



FUJIFILM

DIGITAL CAMERA




FinePix S3Pro

SERVICE MANUAL

US/CA/EU/EG/GE/AS/JP-Model



WARNING

- THE COMPONENTS IDENTIFIED BY THE MARK “” ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR SAFETY. PLEASE REPLACE ONLY BY THE COMPONENTS SPECIFIED ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST.
- IF YOU USE PARTS NOT SPECIFIED, IT MAY RESULT IN A FIRE AND AN ELECTRICAL SHOCK.

SAFETY CHECK-OUT

After correcting the original problem, perform the following safety check before return the product to the customer.

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splasher and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B + voltage to see it is at the values specified.
6. Make leakage - current measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.



RISK OF FIRE-
REPLACE FUSE
AS MARKED

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 2.5 AMPERES 125V FUSE.

ATTENTION: AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME, TYPE 2.5 AMPERES, 125 VOLTS.

8.



WARNING!
HIGH VOLTAGE

WARNING:
TO REDUCE THE ELECTRIC SHOCK, BE CAREFUL TO TOUCH THE PARTS.

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1. General

1-1. Product specification

System	
Model	Digital camera FinePix S3 Pro
Effective pixels	12.34 million (S-pixel: 6.17 million, R-pixel: 6.17 million) pixels
CCD	Large-format (23.0 × 15.5 mm) Super CCD SR II with primary color filter Total 12.9 megapixels (S-pixels: 6.45 million; R-pixels: 6.45 million)
Storage media	xD-Picture Card (16/32/64/128/256/512 MB) CF card and Microdrive TM (FAT32-compatible) (Compatibility is listed on Fujifilm website: http://home.fujifilm.com/products/digital/)
File format	DCF-compliant Compressed: Exif Ver.2.21 JPEG, DPOF-compatible Uncompressed: CCD-RAW (RAF)*1
Max. recording resolution	4256 × 2848 (12.1 million)
Number of recorded pixels	4256 × 2848 pixels/3024 × 2016 pixels/2304 × 1536 pixels/1440 × 960 pixels
Lens mount	Nikon F mount (with AF coupling and AF contacts)
Focal length	Approx. 1.5× the nominal focal length of the lens (35mm camera equivalent)
Sensitivity	ISO 100/160/200/400/800/1600 *2
Metering modes	TTL open metering/3D 10-zone Matrix, Center-weighted, Spot
Exposure control	Program AE, Shutter-priority AE, Aperture-priority AE, Manual exposure
Exposure compensation	-3.0 EV to +3.0 EV 1/2 EV step
Shutter	Electronically controlled vertical-travel focal-plane shutter
Shutter speeds	30 to 1/4000 sec, Bulb X contact: Max. 1/180 sec. *3
Continuous shooting	Max. 2.5 frames/sec.: Up to max. 12 frames. (D-range: Standard; JPEG mode) Up to max. 7 frames. (D-range: Standard; RAW mode) Max. 1 frame/sec.: Up to max. 6 frames. (D-range: Wide; JPEG mode) Max. 1.4 frames/sec.: Up to max. 3 frames. (D-range: Wide; RAW mode)
Auto bracketing	±0.5 EV, ±1.0 EV, ±1.5 EV, ±2.0 EV,
Focus	Mode: Single-AF servo, Continuous AF servo, Manual AF system: TTL phase difference detection with auxiliary AF flash AF frame selection: Single-area AF, Dynamic AF (Dynamic AF Mode with Closest Subject Priority is available)
White balance	Automatic scene recognition/Preset (Fine, Shade, Fluorescent (Daylight), Fluorescent (Warm White), Fluorescent (Cool White), Incandescent, Custom (2 settings))
Self-timer	20 sec./10 sec./5 sec./2 sec.
Flash	Manual pop-up, D-3D Multi-BL flash control, D Multi-BL flash control, Standard D-TTL flash control Guide No.: 12 (ISO 100-m); Sync. shutter speed: 1/180 sec. or slower
Flash modes	Front Synchro, Slow Synchro, Rear synchro, Red-eye Reduction and Red-eye Reduction Slow Synchro, suppressed flash
Accessory shoe	Standard ISO-type with hot-shoe contact (Safety lock provided)
Synchro contacts	X contacts only, synchronizing speed: 1/180 sec. or slower
Synchro terminal	Equipped with ISO 519 synchro terminal as standard, lock screw provided
Viewfinder	Eye-level pentaprism (coverage: Approx. 93% vertical, approx. 95% horizontal), dioptic adjustment mechanism, viewfinder magnification approx. 0.8×)
LCD monitor	2.0-inch 235,000-pixels low-temperature polysilicon TFT color LCD panel (approx. 100% coverage for playback)
Remote release	Release socket built into the shutter release button 10-pin remote release terminal provided on camera body front
Photography functions	Color space selection, dynamic range selection, film simulation mode selection, framing guideline, frame no. memory, multiple-exposure shooting, shutter button for vertical shooting, live image
Playback functions	Trimming, Auto Play, multi-frame playback, histogram display, brightness warning display
Other functions	PictBridge compatibility, Exif Print compatibility, PRINT Image Matching II compatibility, language selection (Japanese, English, French, German, Spanish, Italian, Chinese), discharging function

Power Supply and Others

Power supply

Use one of the following:

- 4× AA-size Ni-MH (Nickel-Metal Hydride) batteries
- AC Power Adapter AC-5VX (sold separately)

Dimensions and weight
(W × H × D)

Camera body dimensions: 147.8 mm × 135.3 mm × 78.5 mm/5.8 in. × 5.3 in. × 3.1 in.
(excluding lens and attachments)

Camera body weight: 815 g/28.7 oz (excluding lens, batteries and recording media)

Weight when shooting: Dependent on the lens used

Operating conditions

Temperature: 0°C to +40°C. (+32°F to +104°F)

*Note that the range for Microdrive is +5°C to +40°C (+41°F to +104°F).

Humidity: 80% or less (no condensation)

Guide to the number
of available frames
for battery operation

Battery Type	With LCD monitor ON
Ni-MH batteries 2300 mAh	Approx. 400 frames

According to the CIPA (Camera & Imaging Products Association) standard procedure for measuring digital still camera battery consumption (extract):

When using Ni-MH batteries, use the batteries supplied with the camera. The storage media should be xD-Picture Card.

Shots taken at 23°C, one shot every 30 seconds using a 50mm AF1.4D lens with 1-time AF operation, full flash for every other shot, the camera turned off/on every 10 shots and auxiliary AF lighting turned off.

- Note: Because the number of available shots varies depending on the level of charge in Ni-MH batteries, the figures shown here for the number of available shots using batteries are not guaranteed.

The number of available shots will also decline at low temperatures.

Accessories

- AA-size Ni-MH Batteries (HR-AA) (4)
- Battery charger BCH-NH2 (1)
- *Plug-in and cord-attached types are provided depending on the intended country of use.
- Strap (1)
- Eyepiece cap (1)
- Camera body cap (1)
- Video cable (1) (approx. 1.5 m (4.9ft.), mini-plug (3.5 mm-dia.) to pin-plug cable)
- IEEE 1394 4-pin to 6-pin cable (1) (approx. 1.5 m (4.9ft.))
- USB cable (mini-B) (1)
- Synchronizing terminal cap (1)
- Remote release socket cap (1)
- Battery holder (1)
- CD-ROM: Software for FinePix AX (1)
- Owner's Manual (1)
- Accessory shoe cover (1)
- LCD cover (1)
- Cable holder (1)
- Clamp filter (1)
- Fitted on the camera body
- Fitted on the camera body
- Fitted on the camera body
- Fitted on the camera body
- Fitted on the camera body
- Software Quick Start Guide (1)

Optional accessories

- xD-Picture Card
 - DPC-16 (16 MB)/DPC-32 (32 MB)/DPC-64 (64 MB)/DPC-128 (128 MB)/DPC-256 (256 MB)/DPC-512 (512 MB)
- AC Power Adapter AC-5VX
- Fujifilm Rechargeable Battery 2HR-3UF
- Fujifilm Battery Charger with Battery BK-NH2 (With Euro type or UK type plug)
- Image Memory Card Reader DPC-R1
 - Compatible with Windows 98/98 SE, Windows Me, Windows 2000 Professional, Windows XP or iMac, Mac OS 8.6 to 9.2.2, Mac OS X (10.1.2 to 10.2.2) and models that support USB as standard.
 - Compatible with xD-Picture Card of 16 MB to 512 MB, and SmartMedia of 3.3 V, 4 MB to 128 MB.
- PC Card Adapter DPC-AD
 - Compatible with xD-Picture Card of 16 MB to 512 MB, and SmartMedia of 3.3 V, 2 MB to 128 MB.
- CompactFlash Card Adapter DPC-CF
 - Windows 95/98/98 SE/Me/2000 Professional/XP
 - Mac OS 8.6 to 9.2/X (10.1.2 to 10.1.5)
- xD-Picture Card USB Drive DPC-UD1
 - Compatible with xD-Picture Card of 16 MB to 512 MB
 - Windows 98/98 SE/Me/2000 Professional/XP
 - Mac OS 9.0 to 9.2/X (10.0.4 to 10.2.6)
- Hyper-Utility Software HS-V2 Ver.3.0






- *1: CCD-RAW is a format specific to the FinePix S3 Pro. The enclosed “FinePixViewer” software or the optional Hyper-Utility software “HS-V2 Ver. 3.0” is required to interpret the images.
- *2: Images shot in high-sensitivity photography (ISO 400 or higher) may appear coarse and may also be affected by noise such as white dots.
- *3: Images shot with long exposures (about 4 second or longer) may appear coarse and may also be affected by noise such as white dots.


Input/Output Terminals

Video output	NTSC/PAL selectable
Digital Interface	USB 2.0 (High-speed), IEEE 1394
DC input	Socket for specified AC Power adapter AC-5VX (sold separately)

■ Standard Number of Available Shots per Media

The number of available shots varies slightly depending on the type of subject. Also, the discrepancy between the actual number of available shots and the standard number grows as the capacity of the media increases.

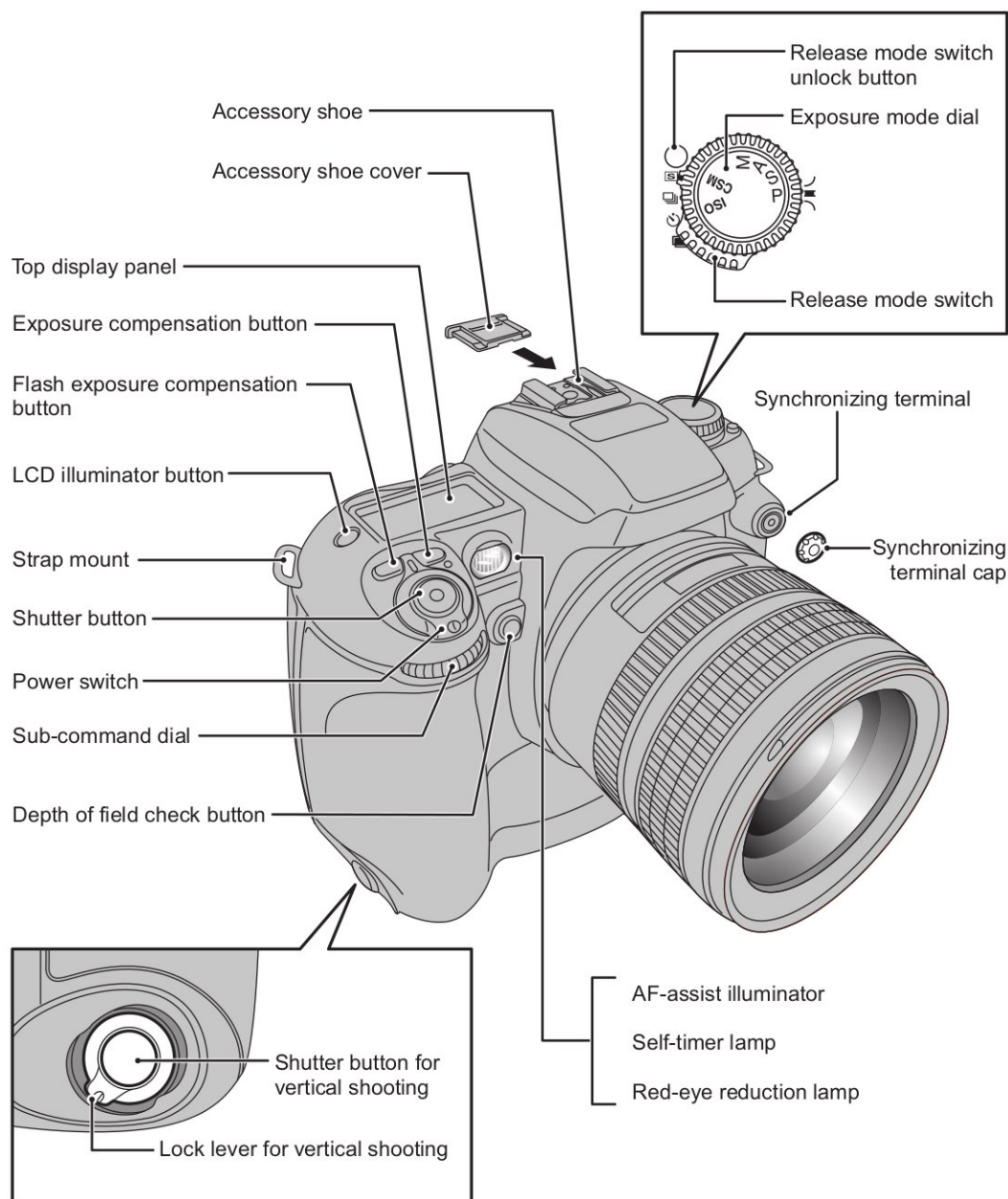
Number of recorded pixels	 CCD-RAW		 4256 × 2848		 3024 × 2016		 2304 × 1536		 1440 × 960	
Quality Mode	HIGH		FINE	NORMAL	FINE	NORMAL	FINE	NORMAL	FINE	NORMAL
	D-RANGE WIDE	D-RANGE STANDARD								
Image File Size	Approx. 25 MB	Approx. 13 MB	Approx. 4.7 MB	Approx. 2.4 MB	Approx. 3.0 MB	Approx. 1.5 MB	Approx. 1.7 MB	Approx. 880 KB	Approx. 1 MB	Approx. 520 KB
DPC-16 (16 MB)	0	1	3	6	5	10	8	17	14	29
DPC-32 (32 MB)	1	2	6	13	10	20	17	35	30	59
DPC-64 (64 MB)	2	4	13	26	21	42	36	72	61	120
DPC-128 (128 MB)	5	9	26	53	42	84	72	144	122	241
DPC-256 (256 MB)	10	19	53	107	85	169	146	290	245	484
DPC-512 (512 MB)	20	39	107	214	170	339	292	580	491	967
Microdrive (340 MB)	13	27	73	146	116	232	200	396	338	671
Microdrive (1 GB)	41	81	220	437	349	698	597	1173	995	1932

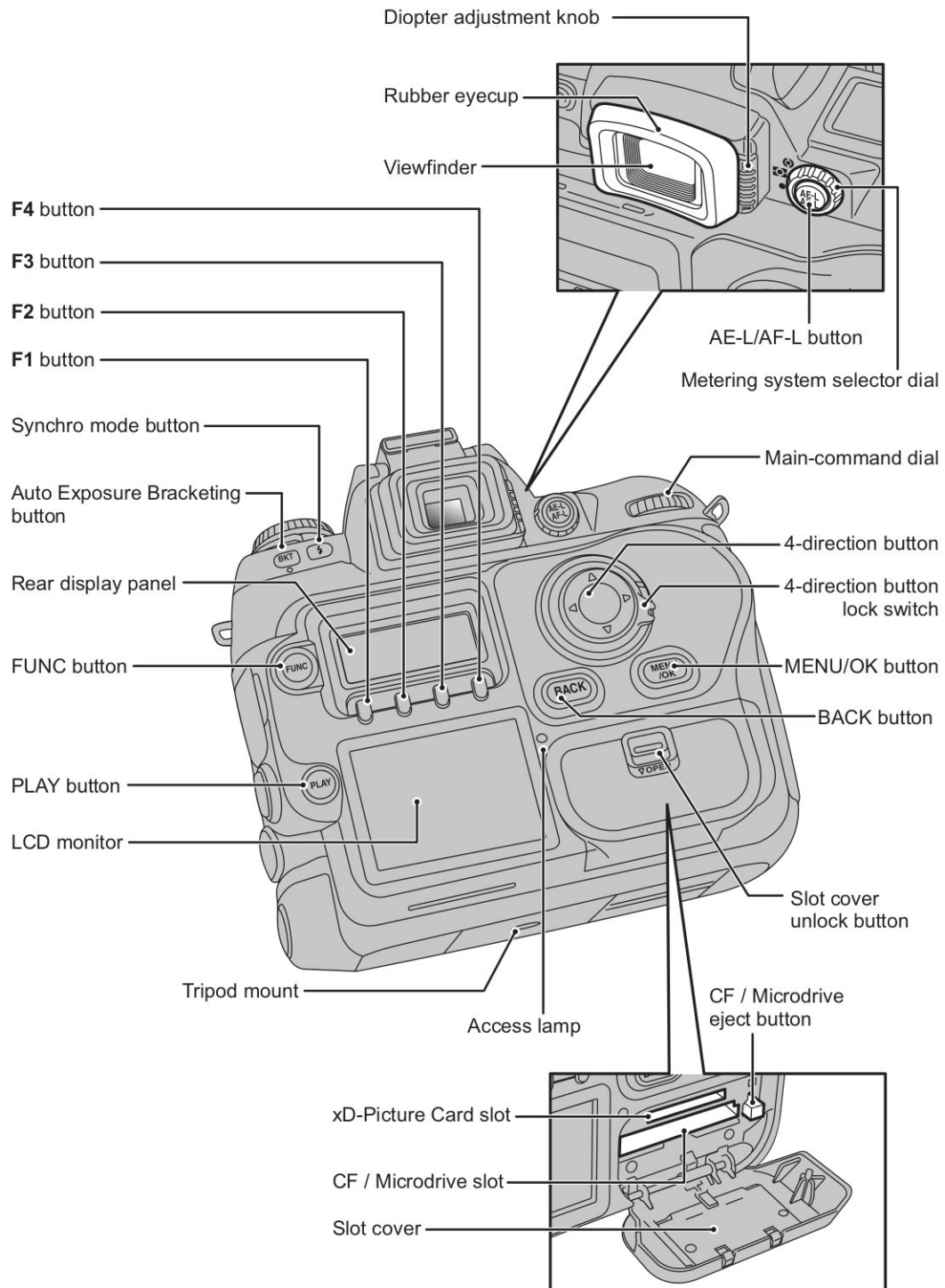
For CCD-RAW files, “” is displayed as the resolution.

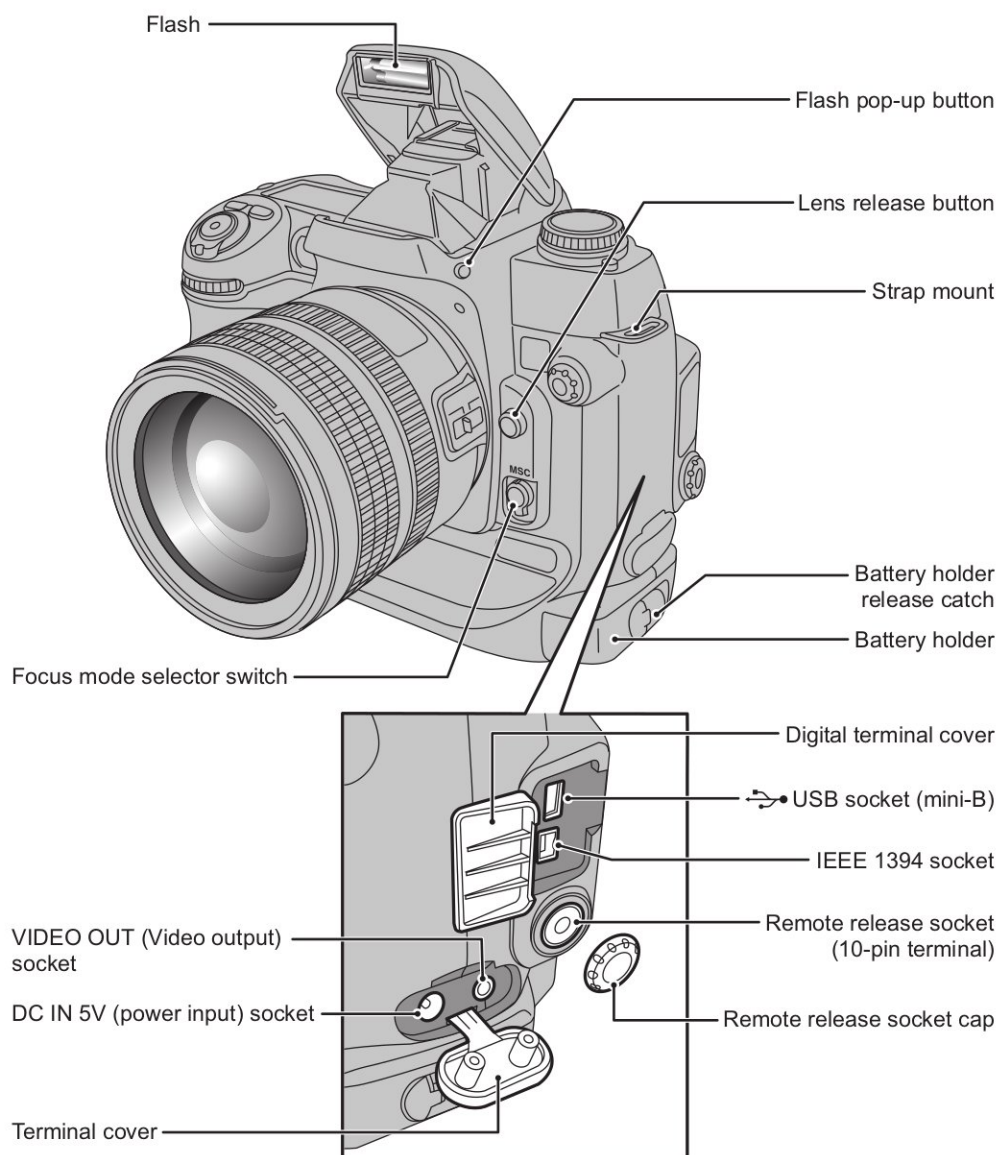
1-2. Explanation of Terms

Adobe RGB (1998)	<p>A color space introduced as the working color space for Adobe Photoshop 5.0. AdobeRGB encompasses almost all the colors reproduced by CMYK printers and is intended primarily for printing applications. It was introduced as "SMPTE-240E" in the RGB settings in Adobe Photoshop 5.0 and as "Adobe RGB (1998)" in the profile settings from version 6.0 onwards.</p>
CCD-RAW	<p>This is the image data prior to signal processing (the reconstruction of the data read in from the CCD as an image). Because the signal processing is performed on the computer, high levels of control are possible.</p> <ul style="list-style-type: none">• To reconstruct images, FinePixViewer (on the enclosed CD-ROM) or the Hyper Utility (optional) must be installed on your computer.
Color space	<p>Refers to the range of colors, expressed as two-dimensional or three-dimensional numerical values, that can be reproduced by devices such as cameras, monitors and printers. The sRGB and AdobeRGB color spaces are each shown as an xy color chart (a coordinate color space in which colors are represented in two dimensions with no brightness value). The range of colors that can be expressed by a particular color space is indicated by a triangle imposed on the xy color chart. Colors become brighter as they approach the outer edge of the xy color chart. This color representation method is capable of showing all the actual colors.</p>
Color Temperature	<p>Low-temperature light sources, such as a candle flame, are strongly red, while high-temperature light sources, such as a gas burner flame, are strongly blue. The color of the light for these temperatures is expressed as a color temperature (K = Kelvin). The light of the sun at midday in a completely clear sky is taken to be 5500K.</p>
EV:	<p>A number that denotes Exposure Value. The EV is determined by the brightness of the subject and sensitivity (speed) of the film or CCD. The number is larger for bright subjects and smaller for dark subjects. As the brightness of the subject changes, a digital camera maintains the amount of light hitting the CCD at a constant level by adjusting the aperture and shutter speed.</p> <p>When the amount of light striking the CCD doubles, the EV increases by 1. Likewise, when the light is halved, the EV decreases by 1.</p>
JPEG:	<p>Joint Photographic Experts Group</p> <p>A file format used for compressing and saving color images. The higher the compression rate, the greater the loss of quality in the decompressed (restored) image.</p>
White Balance:	<p>Whatever the kind of the light, the human eye adapts to it so that a white object still looks white. On the other hand, devices such as digital cameras see a white subject as white by first adjusting the color balance to suit the color of the ambient light around the subject. This adjustment is called matching the white balance.</p>
Exif Print:	<p>Exif Print Format is a newly revised digital camera file format that contains a variety of shooting information for optimal printing.</p>

1-3. Names of External Components

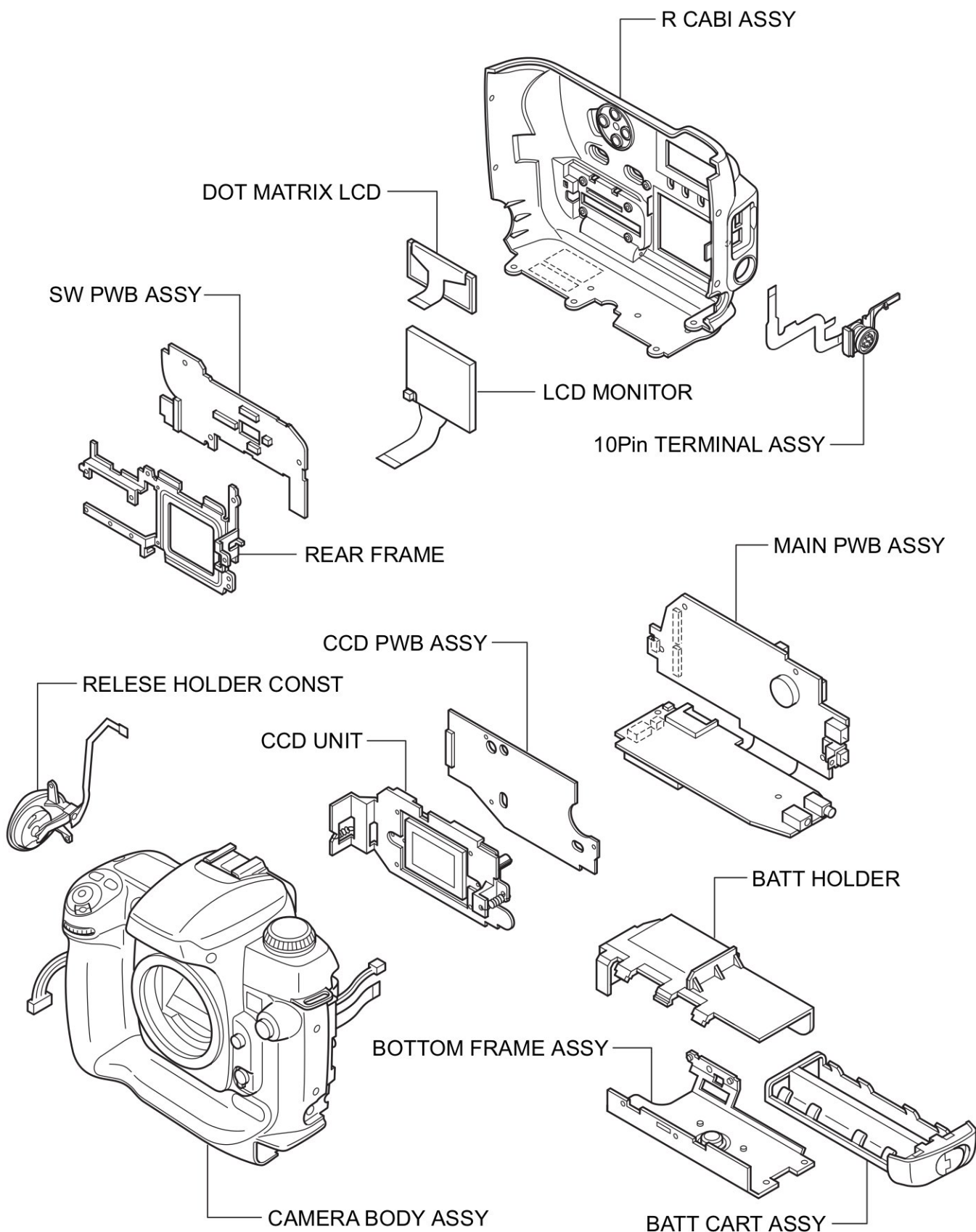






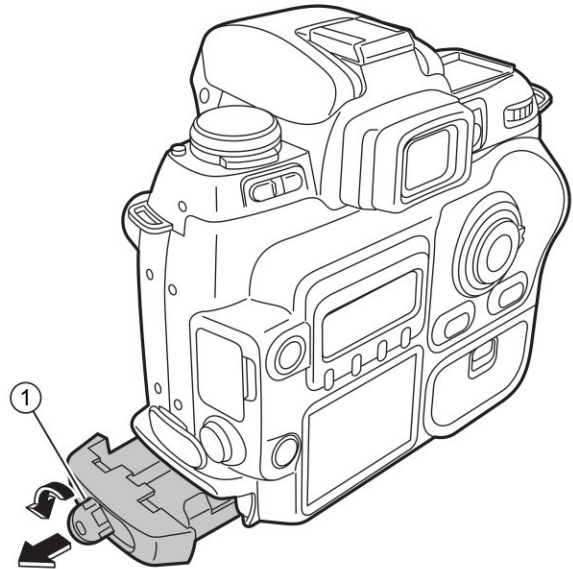
2. Disassembly

2-1. Names of internal Components



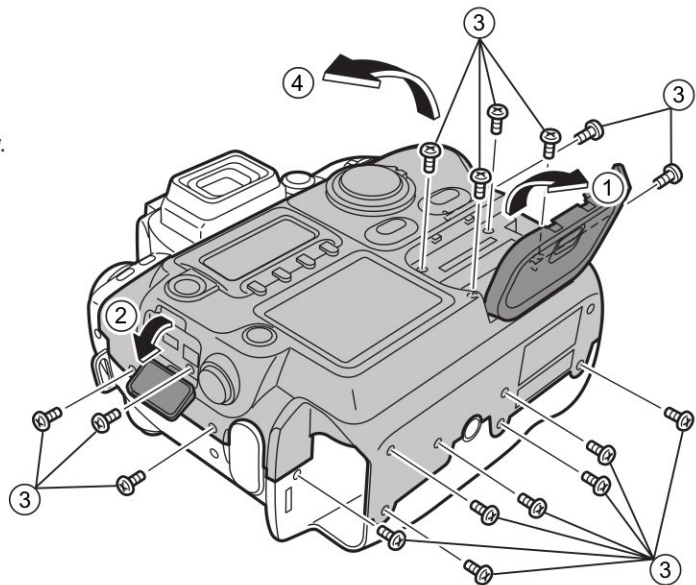
2-2. Removing the BATT CART ASSY

- (1) Unlock the battery holder by turning the lock lever and pull out the BATT CART ASSY.

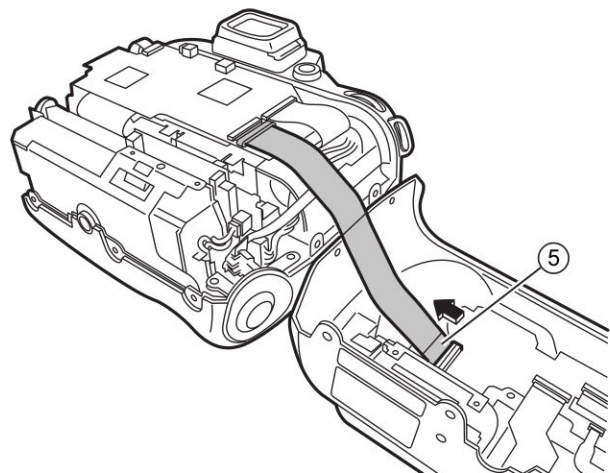


2-3. Removing the R CABI ASSY

- (1) Open the CARD COVER.
- (2) Open the DIGITAL TERMINAL COVER.
- (3) Remove the 16 screws (N-MS2M 1.7 x 3.0 BA).
- (4) Remove the R CABI ASSY in the direction of the arrow.

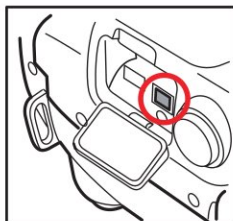


- (5) Remove the MAIN-SW FPC from the connector (SW PWB ASSY CN 102).



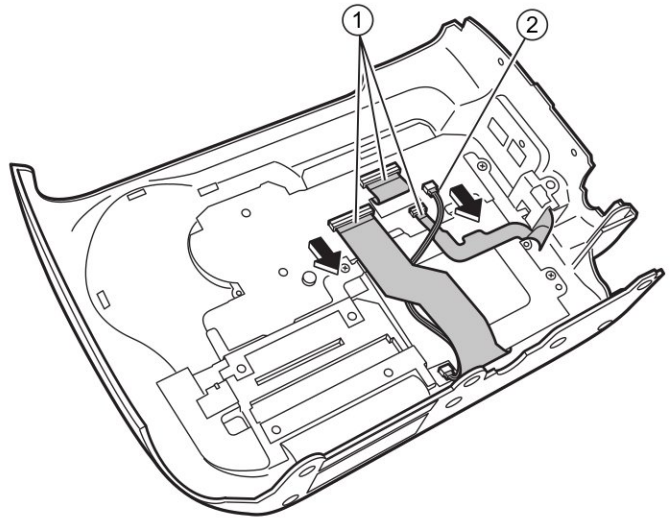
[Notes on assembling the R CABI ASSY]

1. Ensure that the FPC is not inserted on an angle and that it is fully inserted before locking.
2. Confirm the IEEE1394 JACK is correctly matched to the hole of R CABI ASSY.
3. Ensure that there are no gaps between the CAMERA BODY ASSY and R CABI ASSY after assembly.

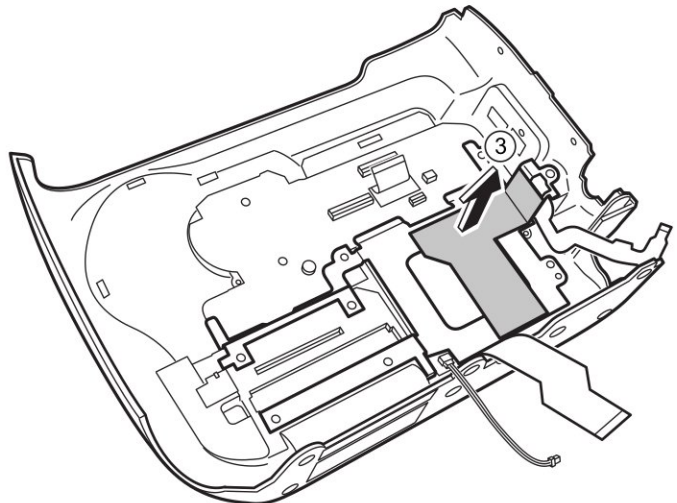


2-4. Removing the SW PWB ASSY

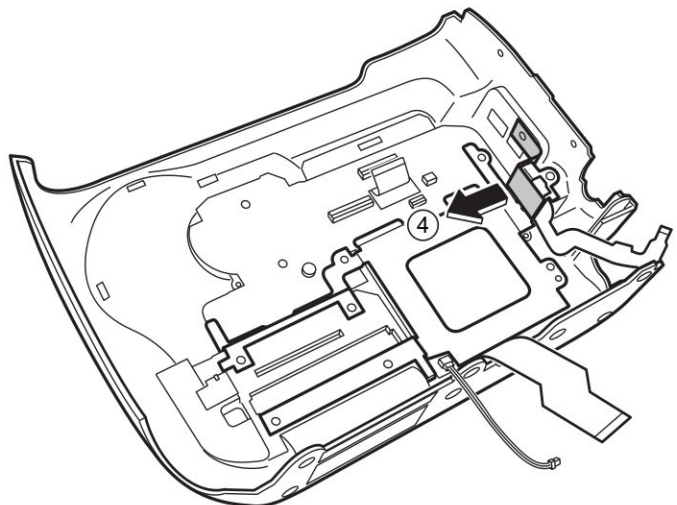
- (1) Remove the FPC at 3 points.
- (2) Remove the wire harness at 1 point.



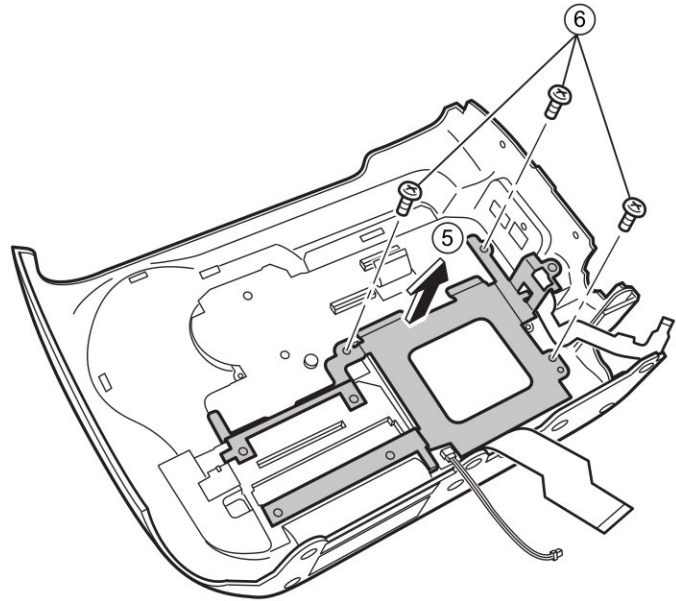
- (3) Remove the EMI SHEET 10 FPC in the direction of the arrow.



- (4) Remove the EMI SHEET 10 CNN in the direction of the arrow.



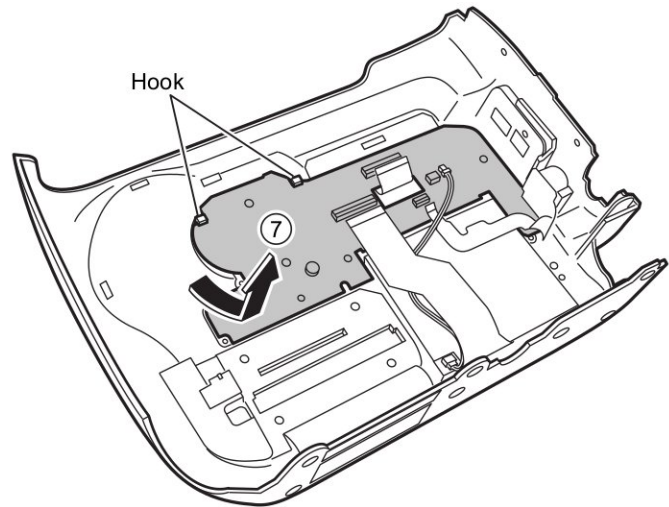
- (5) Remove the 3 screws (BT2M 1.7 x 4.0 B).
- (6) Remove the REAR FRAME in the direction of the arrow.



- (7) Remove the SW PWB ASSY in the direction of the arrow.

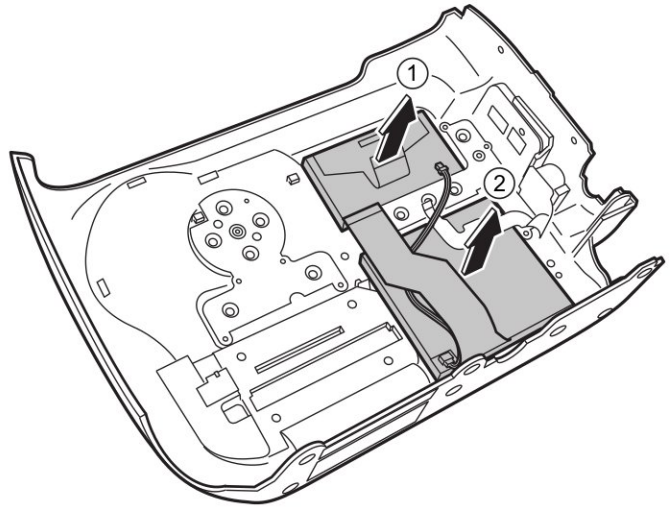
[Notes on assembling the SW PWB ASSY]

- 1. Check that the top edge of the SW PWB ASSY is engaged with the hook on the R CABI ASSY side.
- 2. Take care to avoid inserting the FPC on an angle and ensure that it is fully inserted before locking.
- 3. Ensure that there are no gaps between the CABI after assembly.



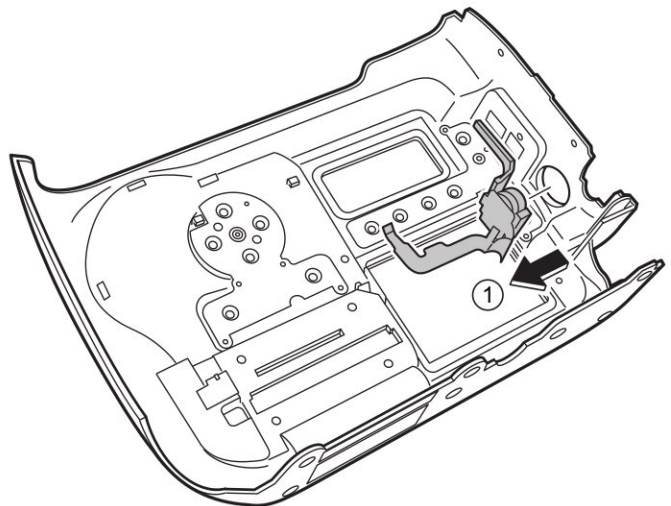
2-5. Removing the LCD

- (1) Remove the DOT MATRIX LCD in the direction of the arrow.
- (2) Remove the LCD MONITOR in the direction of the arrow.



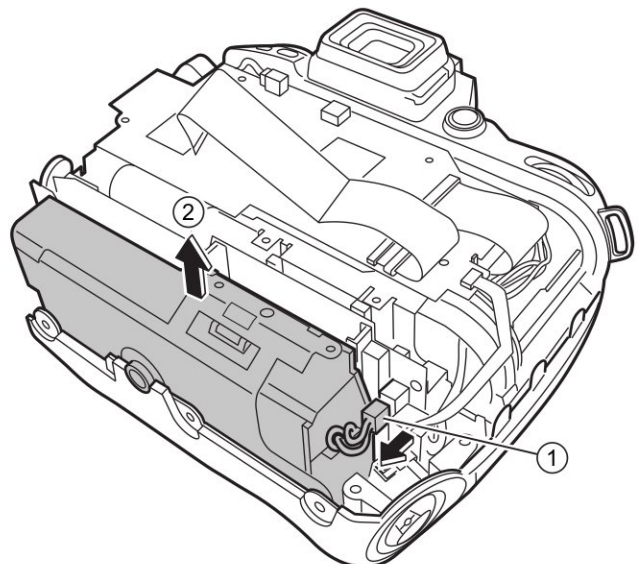
2-6. Removing the 10-pin TERMINAL ASSY

- (1) Remove the 10-pin TERMINAL ASSY in the direction of the arrow.



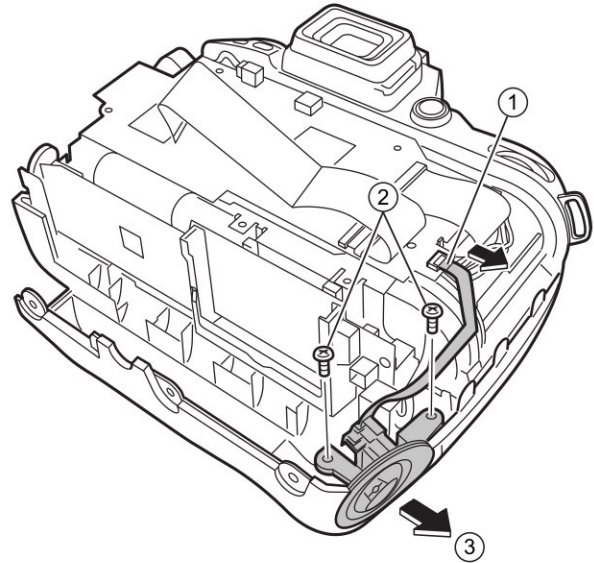
2-7. Removing the BATTERY HOLDER

- (1) Remove the wire harness from the connector (MAIN PWB ASSY CN 600).
- (2) Remove the BATTERY HOLDER in the direction of the arrow.

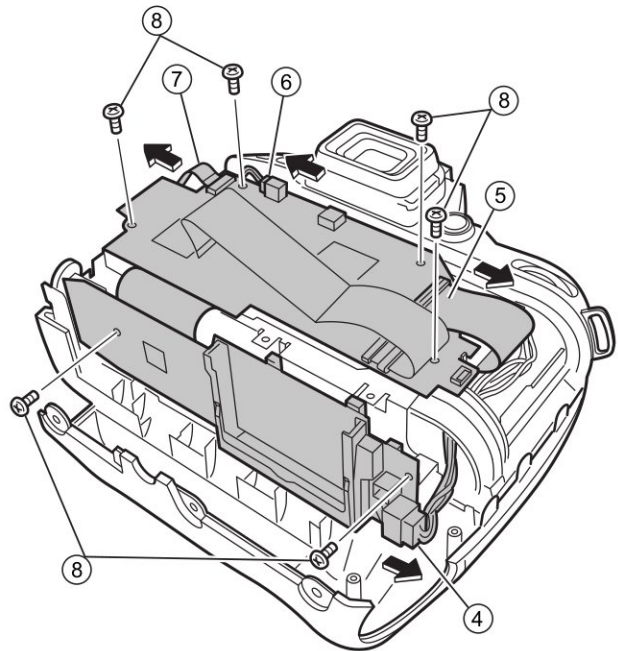


2-8. Removing the MAIN PWB ASSY

- (1) Remove the FPC from the connector (MAIN PWB ASSY CN 101).
- (2) Remove the 2 screws (BT2M 1.7 x 4.0 B).
- (3) Remove the RELEASE HOLDER CONST in the direction of the arrow.



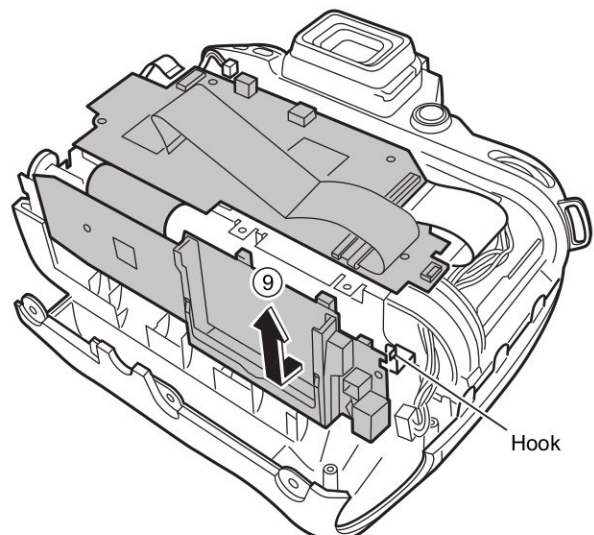
- (4) Remove the wire harness (CAMERA BODY) from the connector (MAIN PWB ASSY CN 700).
- (5) Remove the MAIN-CCD FPC from the connector (MAIN PWB ASSY CN 100).
- (6) Remove the wire harness (CAMERA BODY) from the connector (MAIN PWB ASSY CN 104).
- (7) Remove the FPC (CAMERA BODY) from the connector (MAIN PWB ASSY CN 103).
- (8) Remove the 6 screws (MS2M 1.7 x 3.0 N).



- (9) Remove the MAIN PWB ASSY in the direction of the arrow.

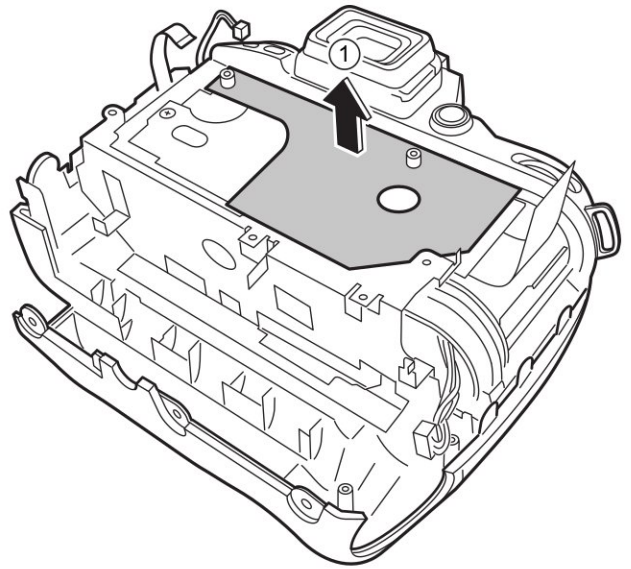
[Notes on assembling the MAIN PWB ASSY]

Check that the notch in the CARD SLOT side of the MAIN PWB ASSY is engaged with the hook on the CAMERA BODY.



2-9. Removing the CCD PWB ASSY and CCD UNIT

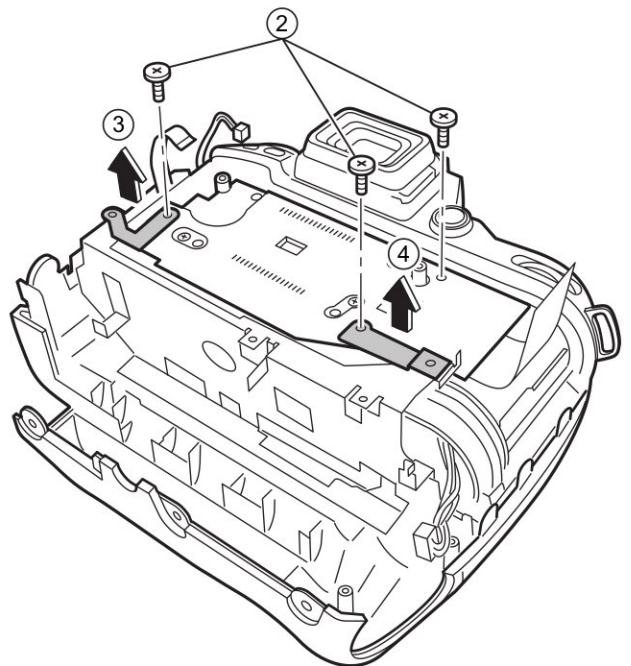
(1) Remove the SHIELD SHEET.



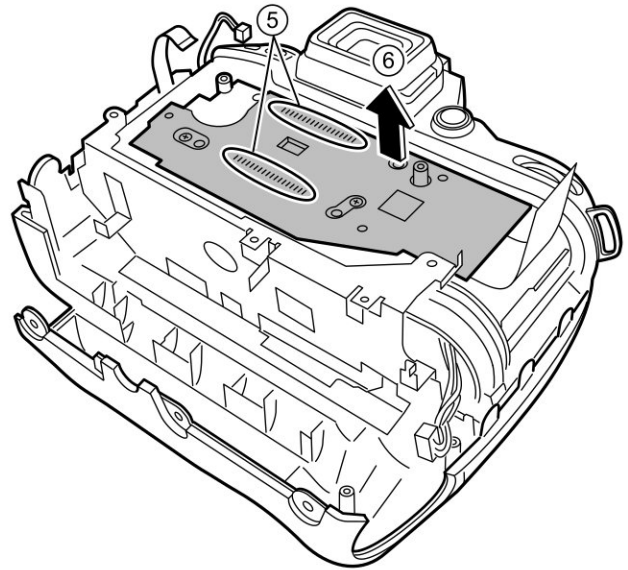
(2) Remove the 3 screws (CCD PWB SCREW).

(3) Remove the EMI SHEET L in the direction of the arrow.

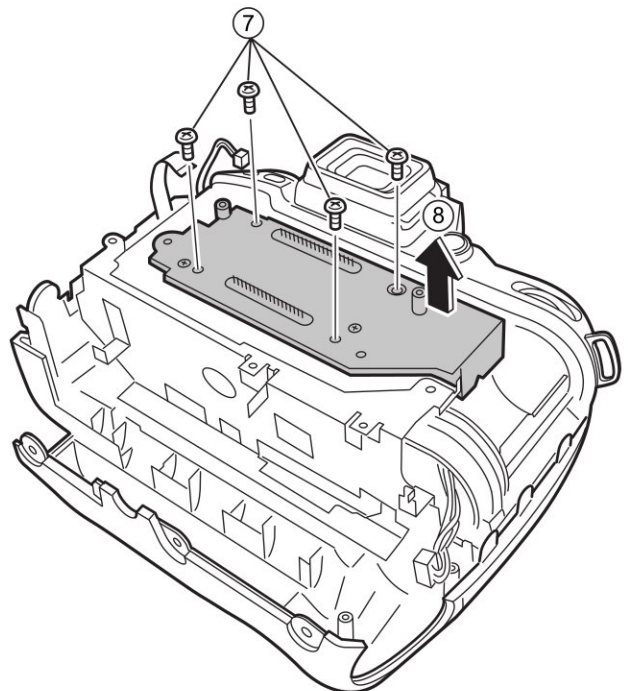
(4) Remove the EMI SHEET R in the direction of the arrow.



- (5) Remove the solder on the CCD PWB ASSY (36 locations).
- (6) Remove the CCD PWB ASSY in the direction of the arrow.



- (7) Remove the 4 screws (M 1.2 x 2.4 C).
- (8) Remove the CCD UNIT in the direction of the arrow.



2-10. How to dismantle the parts around the outer wrappings

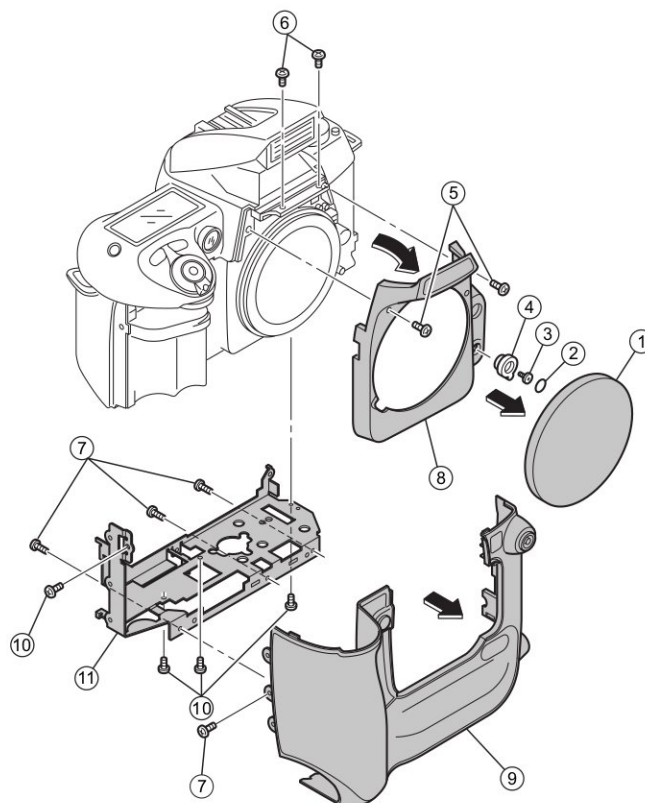
2-10-1. Removing TOP COVER UNIT

★ Revised: 1. Dec. 2004

Remove in the order indicated by circled numbers.

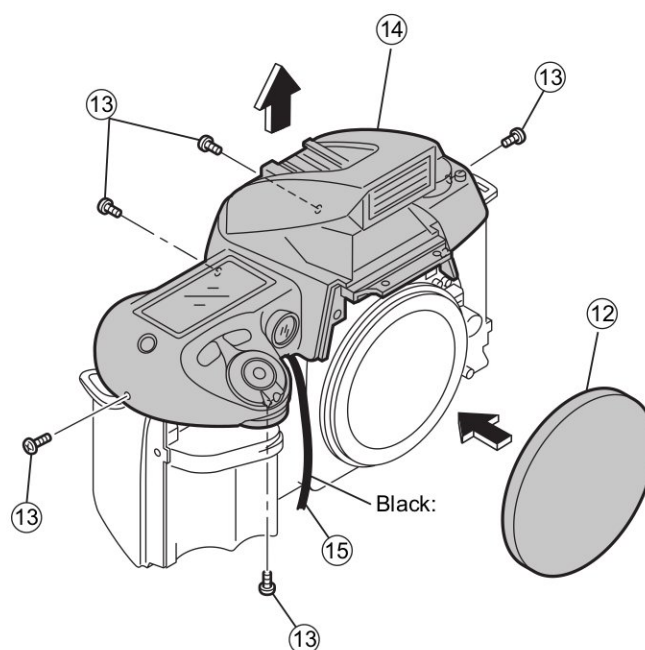
<Step 1>

- (1) Remove the lens cap.
- (2) Remove A/M COVER PLATE.
- (3) Remove one screw.
- (4) Remove A/M CHANGE LEVER.
- (5) Remove two screws.
- (6) Remove two screws.
- (7) Remove four screws.
- (8) Remove FRONT COVER BLACK in the direction of the arrow.
- (9) Remove FRONT CABINET UNIT in the direction of the arrow.
- (10) Remove four screws.
- (11) Remove the MAIN FRAME.



<Step 2>

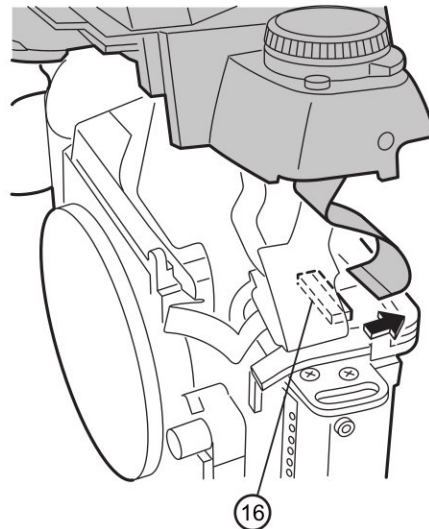
- (12) Do the lens cap.
- (13) Remove five screws.
- (14) Float TOP COVER UNIT in the direction of the arrow.
- (15) Remove one screw.



<Step 3>

- (16) Remove FPC from the TOP COVER side, and remove TOP COVER UNIT to the grip side.

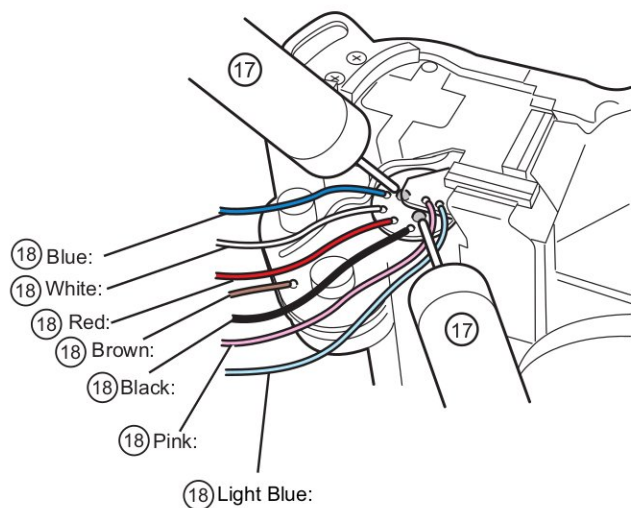
* As for the grip side, the harness is stopped with solder.



<Step 4> ⚠ ⚡

- (17) Peel off the insulation tape then discharge the MAIN CONDENSER before remove the wiring harnesses.

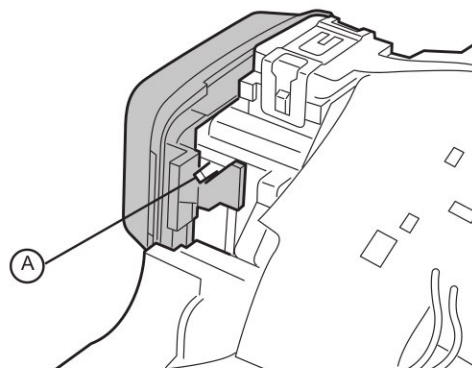
- (18) Remove six harness, and remove TOP COVER UNIT completely.



[Notes of assembly of TOP COVER UNIT]

Hang part A inner EYE PIECE BARREL UNIT.

And, build in TOP COVER UNIT.



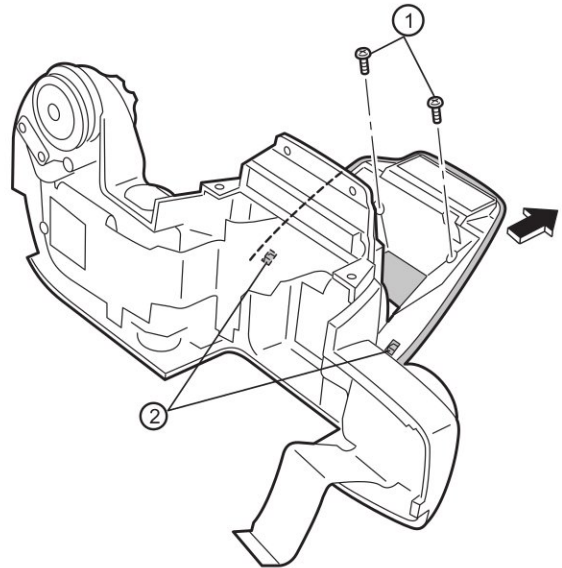
2-10-2. Removing SB LOWER CASE UNIT

★ Revised: 1. Dec. 2004

Remove in the order indicated by circled numbers.

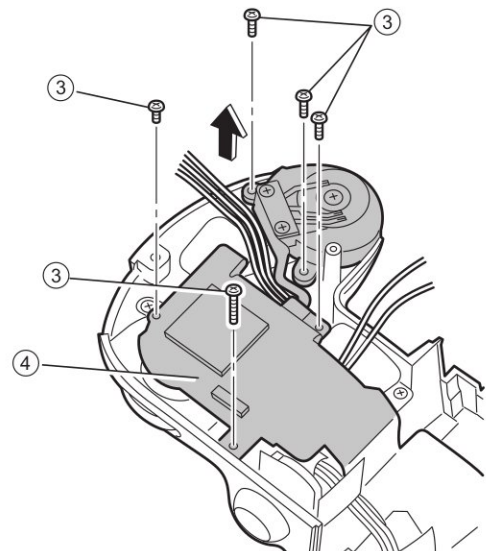
<Step 1>

- (1) Remove two screws.
- (2) Remove the hook in two places.



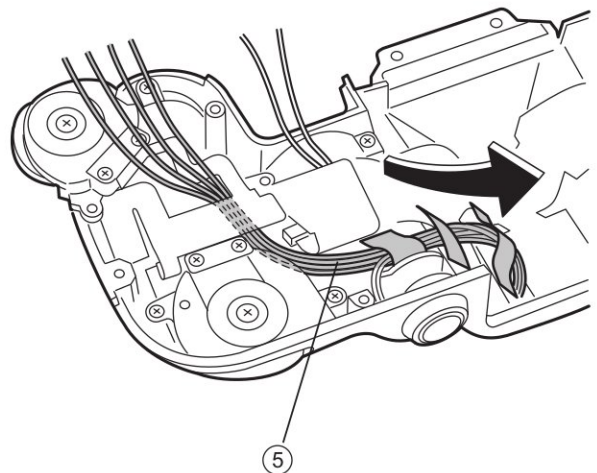
<Step 2>

- (3) Remove two screws.
- (4) Float TOP COVER FPC.



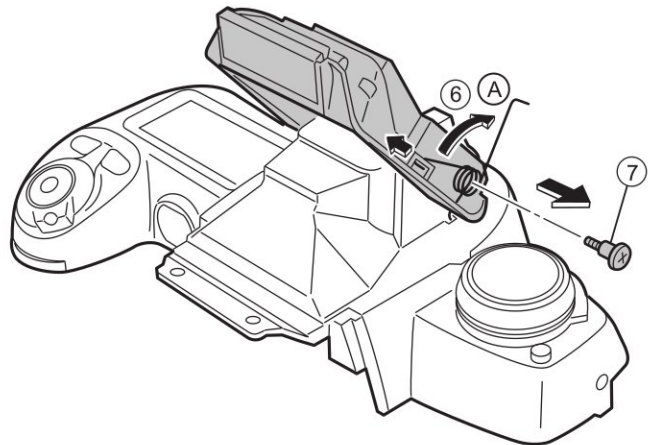
<Step 3>

- (5) Pull out the harness of the flash in the direction of the arrow after floating TOP COVER FPC.



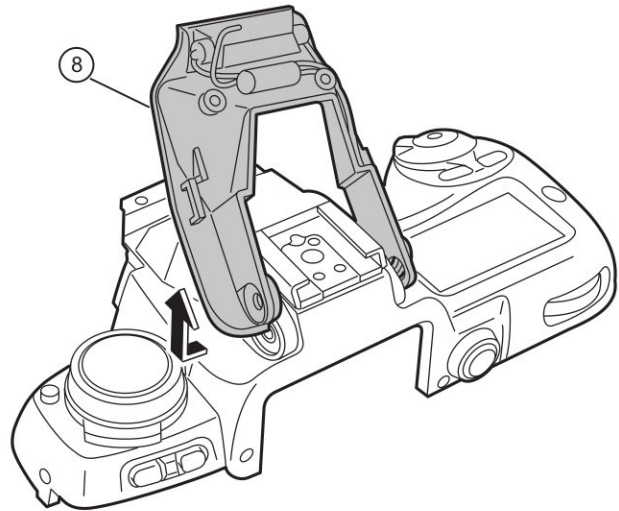
<Step 4>

- (6) Remove FLASH UP SPRING in the direction of A.
- (7) Remove one screws.



<Step 5>

- (8) Remove SB LOWER CASE UNIT in the direction of the arrow.



3. Schematic

3-1. Cautions

<Caution when replacing chip (leadless) parts>

- Do not re-use the removed parts, but use new parts. Be careful that the negative side of the tantalum capacitors are susceptible to heat.
- Voltage indications are omitted for capacitors other than chemical and tantalum capacitors with a dielectric strength of 50 V or less. All units are μF (μ shows pF).
- Chip resistors without indication are 1/10 W.
- $\text{K}\Omega = 1000\Omega$, $\text{M}\Omega = 1000\text{K}\Omega$
- Variable resistors and semi-variable resistor are abbreviated the specification of B characteristic.

3-2. Basic block name and function explanation

Part name	Block name	Function
CCD UNIT	CCD BLOCK	CCD output (IC900)
CCD PWB ASSY	CCD BLOCK	CCD driver (IC901, 902), Analog to digital conversion of CCD output (IC906)
MAIN PWB ASSY	PROCESS BLOCK	Video signal processing, System control, SW detection management (IC104), SDRAM (IC101, 102, 103, 106), FLASH ROM (IC112)
	DCDC BLOCK	Power supply management (IC600)
	PWON BLOCK	POWER ON control (IC204, 205)
	PARTNER-CHIP BLOCK	Video signal processing assistance (IC1100)
	IEEE1394 BLOCK	IEEE1394 communication (IC304)
	USB2.0 BLOCK	USB2.0 communication (IC400)
	CARD BLOCK	xD card slot (CN800), CF TypeII slot (CN801)
	DCDC BLOCK (CAMERA BODY)	Power supply to CAMERA BODY (IC707)
SW PWB ASSY	LCD BLOCK	LCD control (IC500)
	SW BLOCK	Operation SW

3-3. Description of the Main Block Functions

3-3-1. Overview of the new technology

A number of technological innovations have been used on this model. These innovations are described below.

(1) Large-format (15.5 x 23.0 mm) "Super CCD Honeycom SR11" featuring a new structural design

- Ultra-high image quality with a maximum recorded image size of 4256 x 2848 pixels (12.1 megapixels) provided by the "Honeycom Signal Processing System" and a resolution of 12.34 effective megapixels (high-sensitivity S pixels: 6.17 million; R pixels designed to increase dynamic range: 6.17 million).
- The "Super CCD Honeycom SR11" is a newly designed CCD that increases the dynamic range to roughly 4 times that of the previous FinePix S2Pro and provides rich and detailed tonal gradations. It provides superb image quality featuring high sensitivity, a broad dynamic range and a high S-N ratio.
- According to their needs, users can select either "D-Range: Wide" to take full advantage of the extensive dynamic range or "D-Range: Standard", which uses only the S-pixel signals to form the image and is ideal for continuous or high-speed shooting.
- When "D-Range: Wide" is selected, the photographer can then choose "AUTO" mode, in which the camera automatically sets the optimum dynamic range for the scene being shot, or set the dynamic range to "WIDE 1" or "WIDE 2" when the shot is taken to achieve a particular effect.
- Sensitivity settings equivalent to ISO 100-1600 are available, allowing shots to be taken in wide variety of situations both in the studio and outdoors.

(2) IEEE1394 and USB 2.0 interfaces allow high-speed transfer of image data to a PC. Also provided is a photography function that transfers photographed images directly from the camera to a PC via the IEEE1394 interface. (Requires the optional Hyper Utility HS-V2 version 3.0 software.)

- (3) In addition to sRGB, support is provided for the Adobe RGB (1998) color space, which is used as the standard color space in the graphic design and printing fields.
 - The inclusion of an additional partner chip with the UCS2 for image processing yields improved color space reproduction and lower levels of noise.
- (4) Image visibility is also improved through the use of a 2.0-inch low-temperature polysilicon TFT color LCD monitor featuring a resolution of 235,000 pixels and 100% coverage.
- (5) The use of a dedicated microchip for powering up means that media information is recorded even while the camera is turned off, reducing the time between the camera being turned on being ready to shoot.
- (6) The previous FinePix S2Pro needed 2 power supplies (2 CR123 button cells and 4 AA batteries), but the reduced power consumption levels on the FinePix S3Pro allow it to run on a single power supply (4 AA batteries).
- (7) Modifications to the base body allow improved viewfinder magnification, the adoption of D-TTL flash exposure control and an X-sync speed of 1/180.
- (8) A Firmware Update function has been included to allow for future functionality upgrades and support for special models.

3-3-2. Block function descriptions

(1) Imaging circuit (CCD BLOCK) (CAM BLOCK)

The analog video signals output from the new APS-size CCD Honeycom SR11 (high-sensitivity S pixels: 6.17 million; R pixels designed to increase dynamic range: 6.17 million) are processed using false-color correction (CDS), optimized spacing (CDS), amplification (AGC) and signal mixing (CDS) in a single CSPIC chip (IC906; abbreviated as ACS), before being converted (A-D) to 12-bit digital signals. The CSP-IC also incorporates the "TG/SSG" function, previously provided as a separate IC, onto one chip. The converted digital signals are then sent to the signal processing IC (abbreviated as UCS2; IC104; CSP).

(2) Image processor (PROCESS BLOCK) (Input data from the CCD)

The 12-bit digital image data (the section corresponding to 1H) generated by the imaging unit (CCD-CAM BLOCK) is sent to the signal processing IC (abbreviated as UCS2; IC104), where buffer processing is performed in the IC's internal buffer to convert the signals to 32-bit (16-bit x 2) data (CCD-RAW data). The converted 32-bit data (CCD-RAW data) is stored in the 16MB SDRAM (IC101 IC102 IC103 and IC106) via the I/O bus for the image signal processing IC. The image data for each frame (4256 pixels x 2848 lines) is temporarily stored in SDRAM. Also, the 32-bit image data input to the signal processing IC (abbreviated as UCS2; IC104) is used for additions performed by the AUTO computing unit and then sent to the CAM BLOCK ACS (IC906) so that the optimal AE, AWB and AF values are obtained. (Recording onto the xD Pictuer Card/Microdrive) The image data stored in the SDRAM (IC101 IC102 IC103 and IC106) is sent one line at a time to the signal processor IC (IC104; UCS2; CSP) via the I/O bus in the signal processor IC. In the signal processor, the data is unpacked and the following processes are called: 16 bit -> 10 bit conversion; preprocessing such as digital clamping, gamma correction, and 10-bit -> 8-bit conversion for the R, G and B channels; YC processing to convert the 8-bit RGB signals to Y:Cb:Cr=4:2:2, after which the Y, Cr and Cb 8-bit image data is returned to the internal buffer. In the internal buffer, the 8-bit Y, Cr and Cb signals are sorted into a data format that facilitates DCT compression before being recorded onto an xD Pictuer Card or Microdrive via the JPEG calculation unit and media controller. (Image playback from the xD Pictuer Card or Microdrive) The compressed image data on the xD Pictuer Card is sent to the signal processing IC (abbreviated as UCS2; IC104) as 8-bit image data and then sent to SDRAM (IC101 IC102 IC103 and IC106) via the media control unit, the DMA unit and the internal buffer control unit. The image data temporarily stored in SDRAM (IC101 IC102 IC103 and IC106) is then returned to the signal processor IC (abbreviated as UCS2; IC104) and sent to the signal processor unit via the media controller and JPEG calculation unit. The signal processor unit performs postprocessing in which the 8-bit Y:Cr:Cb image signals are converted to 8-bit R, G and B signals. At the same time, the character display signals are superimposed and sent to the LCD BLOCK. The imaging system adjustment data is stored in F_ROM (IC314). The 8-bit brightness and color-difference signals processed by the signal processing IC (UCS2; IC104) are D-A converted in the image signal processing IC encoder unit and the display character signals are superimposed, producing analog RGB signals. Video (a composite video signal) is also included at the same time in the B component of the RGB signal output. When the VIDEO terminal is inserted into the camera, a composite video signal is automatically output by the detector.

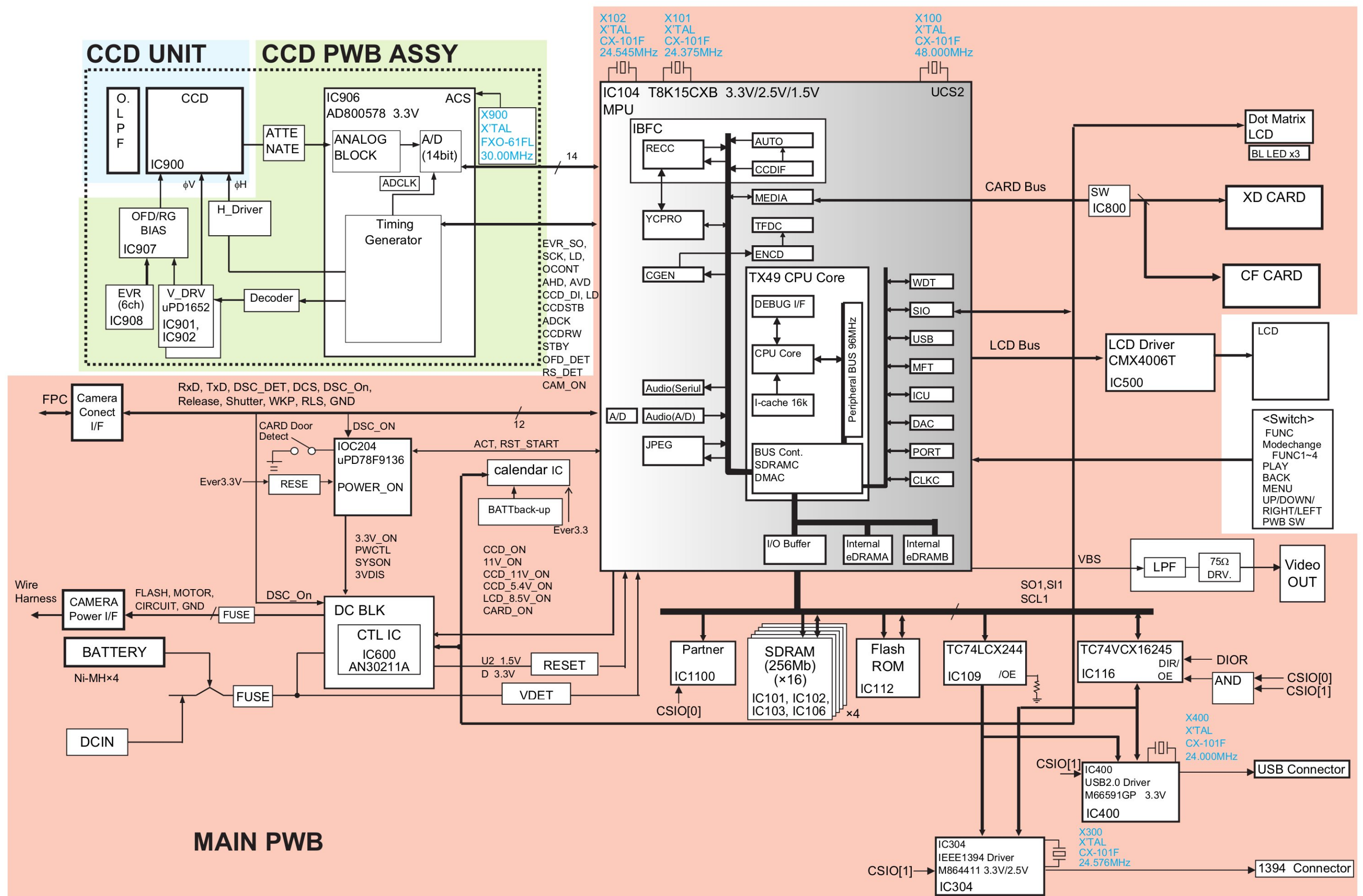
(3) LCD Controller (LCD BLOCK)

The RGB analog signals output from the image signal processing IC encoder block are sent to the LCD controller IC (IC500), where they are converted to digital RGB signals. The LCD controller IC also controls the LCD panel gradations at the same time.

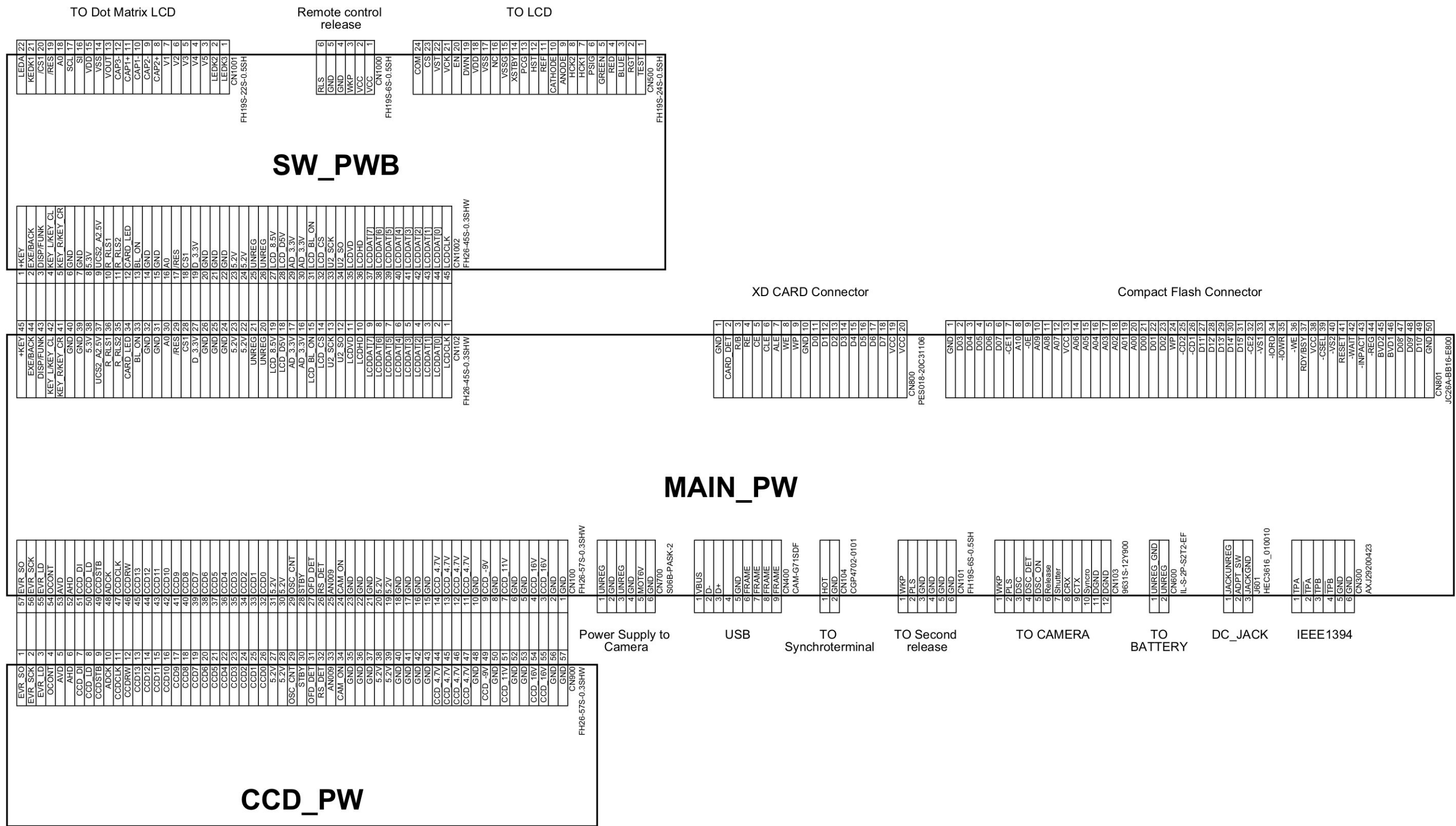
3-3-3. Description of the Power Supply Block Functions

The power supply circuit mounted on the MAIN PWB ASSY board generates a 3.3-volt (IEEE-IC IC1100, UCS2 IC401, ACS IC906, +16V/-9.0V (CCD power supply)), 7.5-volt (LCD backlight power supply) or 12-volt (LCD panel) supply.

3-4. Block Diagram

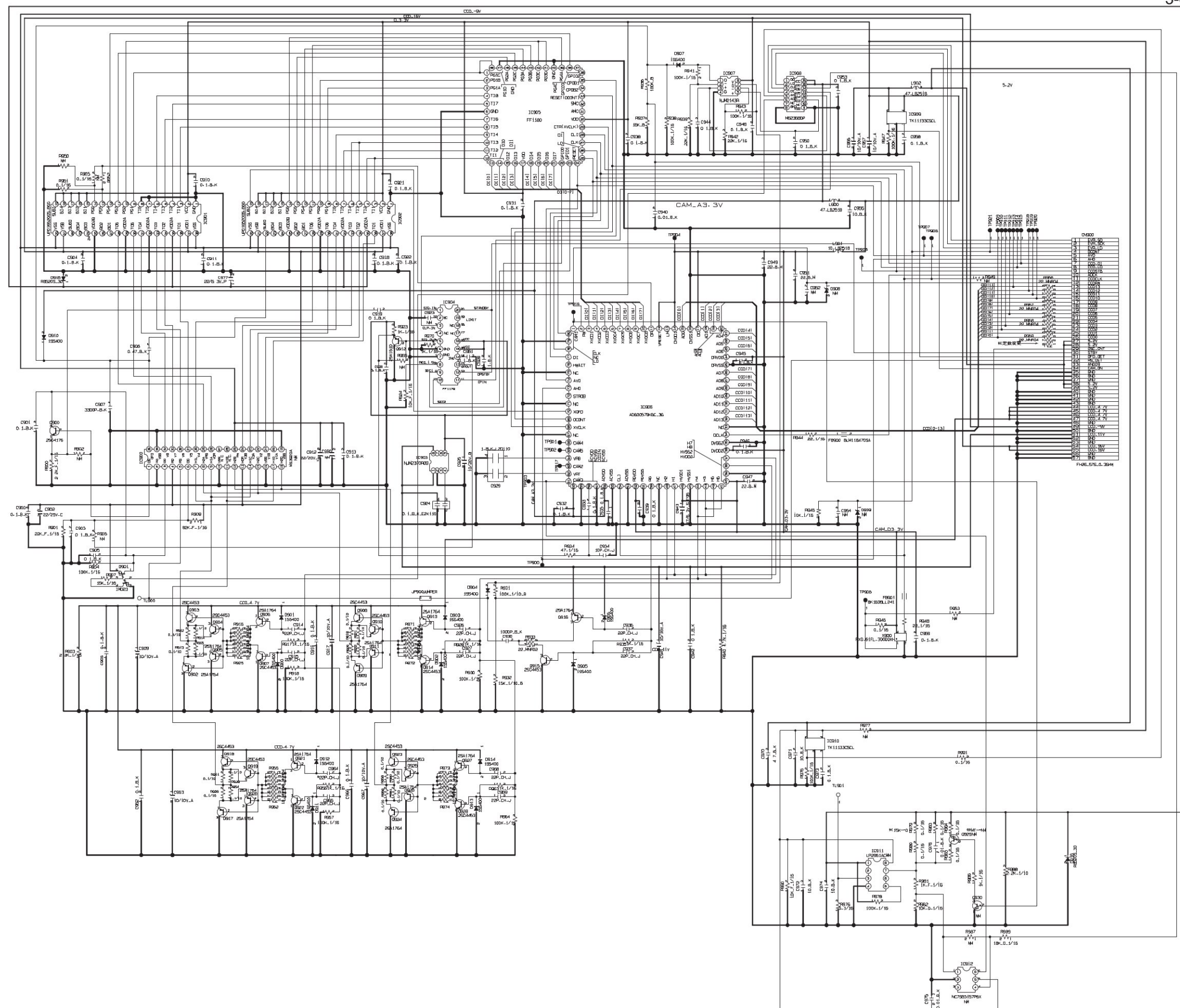


26



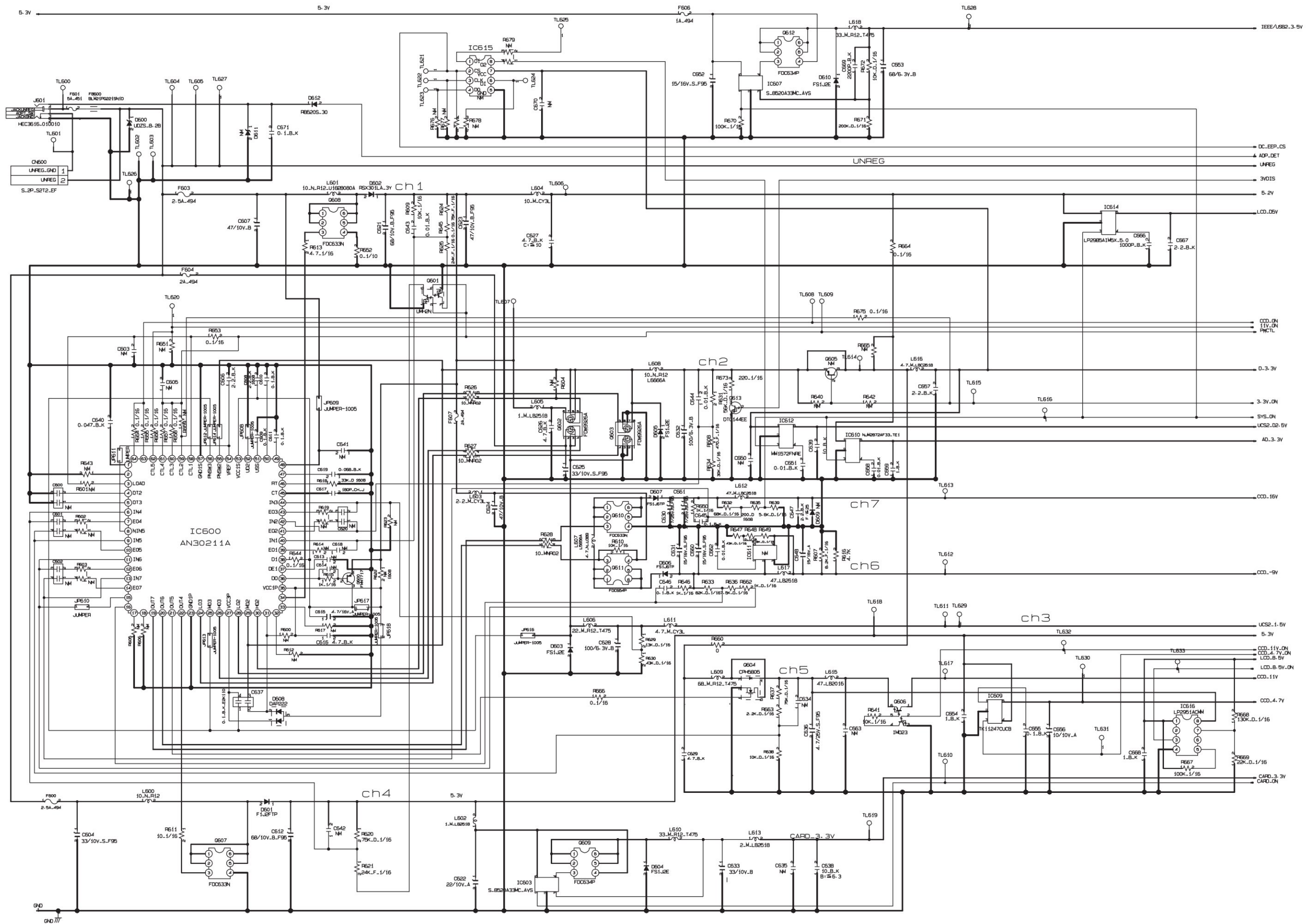
3-6. Circuit Diagrams

3-6-1. CCD BLOCK

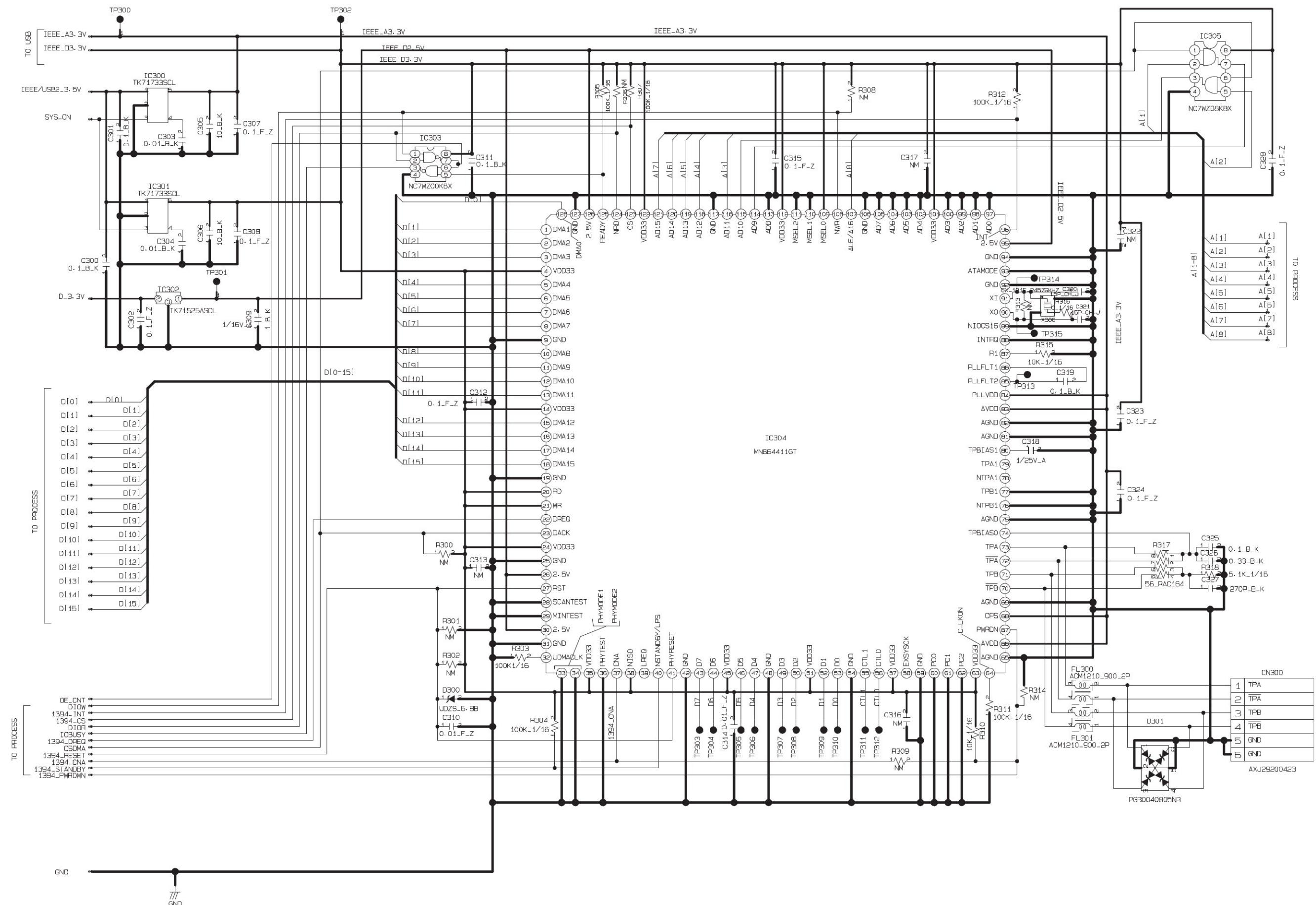


3. Schematics

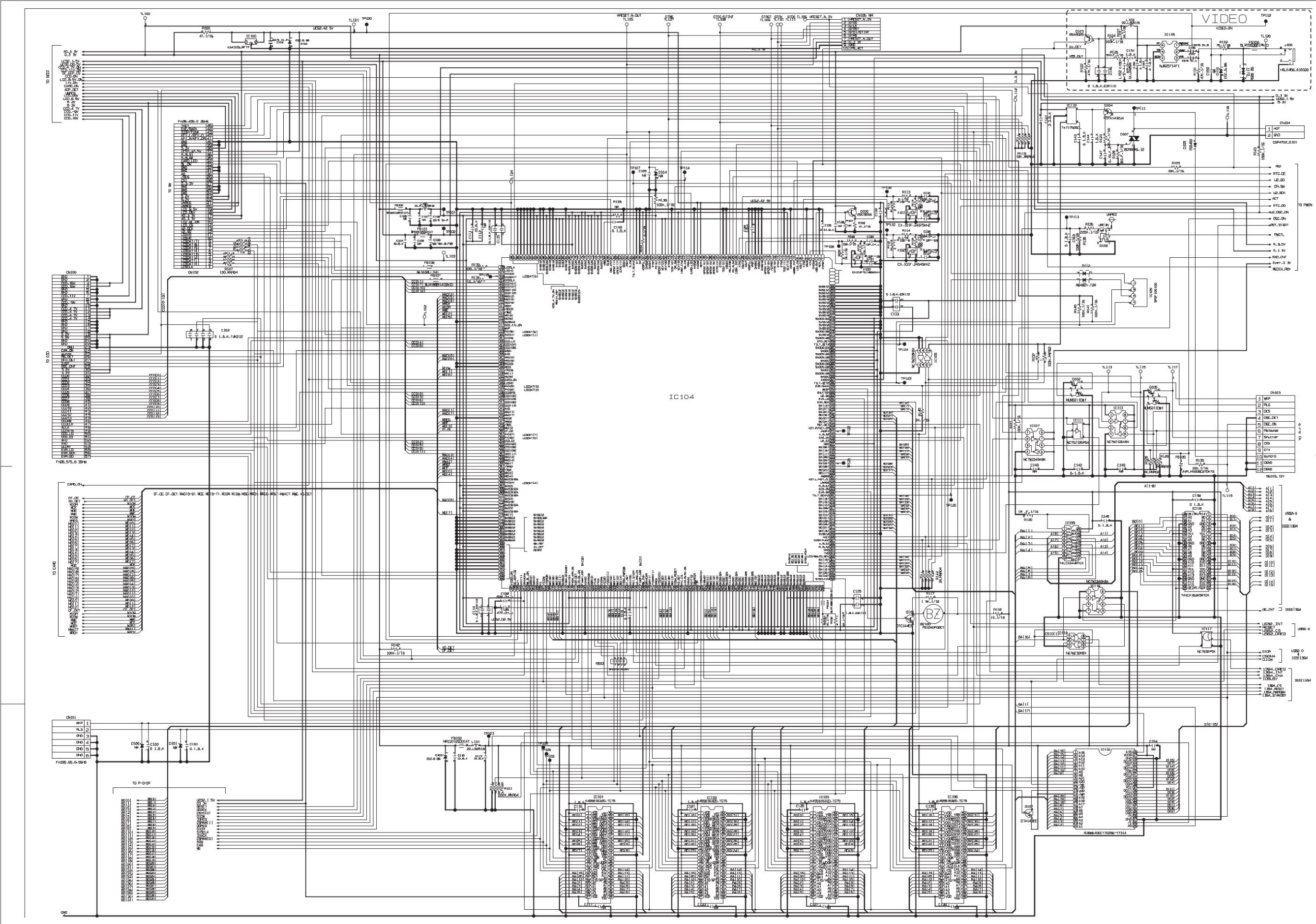
3-6-2. DCDC BLOCK



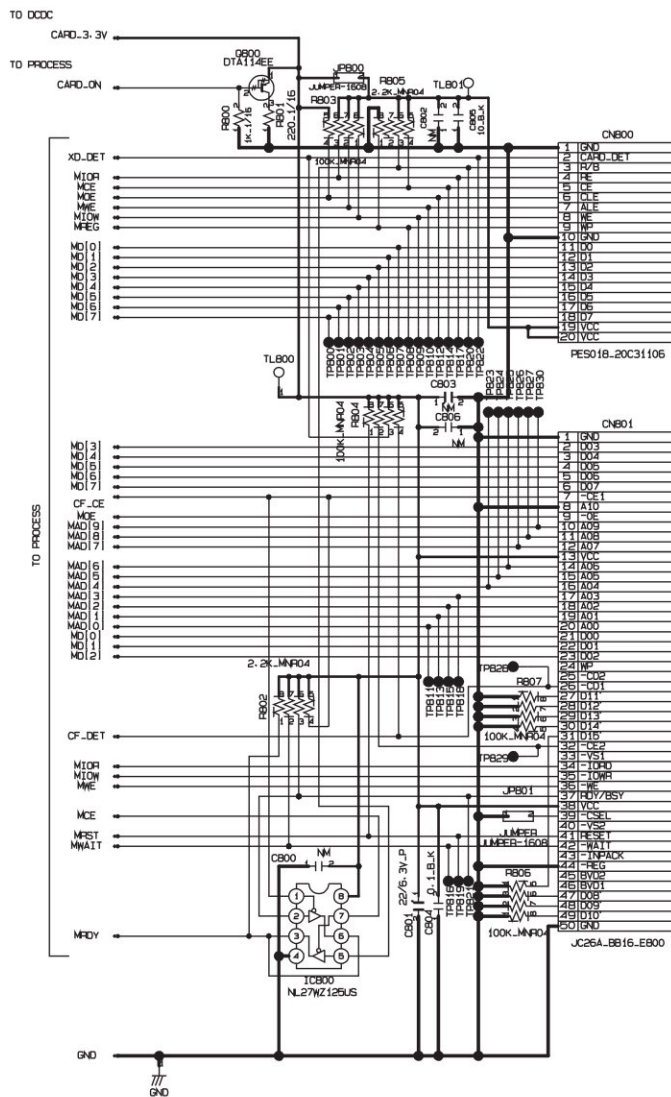
3-6-3. IEEE1394 BLOCK



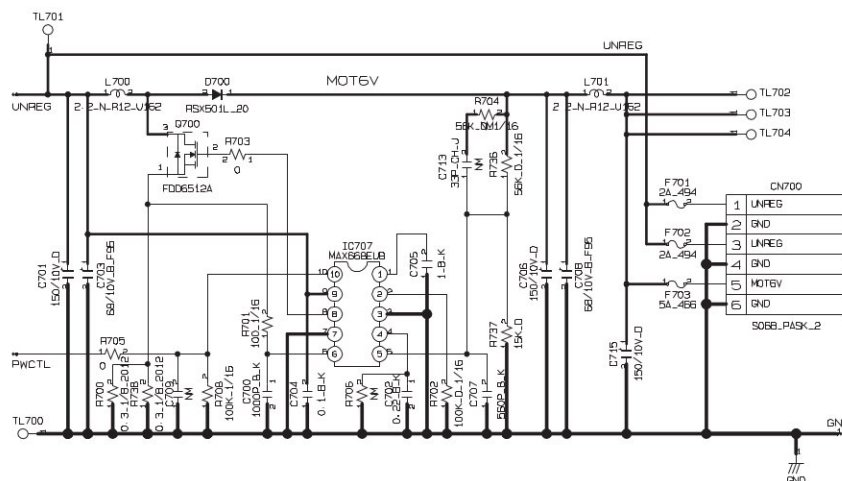
3-6-4. PROCESS BLOCK



3-6-5. CARD BLOCK

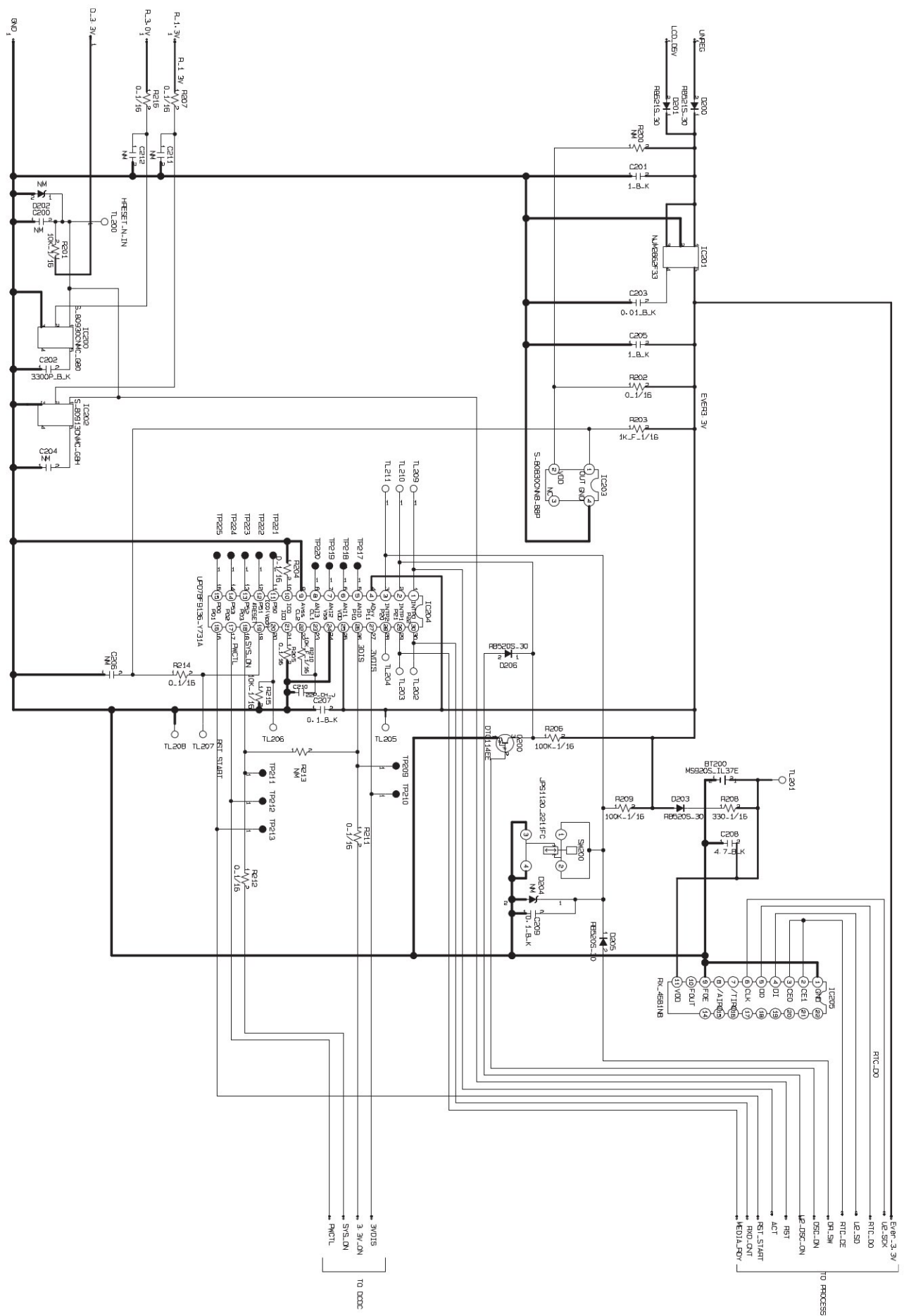


3-6-6. DCDC BLOCK (CAMERA BODY)



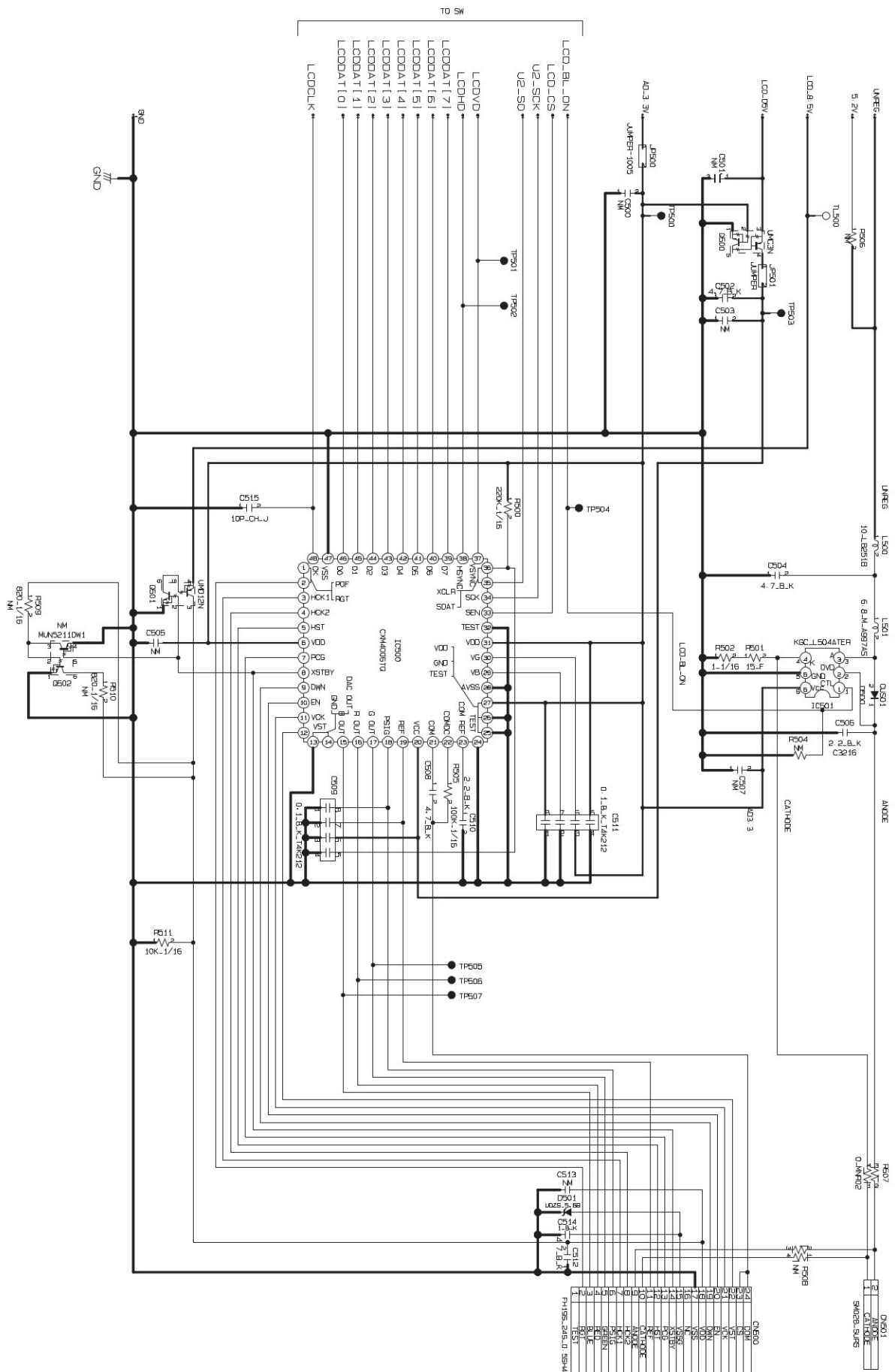
FinePix S3Pro Service Manual

3-6-8. PWON BLOCK



FinePix S3Pro Service Manual

3-6-10. LCD BLOCK

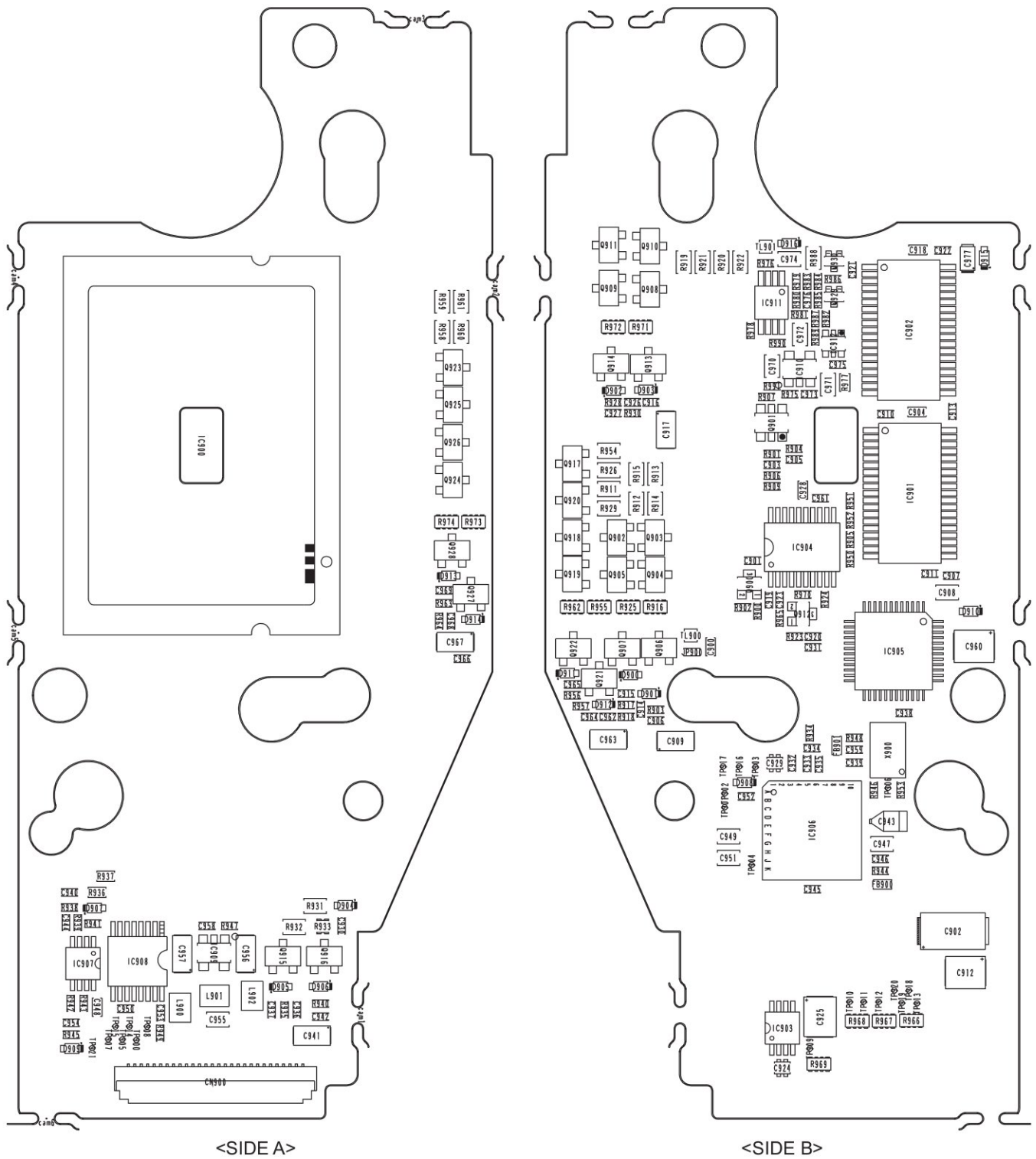


FinePix S3Pro Service Manual

[illegible]

3-7. Mounted Parts Diagrams

3-7-1. CCD PWB ASSY



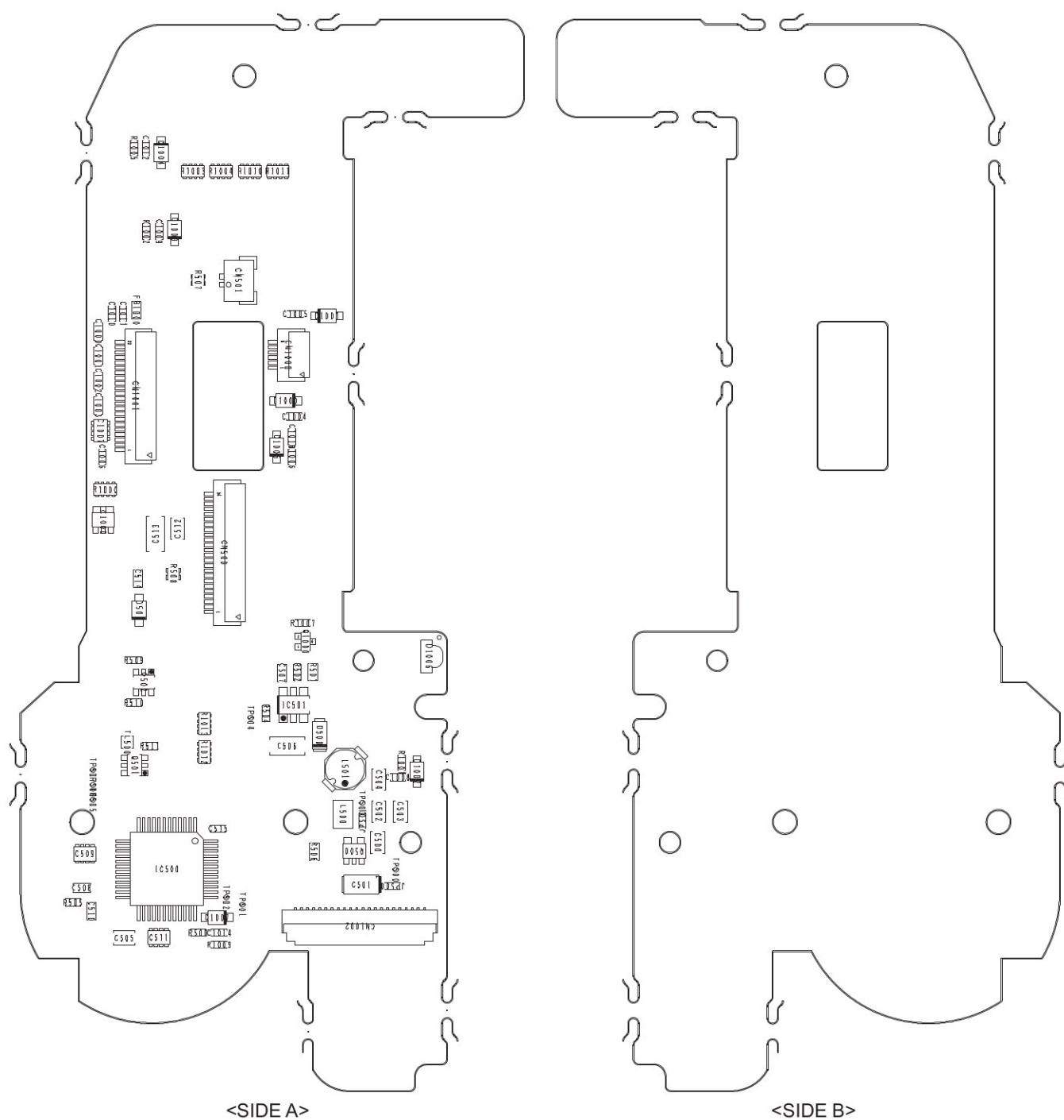
FinePix S3Pro Service Manual

<SIDE A>



3. Schematics

3-7-3. SW PWB ASSY



4. Adjustments

4-1. Important point Adjustment when Replacing Major Parts

When replacing the MAIN PWB ASSY, CAMERA BODY ASSY, CCD HOLDER ASSY, or REAR LCD PANEL, check the items marked with a circle (○) in the table below.

(These adjustments are not required when replacing items other than the units listed in the table.)

No.	Replacing parts Adjustment item	MAIN PWB	CAMERA BODY	CCD UNIT	REAR LCD PANEL
1	CCD Defect correction	○		○	
2	Camera adjustment	○	○	○	
3	Battery voltage adjustment	○	○	○	
4	Video adjustment	○			
5	Rear lcd panel adjustment	○			○
6	Firmware download	Do not use it until there is an instruction.			
7	End setting	Make all adjustments after replacing the above parts.			

4-2. Measuring Instruments Used

Measuring equipment	Remarks
Regulated power supply	For adjustment
Pattern box	PTB450F
Waveform monitor	For function checks
Digital voltmeter	For adjustment
Personal computer	For various adjustments and operational checks (PC-AT compatible, Windows 2000 or XP).
Luminance meter	LS-110 (KONICA MINOLTA) or equivalent
Color thermometer	Color Meter IIIF (KONICA MINOLTA) or equivalent
TV monitor	NTSC TV monitor, minimum resolution 600 lines (for function checks).
Flash meter	For function checks

4-3. Use Jig list

Pats.No	Name	Comment	Remarks
ZJ00006-100	FilterLB140	Camera System adjustments	Common with the DS-30/DS-20/DS-7
ZJ00553-100	AF solid chart	AF adjustment	Common with the FinePix S2 Pro
J18266	AF Adjustment Lens	AF adjustment	Common with the FinePix S2 Pro
ZJ00876-100	CCD defect data (CD-R) Vol.1	CCD Defect correction	Only FinePix S3 Pro *1
FZ05365-100	USB cable	General adjustment	
ZJ00396-100	Lens for inspection	AF inspection	Common with the FinePix S1 Pro
	Lens for adjustment	Camera adjustment	Common with the FinePix S1 Pro
ZJ00213-100	Power cable jig	General Adjustment	Common with the FinePix6800Z
ZJ00853-100	FinePix S3Pro PC adjustment soft	For PC adjustment	Only FinePix S3Pro *1
ZJ00397-100	Standard Drive (microdrive)	Inspection	Common with the FinePix S1 Pro
	AC adapter (AC-5VX)	Adjustment/Inspection	Commercial item
ZJ00684-100	DSC jig driver	For PC setup	Windows 98/Me/2000/XP OS *1
ZJ00398-100	Resolution Chart for High-Definition	For Definition inspection	Common with the FinePix S1 Pro
ZJ00626-100	AF target for inspection	AF inspection	Common with the FinePix S2 Pro
ZJ00611-100	X-Y stage for AF adjustment	AF inspection	Common with the FinePix S2 Pro
ZJ00863-100	S3Pro Battery jig	Battery adjustment	Common with the FinePix S2 Pro
FZ03284-100	Video cable	VIDEO adjustment	Common with the FinePixA310
ZJ00650-100	VIDEO adjustment jig	Video adjustment	Common with the FinePixA310
FZ03983-100	AC Cable (For EG)	Use with VIDEO adjustment jig	Common with the FinePixA310 *2
FZ03982-100	AC Cable (For EU)	Use with VIDEO adjustment jig	Common with the FinePixA310 *2
FZ00330-200	AC Cable (For US/JP)	Use with VIDEO adjustment jig	Common with the FinePixA310 *2

*1 : Data available from WEB site.

*2 : Select one the power cable suitable for each country.

[Modification of an Inspection Lens to an Adjustment Lens]

[It is common with FinePix S1 Pro]

* If an inspection interchangeable lens is used as is, the aperture will change automatically, so there will be no convergence [ISO sensitivity adjustment] and it could result in an error.

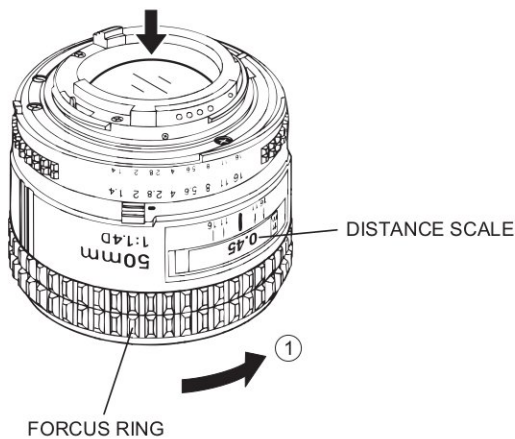
Therefore,

- (1) The CPU signal contact unit inside the lens must be removed.
- (2) The protrusion for mounting on the camera must be removed from the inspection interchangeable lens to prevent it from switching its aperture automatically, and thus modify the lens so it can be used for adjustment.

The modification procedure is shown below.

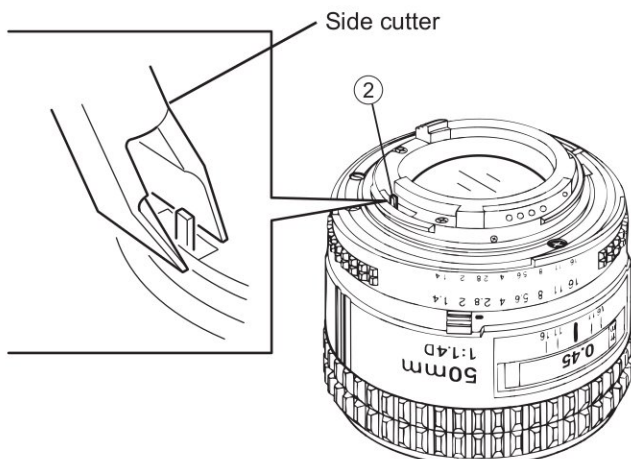
[Step 1]

Turn the focus ring (1) so that the interchangeable lens's distance scale reads 0.45, then place the lens upside down.



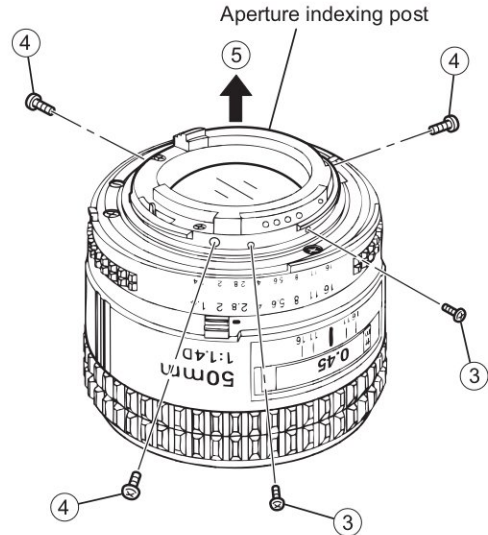
[Step 2]

Cut the stopper for the camera using side cutters, etc.



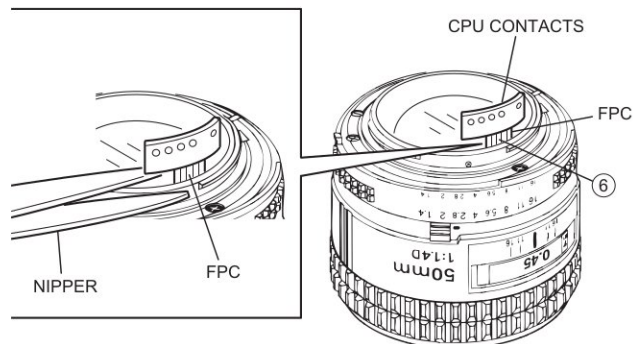
[Step 3]

Remove the screws holding the opening F value linkage guide in the order shown by the circled numbers in the figure below, then remove the opening F value linkage guide (5).



[Step 4]

Cut off the FPC of the CPU signal contacts with scissors, etc.



[Step 5]

Fasten the opening F value linkage guide with the mounting screws.

4-4. Calibration method of pattern box

< Use the pattern box for CAMERA adjustment >

Turn on the power supply in the pattern box.

Afterwards, wait for about ten minutes so that the source of light may stabilize.

(1) Brightness:

160±5cd/m² (with LB140 filter)

No chart, center of pattern box

Konica Minolta brightness meter LS-110 or equivalent

* Calibration method

Place the filter (LB140) against the pattern box. With the filter (LB140) in contact with the brightness meter, adjust the pattern box brightness to 160±5cd/m².

(2) Color temperature:aa

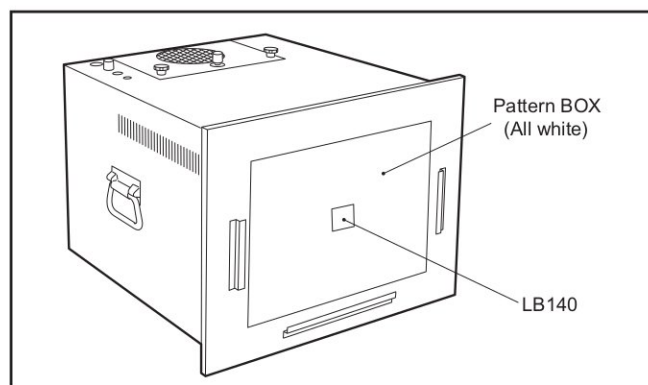
6100±50 K (with LB140 filter)

No chart, center of pattern box

Konica Minolta color meter IIIIF or equivalent

* Calibration method

Place the filter (LB140) against the pattern box. With the filter (LB140) in contact with the color temperature meter, adjust the pattern box color temperature to 6100 ± 50 K.



<Fig. 4-4-1> Calibration method of pattern box

4-5. Adjusting soft installation

4-5-1. Various downloading software decompressions, preservation methods, and notes

The PC adjustment software are in a specified Web server, and both of these are the compression of ZIP form files.

Therefore, after downloading these compression files from the Web server, the decompression of the file is necessary. In the decompression software, if the decompression of the ZIP form can be done, any software is OK.

(Please prepare each one for the decompression software.)

The decompression and the preservation method of the PC adjustment software and the firmware are described to the following.

* The PC adjustment soft decompression and preservation method

<Step1>

The sdjustment software is downloaded from WEB, and software is installed in the PC.

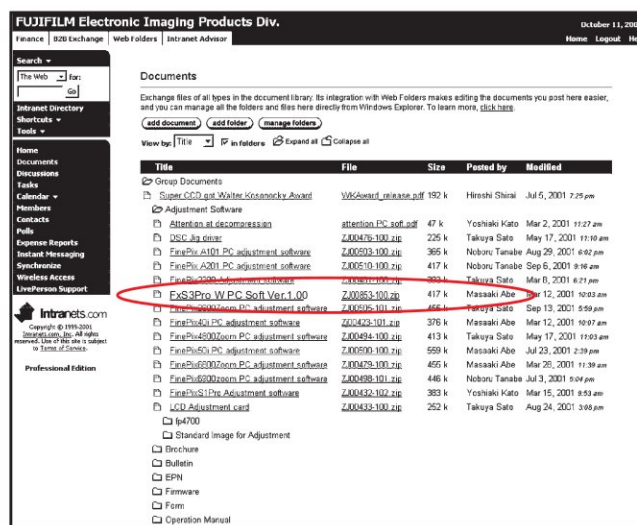
We have uploaded the **"PC Adjustment Software (ZJ00853-100.zip) for "FinePixS3Pro"** on our website: (<http://fujifilm-di.intranets.com/>).

<Step2>

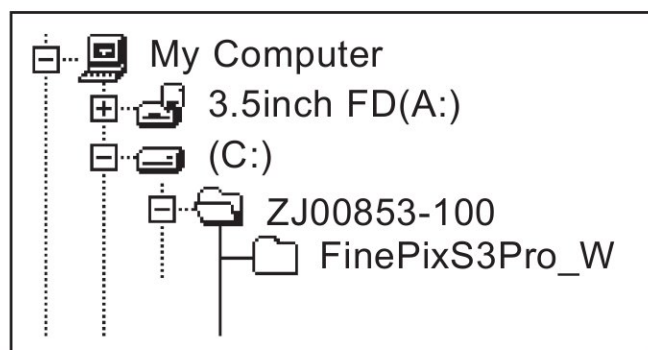
"ZJ00853-100" is a compression of "ZIP type" file.

The **"FinePix S3Pro_W"** folder can be done by extracting it by "Compression software".

Copy the "FinePix S3Pro" and "SU-500" folder to the "C" drive on the Adjustment PC.



<Fig. 4-5-1> Fujifilm-di.intranets Screen



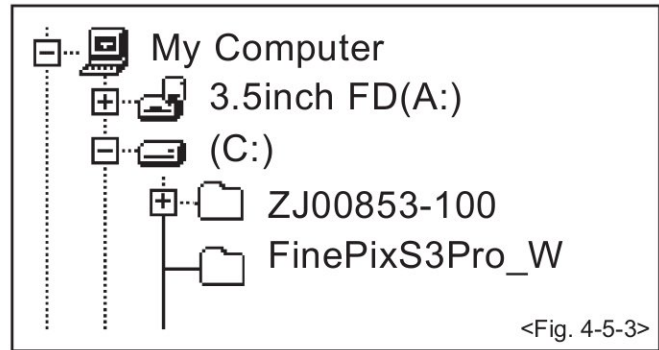
<Fig. 4-5-2>

<Step3>

When all the folders have been copied to the C:drive, double-click on [C:\FinePixS3Pro_W\FFW.exe] to start the adjustment software.

(Note)

- * Specify the preservation drive for C drive if it is decompression software which can specify the preservation drive.
- * Similarly, defrost without making a new folder if it is decompression software which can be defrosted without making a new folder.
- * Defrost simply if the decompression software which you have cannot specify the drive specification and the folder making.



<Fig. 4-5-3>

[Caution][Important]

- (a) PC adjustment software can not start when there is folder of FinePixS3Pro_W in folder named ZJ00853-100. Please preserve the folder of FinePixS3Pro_W right under C drive.
- (b) Please do not change the foldername named FinePixS3Pro_W. PC adjustment software can not start when foldername is changed.

4-5-2. Installation of DSC jig driver

- * Since this camera uses the USB for communications with the personal computer, in order to start the PC adjustment software, [the DSC jig driver] needs to be installed in the personal computer beforehand.
 - * The DSC jig driver is the same as that for the FinePix S7000, so if this jig driver software is already installed in the personal computer, it is not necessary to install it.
- The procedure is given below.

<Step 1>

DSC jig driver(ZJ00684-100.ZIP) is downloaded from Web server (<http://fujifilm-di.intranets.com/>).

<Step 2>

Defrost the downloaded compression software

<Step 3>

Double-click setup.exe in the folder of defrosted ZJ00684-100 and install Fuji FILM DSC Jig Driver as follows.

<Step 4>

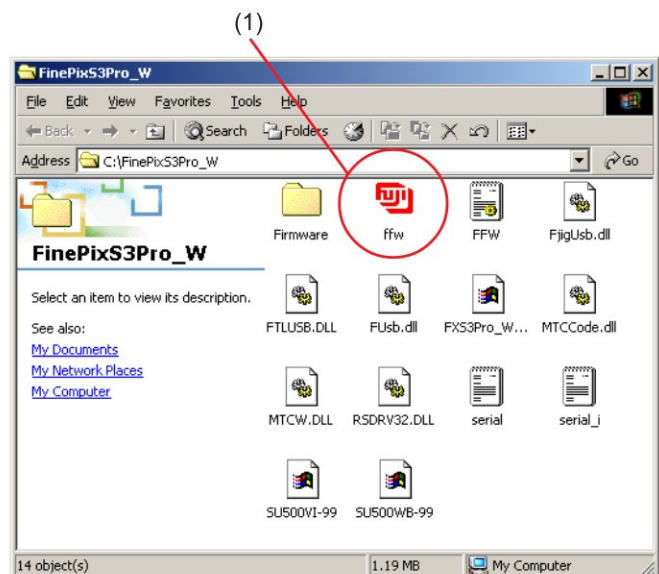
Install the software in [C:\ProgramFiles\Fjig] according to the instructions on the PC's screen.



<Fig. 4-5-4>

4-5-3. Adjusting soft initiation method

When the folder has been copied to the C drive, double-click on the file C:\FinePixS3Pro_W\ffw.exe (Fig.4-5-5) to start the adjustment software.



<Fig. 4-5-5>

4-6. Initial Settings of the Adjustment Software

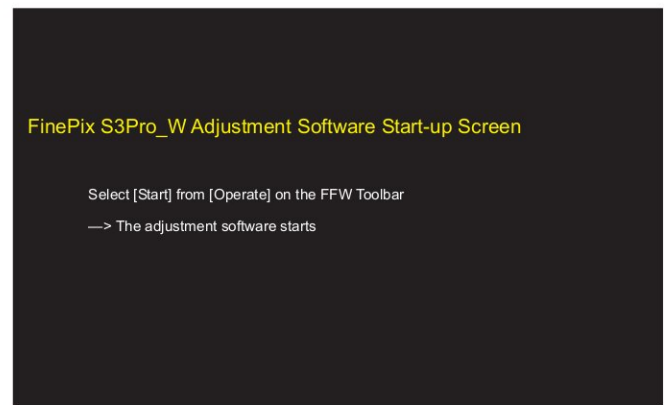
* The initial settings are already written in the "FFW.ini" file, therefore perform the following procedure to the letter.
Note that, if you change file names, the software will not start up.

* The initial settings of steps 3 to 6 are already set in the "FFW.ini" file. Therefore, you need only to check them.

* Do not rewrite the user program (FxS3Pro_W_0.ff). If the program is rewritten, the adjustment software will not startup.

<Step 1>

Double-click on the "FFW.exe" execute file of the adjustment software to open the "FFW Startup" screen (Fig. 4-6-1).

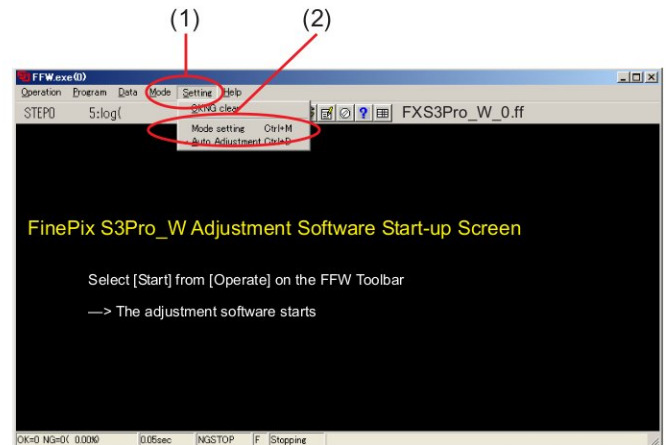


<Fig. 4-6-1>

<Step 2>

Click on "Settings" ([1] in Fig. 4-6-2) in the menubar of the startup window.

Then, select "Mode setting" ([2] in Fig. 4-6-2) from the pull-down menu that appears.



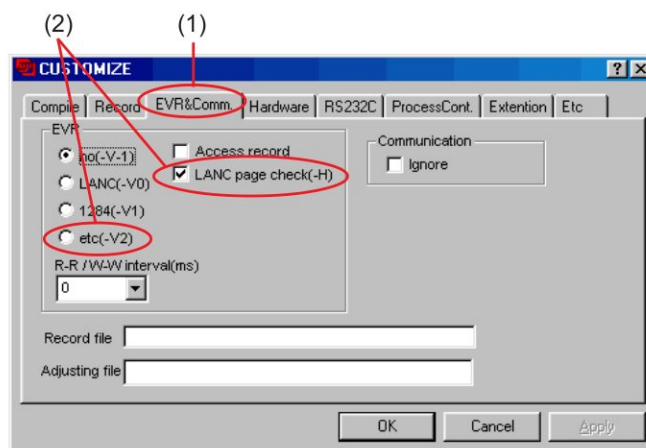
<Fig. 4-6-2>

4. Adjustments

<Step 3>

Select the "EVR & Comm" tab ([1] in Fig. 4-6-3) in the "Customize" dialog box that appears.
Set the "EVR" items ([2] in Fig. 8) as follows.

Item	Details
etc (-V2)	Check
LANC page	Check

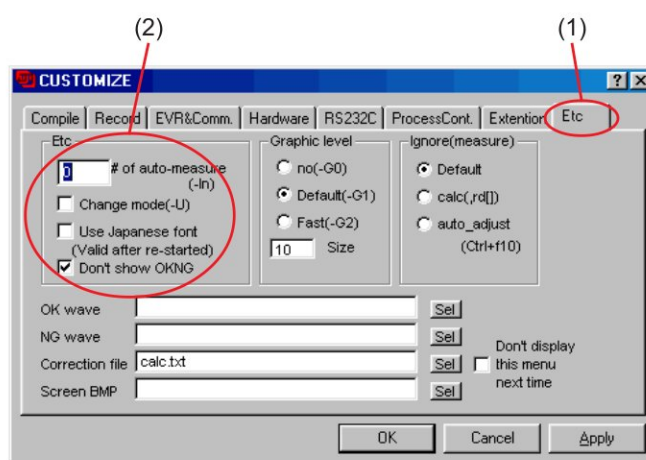


<Fig. 4-6-3>

<Step 4>

Select the "Etc" tab ([1] in Fig. 4-6-4) in the "Customize" dialog box that appears. Set the "Etc" items ([2] in Fig. 4-6-4) as follows.

Item	Details
# of auto measure (-In)	0
Change mode (-U)	Do not check
Use Japanese font (Valid after re-started)	Do not check
Don't show OK NG	Check or Do not check



<Fig. 4-6-4>

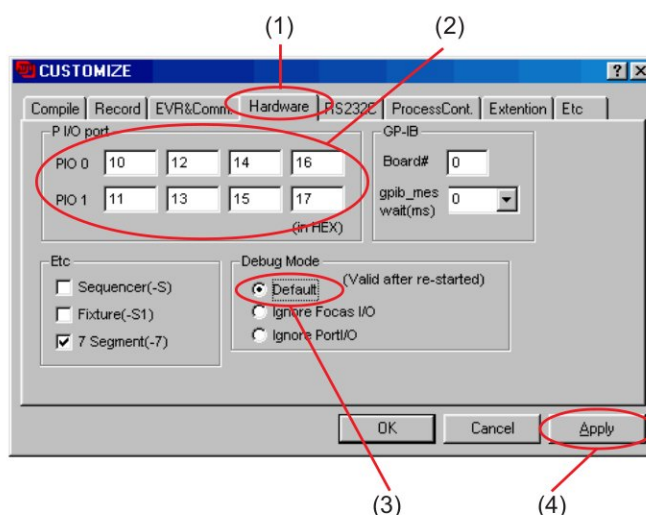
<Step 5>

Select the "Hardware" tab ([1] in Fig. 4-6-5) in the "Customize" dialog box that appears.
Input the values for PI/O port and P Board ([2] in Fig. 4-6-5).

PIO 0	10	12	14	16
PIO 1	11	13	15	17

Set the "Hardware" items ([3] in Fig. 4-6-5) as follows.

Item	Details
Debug Mode	Select [Default]



<Fig. 4-6-5>

<Step 6>

Once the above settings have been made, click on "Apply" ([4] in Fig. 4-6-5) in the "Customize" dialog box to complete setup.

This applies the setup, therefore setting is unnecessary from the next time forward.

[Note]

If [Disable OKNG display] on the PC screen (Fig. 4-6-4) is set to OFF, the PC screen displays [OK] if adjustment is OK, and [NG] if adjustment is NG (either setting is OK).

Cautions When Adjusting

*1) FinePix S3Pro cannot adjust the EVR data reading and writing.(Details are right tables.)

*2) End Setting returns the camera from the Jig mode to the Product Mode.

End Setting is required when using the PC adjustment software, even when replacing boards or units other than those noted above. Failure to run End Setting will prevent identification as Mass Storage.

When the camera is connected to the PC, and prevent communication with the PC.

*3) When all adjustment have been completed, always check that the camera is identified as Mass Storage.

Menu	Command	Details
Operation	Start	Program start
	Stop	Program stop
	Temporary stop	Temporary program stop
	Step 0	Do not use
	End	Terminate program
Program	Reload	Program (*.ff) reload
	Select	Program (*.ff) select
	Edit	Program (*.ff) edit
Data	ad[]	Do not use
	rd[]	Do not use
	SW	Do not use
	fsw	Do not use
	EVR	Do not use **1)
Mode	File record	Do not use
	NGSTOP	Program stopped if
		adjustment is NG
	STEP	Do not use
	LINE	Do not use
	AUTO	Do not use
Setting	OKNG clear	Do not use
	Mode set	Sets up mode
	Automaticadjustment	Execution setting for Auto Adjust in user program
Help	Help	Basic software help
	FF help	User program help
	Focus	Not used with this adjustment software
	Version	Version information for basic software

<Table> FFW.exe Commands

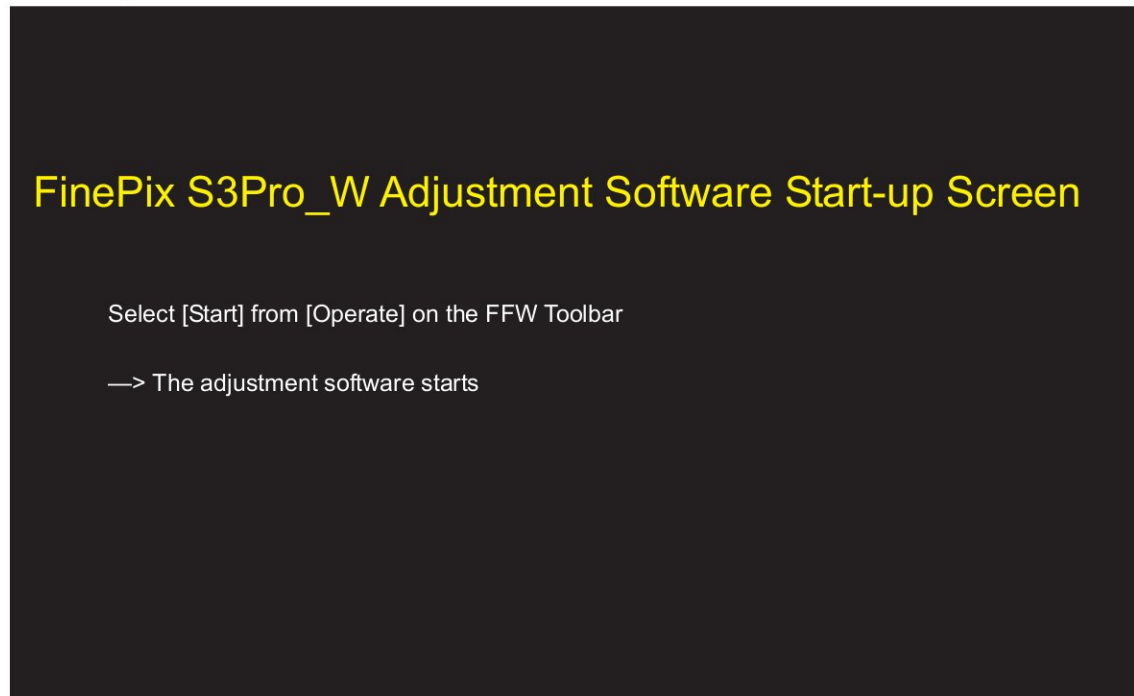
4-7. Starting the Adjustment Software

<Step 1>

Double-click on [FFW.EXE] (Fig. 4-5-3) in the folder copied to the C drive (see '4-5-1. Various downloading software decompressions, preservation methods and notes') to display the adjustment software start-up screen.

<Step 2>

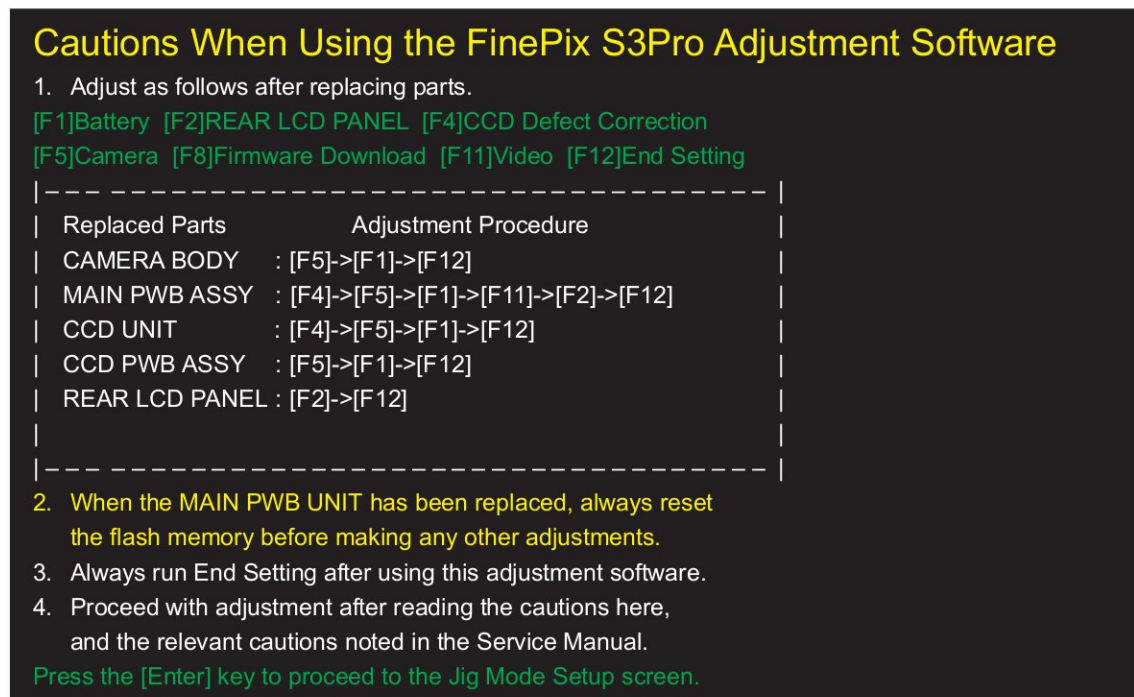
Run the adjustment in accordance with the instructions on the screen.



<Fig. 4-7-2>

—> The [Cautions When Using the Adjustment Software] screen appears.

<Step 3>



<Fig. 4-7-2>

—> The [Jig Mode Setup] screen appears.

<Step 4>

FinePix S3Pro Jig Mode Setup Procedure

- (1) Mount the adjustment lens on the S3Pro.
- (2) Set the focus ring on the adjustment lens to infinity.
- (3) Set the aperture ring on the adjustment lens to F5.6.
- (4) Set the mode dial to M mode.
- (5) Set the focusing mode switch to MF.
- (6) Open the slot cover.
- (7) Connect the USB cable to the camera.
- (8) Supply 6.00 volts to the camera from the S3Pro battery jig.
- (9) Switch-ON the camera power while pressing the shutter button for vertical shooting.
- (10) Check that the shutter speed is displays on the LCD of the camera body.

Press the [Enter] key after completing the procedure of (1)-(10).

<Fig. 4-7-3>

—> The [Firmware version check] screen appears.

<Step 5>

FirmWare = 1.00

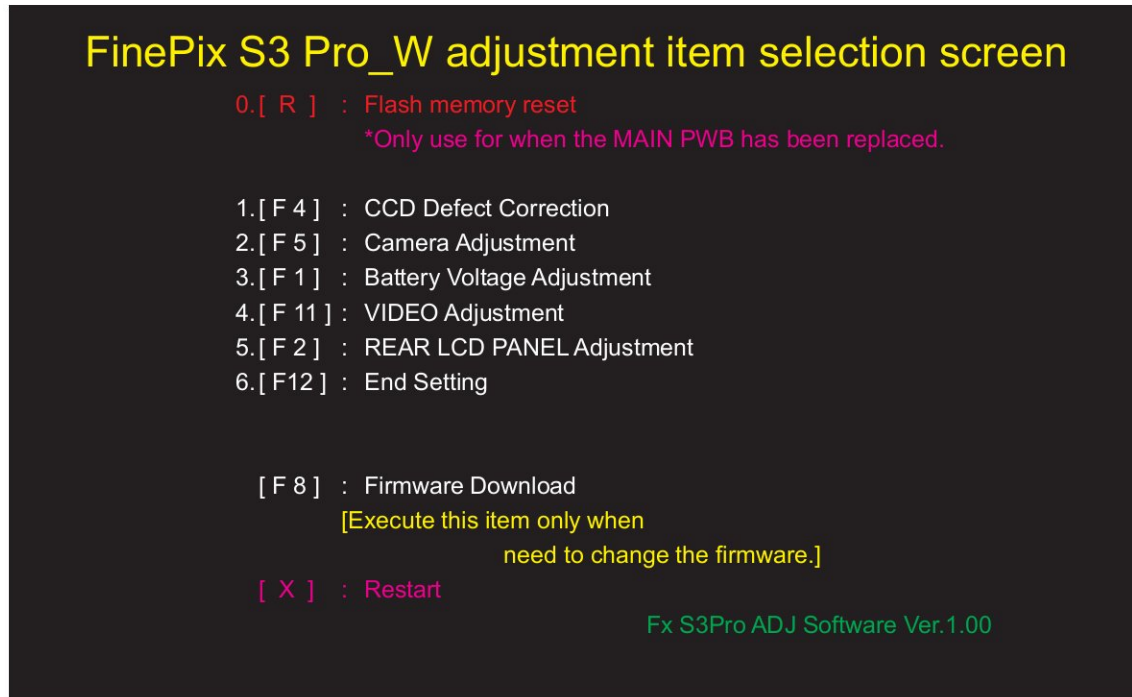
Vendor Name =FUJIFILM
Manufacturer =FUJIFILM
ProductName =FinePix
Device Type =CAMERA
SerialNo =Y-731^^^^040707C0PX0000000001
Frame Work =1.00

Please download a new version if it is necessary to download the firmware.
Advance to the adjustment item selection screen when press the [Enter] Key of PC.

<Fig. 4-7-4>

—> The [Adjustment Items Selection] screen appears.

<Step 6>



<Fig. 4-7-5>

<Note>

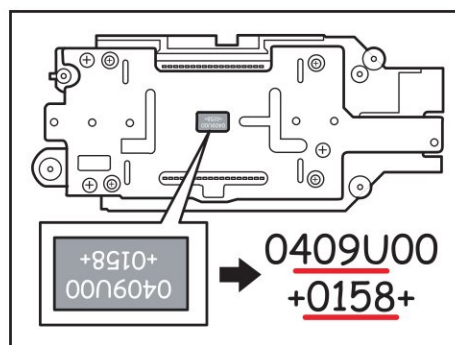
- (1) 'FxS3Pro W PC Soft Ver.1.00' at the bottom-right of the screen indicates the version number of the adjustment software.
- (2) After running firmware download, other adjustments may be required depending on the content of the download software. In such cases, the items to be adjusted, and the sequence of adjustment, will be indicated separately.
- (3) After starting the adjustment software and beginning communication with the camera, always run End Setting following adjustment and before returning the camera to the customer. If the End Setting is not run, the PC will not recognize the camera when the two are connected.
Reason: As the camera will remain in the Jig mode (repair mode), it will not be recognized with the normal camera drivers.
- (4) When the adjustment is interrupted after the [X]:Restart key is pushed, it remains about the Jig mode.

4-8. [F4] : CCD Defect Correction

CCD defect correction is required when the CCD UNIT or MAIN PWB ASSY is replaced.

[Method of acquiring CCD data]

1. When you exchange CCD UNIT
--> It is attached to CCD UNIT.
2. When you exchange MAIN PWB ASSY
--> Need to be create the CCD data floppy disk.
* The following example assumes the use of the serial No. shown at right.



<Fig. 4-8-1>

<Step 1>

Read the serial number of CCD UNIT.

The numbers shown at right are as follows.

First line: 0409U00 (seven digits)

Bottom line: 0158 (four digits)

The name of the CCD data file containing this number is "**409U0158.dat**".

* Use the 2-5th digit from the first line.

* Use the 1-4th digit from the Bottom line.

Cautions:

1. The S3Pro uses 2 types of defect data file.
The file extensions used for CCD defect data are ".dat" and ".kiz".
Windows may be set to hide file extensions. If so, change the Windows settings so that file extensions are displayed.
2. In addition to numbers, letters are also used in the CCD serial No. The data file name is instructed in the same manner in this case.
3. Ensure that the CCD serial No. is read correctly. If the file name is read incorrectly CCD data for another camera will be loaded when this file is used.

<Step 2>

Download the ZIP file of top four digits from Web server (<http://fujifilm-di.intranets.com/>).

Open [ZJ00835-100] in the CCD defect data folder, and download "409U.zip".

<Step 3>

Decompress "409U.zip".

--> "409U folders" including "**409U0158.dat**" and "**409U0158.kiz**" is made.

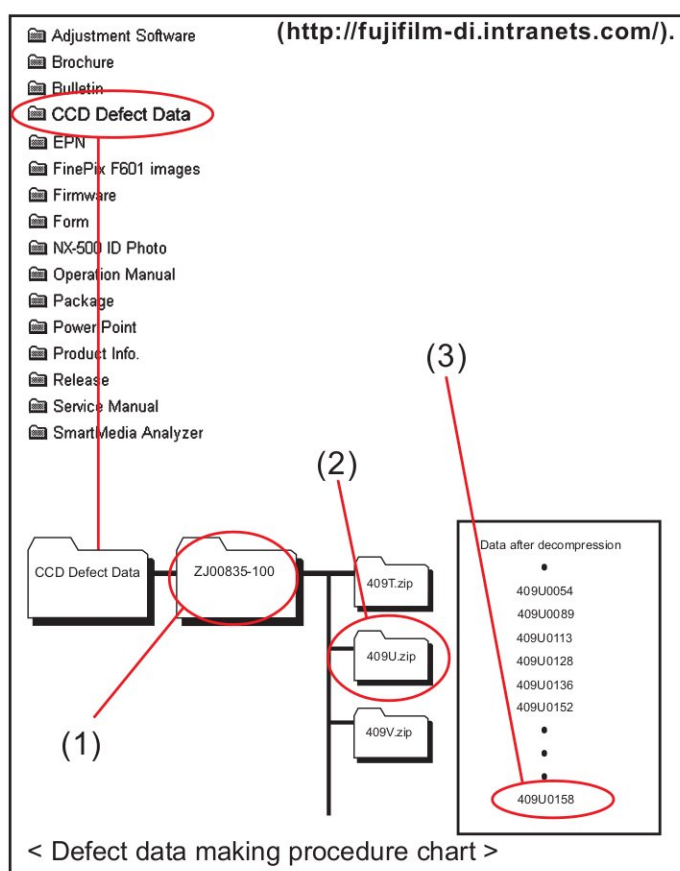
<Step 4>

Insert a writable floppy disk into the floppy disk drive on the computer.

<Step 5>

Open in "409U folders", search for "**409U0158.dat**" and "**409U0158.kiz**", and copy it onto the floppy disk.

Caution: Do not create a folder on the floppy disk when copying the data.



< Adjustment >

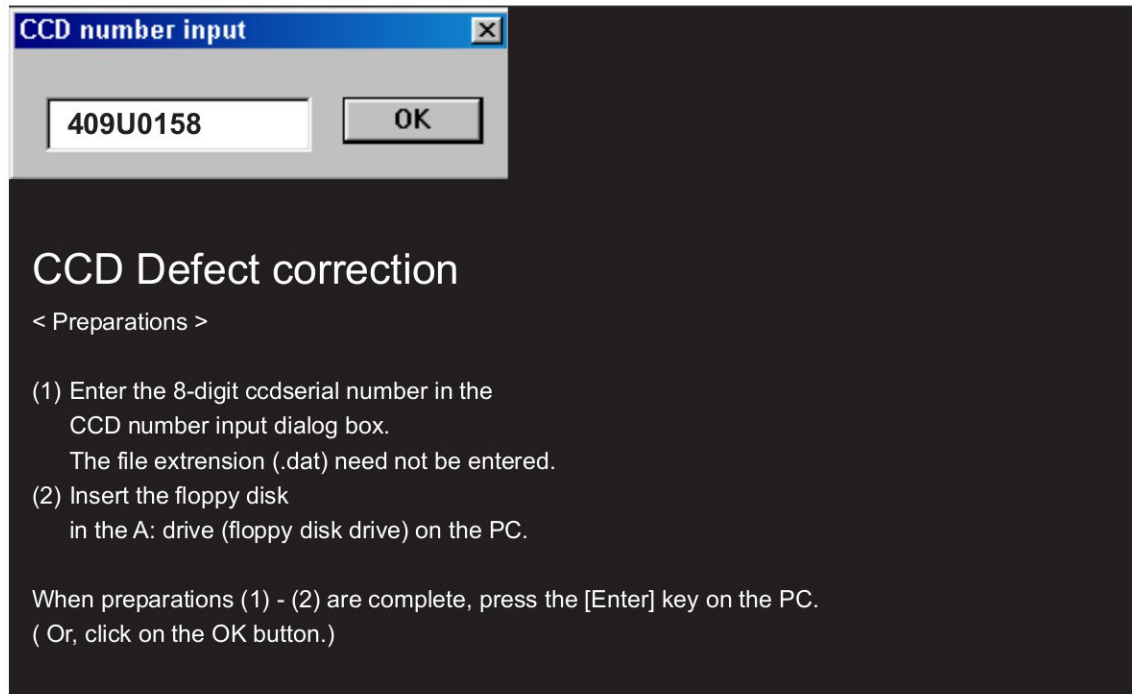
<Step 1>

Select [F4] CCD Defect correction on the [Adjustment Items Select] screen.

--> The [CCD Defect correction Start] screen appears.

<Step 2>

Run the adjustment in accordance with the instructions on the screen.

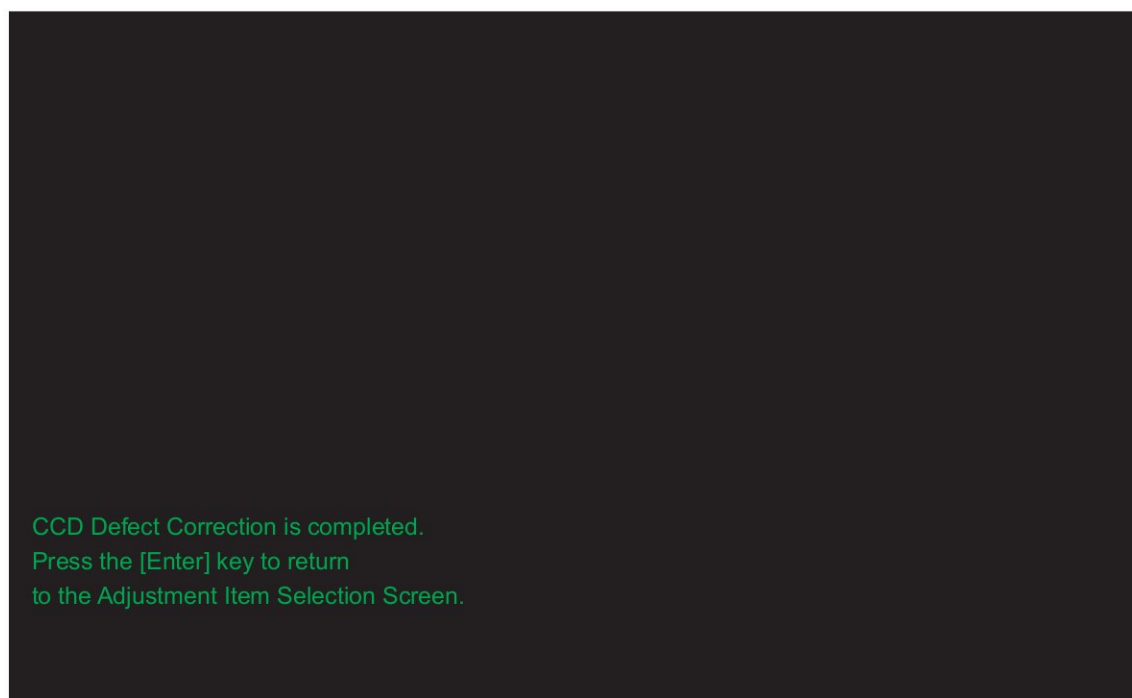


<Fig. 4-8-2>

--> Write the adjustment data to the flash ROM when adjustment has been completed correctly.

--> The [CCD Defect Correction Complete] screen appears.

<Step 3>



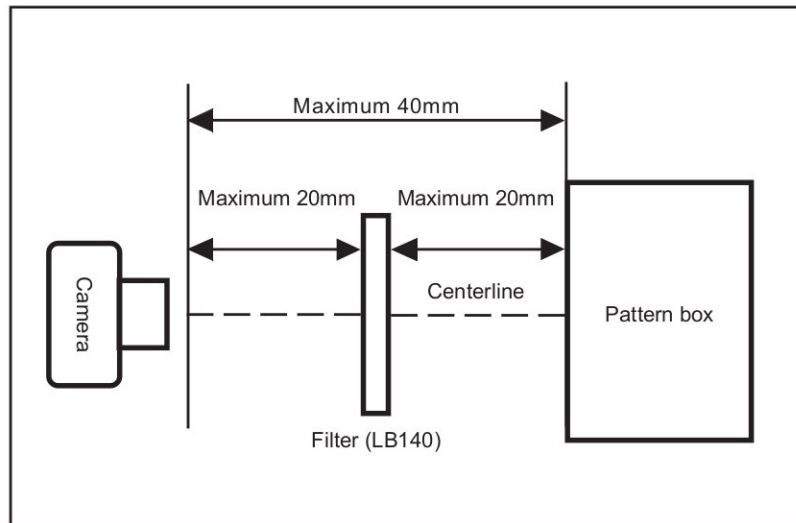
<Fig. 4-8-3>

4-9. [F5] : CAMERA Adjustment

(adjustment for reduced aperture sensitivity, ISO sensitivity adjustment, white balance adjustment, offset level adjustment)

< Setup for Camera Adjustment >

Finish the calibration of the pattern box before CAMERA adjustment.

**<Step 1>**

Select [F5] CAMERA Adjustment on the [Adjustment Items Select] screen.

--> The [CAMERA Adjustment Preparation] screen appears.

<Step 2>

Run the adjustment in accordance with the instructions on the screen.

CAMERA Adjustment

< CAMERA Adjustment Preparations >

- (1) Prepare the LB140 filter.
- (2) Adjust the color temperature of the pattern box (PTB450) to 6100 \pm 50K.
- (3) Adjust the luminance of the pattern box (PTB450) to 160 \pm 5cd/m².
- (4) Fix the camera on a tripod and set it in front of the pattern box.

When preparations (1)-(4) are complete, press the [Enter] key on the PC.

<Fig. 4-9-1>

<Note>

An error will occur during CAMERA adjustment, and adjustment cannot be completed, unless the pattern box is calibrated correctly.

--> The [Camera adjustment with filter] screen appears.

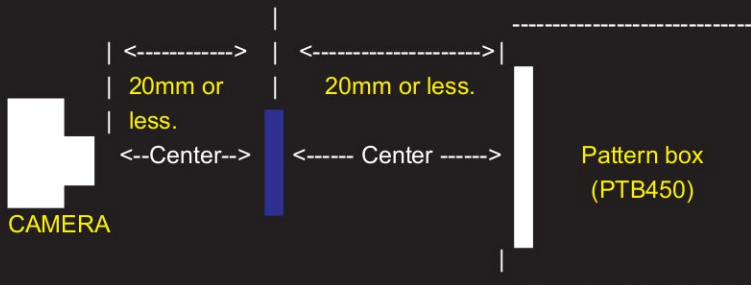
<Step 3>

Camera adjustment with filter

- (1) Set the distance between the camera and pattern box.
- (2) Place the LB140 filter in front of the lens.

When preparations are complete, press the [Enter] key.

LB140 filter



< Setup for CAMERA Adjustment >

<Fig. 4-9-2>

--> The [Camera adjustment without filter] screen appears.

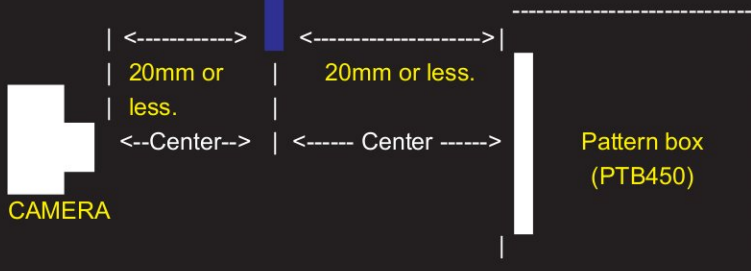
<Step 4>

Camera adjustment without filter

- (1) Set the distance between the camera and pattern box.
- (2) The LB140 filter is not placed in front of the lens.

When preparations are complete, press the [Enter] key.

LB140 filter



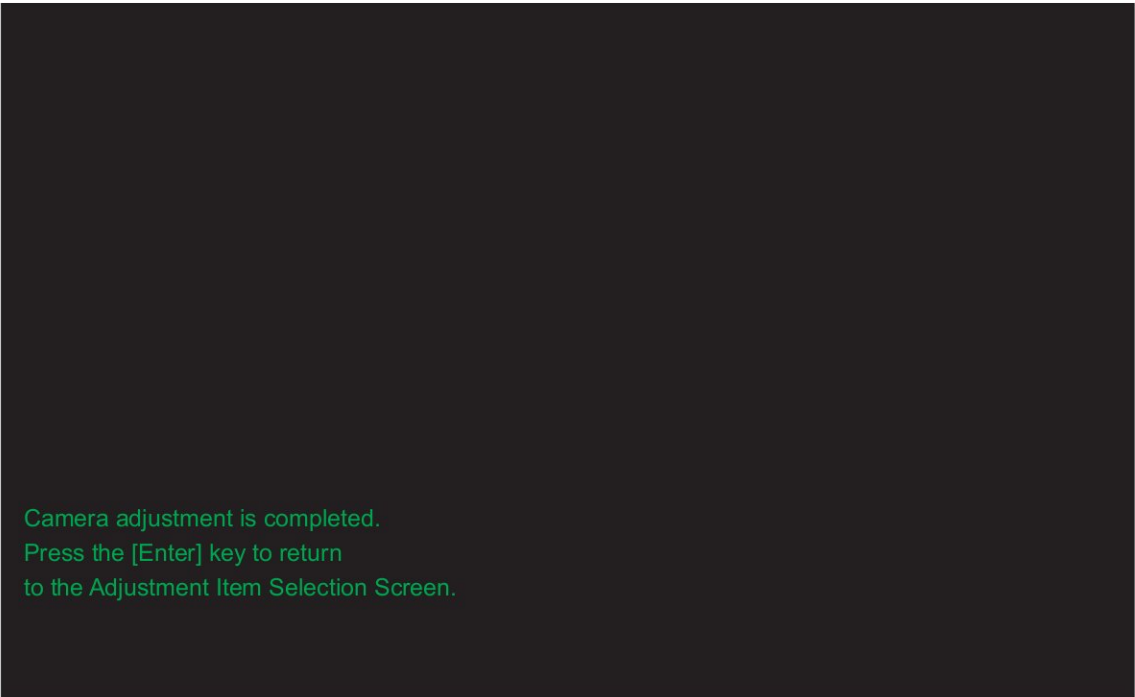
< Setup for CAMERA Adjustment >

<Fig. 4-9-3>

--> Write the adjustment data to the flash ROM when adjustment has been completed correctly.

--> The [CAMERA Adjustment Complete] screen appears.

<Step 5>



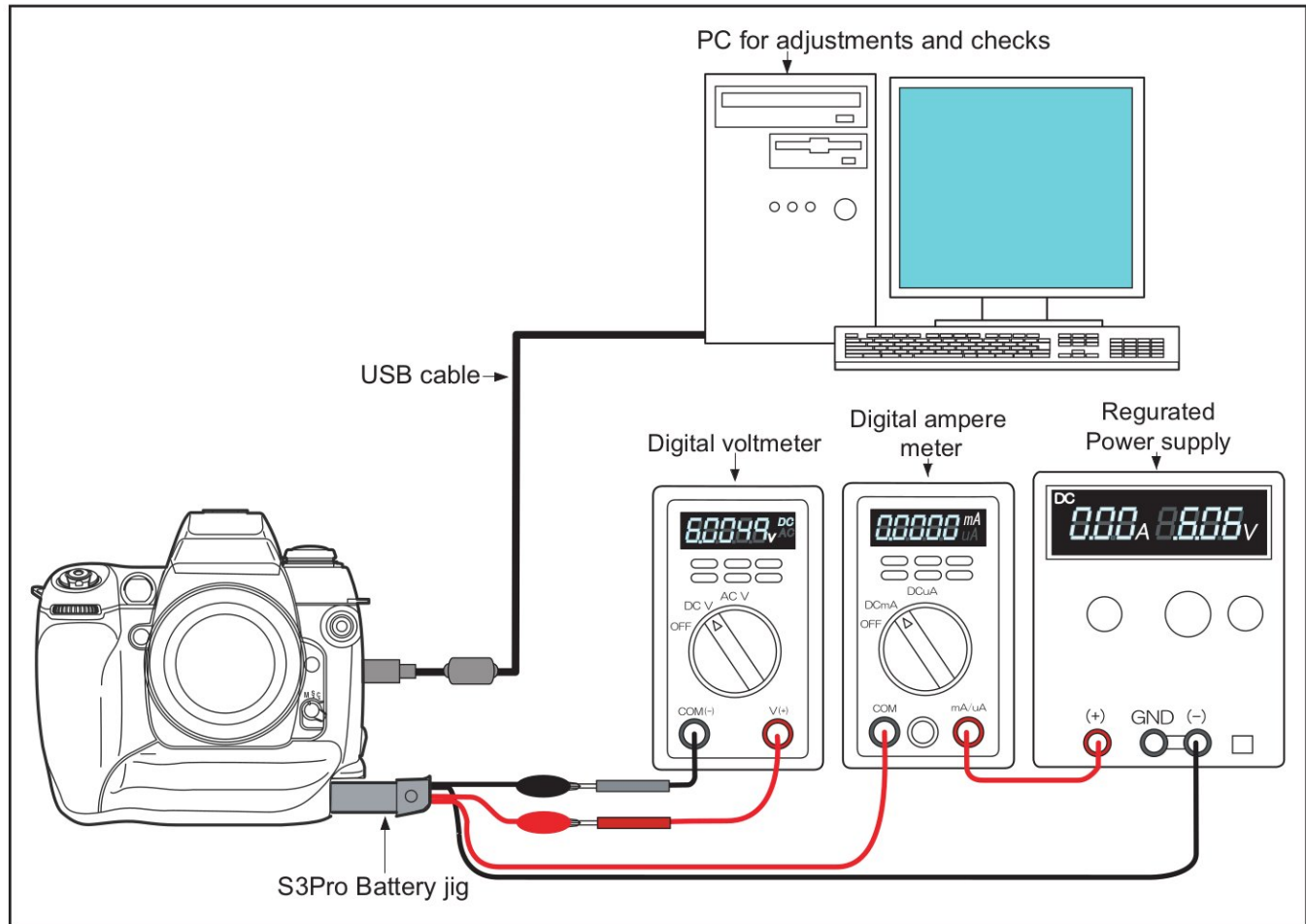
Camera adjustment is completed.
Press the [Enter] key to return
to the Adjustment Item Selection Screen.

<Fig. 4-9-4>

4-10. [F1] : Battery Voltage Adjustment

<Setup for Flash Adjustment>

- (1) When adjusting the battery voltage, supply power (6V) to the camera from the **[S3Pro Battery jig]** before setting the jig mode.
- (2) Always measure input voltage in the vicinity of the DC IN terminal.
- (3) When reducing the voltage, adjust the stabilized power supply to ensure that the voltage is not reduced excessively from the measured point. The adjustment software may produce an error if communication between the adjustment software and the camera is disrupted. Restart the adjustment software in this case.



<Step 1>

Select [F1] Battery Voltage Adjustment on the [Adjustment Items Select] screen.

—> The [Battery Voltage Adjustment Preparation] screen appears.

<Step 2>

Run the adjustment in accordance with the instructions on the screen.

Battery Voltage Adjustment

<Preparations>

1. Check that the S3Pro BATT. jig and the camera are connected.
*If not, return to the Jig Mode Setup screen,
and connect the S3Pro BATT. jig and the camera.
2. Supply power (6.0V) to the camera from the
[S3Pro BATT. jig].

When preparations are complete, press the [Enter] key on the PC.

<Fig. 4-10-1>

—> The [4.56V Input] screen appears.

<Step 3>

Battery Voltage Adjustment

(1) Supply 4.56V (+0.02V/-0.00V).

When preparation is complete, press the [Enter] key.

<Fig. 4-10-2>

—> The [4.40V Input] screen appears.

<Step 4>

Battery Voltage Adjustment

- (1) Supply 4.56V (+0.02V/-0.00V).
When preparation is complete, press the [Enter] key.
Result= 4C
- (2) Supply 4.40V (+0.02V/-0.00V).
When preparation is complete, press the [Enter] key.

<Fig. 4-10-3>

—> The [6.00V Input] screen appears.

<Step 5>

Battery Voltage Adjustment

- (1) Supply 4.56V (+0.02V/-0.00V).
When preparation is complete, press the [Enter] key.
Result= 4C
- (2) Supply 4.40V (+0.02V/-0.00V).
When preparation is complete, press the [Enter] key.
Result= 49
- (3) Supply 6.00V (+-0.05V).
When preparation is complete, press the [Enter] key.

<Fig. 4-10-4>

—> Write the adjustment data to the Flash ROM when adjustment has been completed correctly.

—> The [Battery Voltage Adjustment Complete] screen appears.

<Step 6>

The BATTERY adjustment is completed.

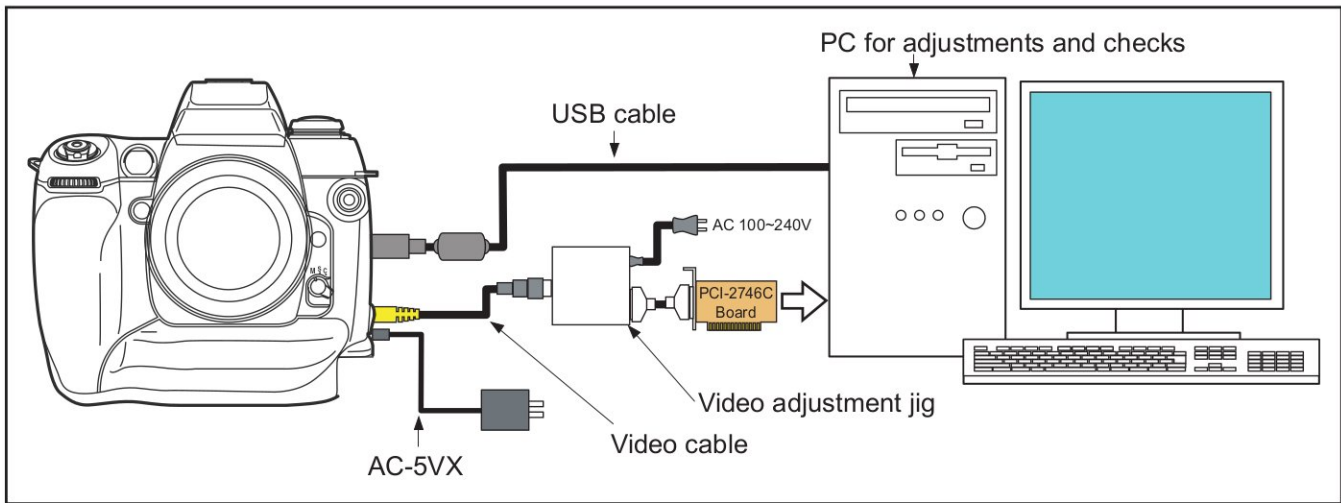
Press the [Enter] key to return to the
Adjustment Item selection Screen.

<Fig. 4-10-5>

4-11. [F11] : Video Adjustment

<Setup for Video Adjustment>

- (1) Set up the PCI-2746C board in the computer as explained in the instructions for the video adjustment jig.
- (2) If the waveform of the brightness signal (Y) or color signal (C) does not appear in the "WAVE No. 0" window during adjustments, check the connections of the video adjustment jig.



<Step 1>

Select [F11] Video Adjustment on the [Adjustment Items Select] screen.

—> The [Video Adjustment Preparation] screen appears.

<Step 2>

Run the adjustment in accordance with the instructions on the screen.

VIDEO Adjustment

< VIDEO Adjustment Preparations >

- (1) Connect the camera and video adj. jig with the video cable.
- (2) Confirm Video jig is connected with the video cable.

When preparations are complete,
press the [Enter] key.

<Fig. 4-11-1>

—> Write the adjustment data to the Flash ROM when adjustment has been completed correctly.

—> The [VIDEO Adjustment Complete] screen appears.

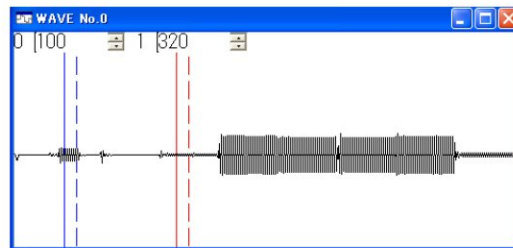
<Step 3>

Video adjustment is completed.

1. Disconnect Video cable from camera.
2. Close the [WaAVE No.0] window by close button.

Press the [Enter] key to return to the Adjustment Item selection Screen.

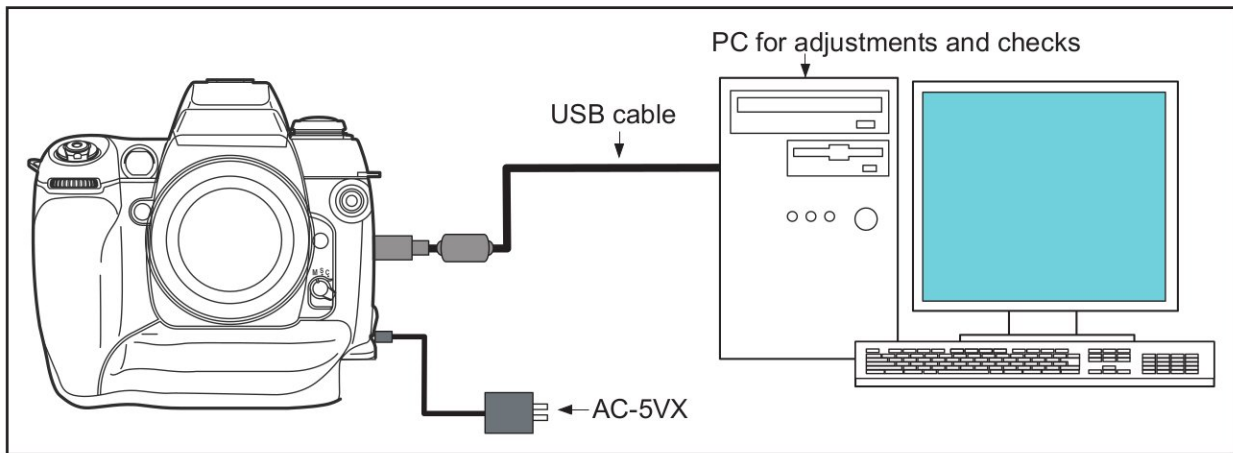
<Fig. 4-11-2>



<Fig. 4-11-3>

4-12. [F2] : Rear LCD Panel Adjustment

<Connections for Rear LCD panel Adjustment>



<Step 1>

Select [F2] Rear LCD Panel Adjustment on the [Adjustment Items Select] screen.

—> The [Rear LCD Panel Adjustment Preparation] screen appears.

<Step 2>

Run the adjustment in accordance with the instructions on the screen.

REAR LCD PANEL Adjustment

Press [UP Arrow] and [DOWN Arrow] of the arrow key to PC as the quadrangle painted out is most clearly displayed in the blacks.

present value = OF

UP Arrow --- To derken

DOWN Arrow --- To bright

The adjustment data is fixed, when press the [Enter] key.

<Fig. 4-12-1>

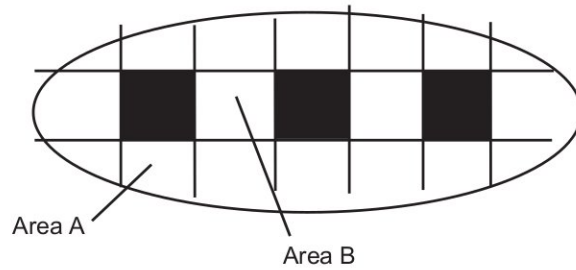
The adjustment pattern is displayed in the Rear LCD Panel (*1).

Adjust the display using the up and down arrow keys on your computer until the pattern is most clearly visible.

—> Write the adjustment data to the Flash ROM when adjustment has been completed correctly.

—> The [Rear LCD Panel Adjustment Complete] screen appears.

- *1 The adjustment pattern shown below appears on the Rear LCD Panel. In the optimum setting, no cross talk(shadowing) appears in the areas adjacent to the black sections (A and B), and the black sections appear completely black.



<Sample of the Rear LCD Panel adjustment pattern>

<Step 3>

REAR LCD PANEL adjustment is completed.

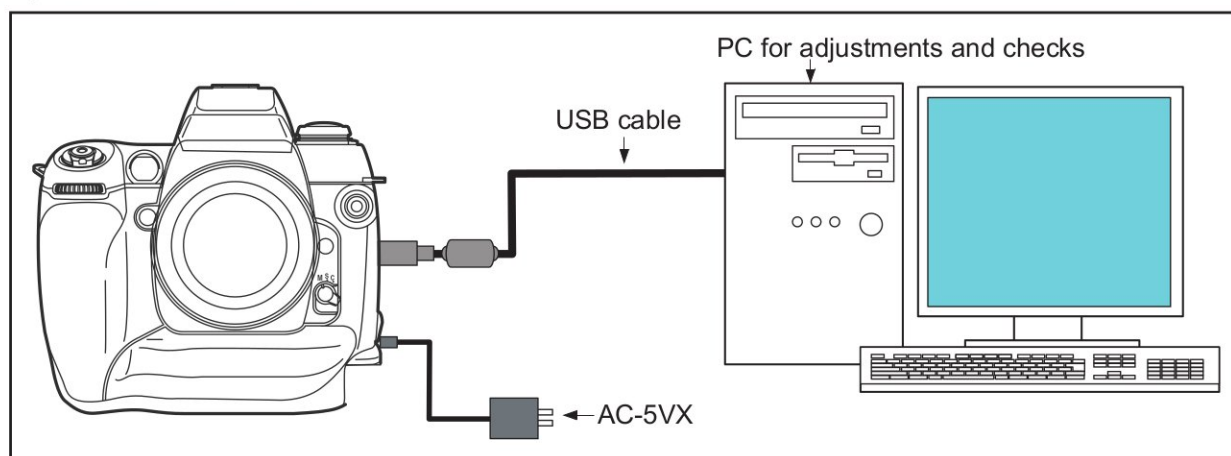
Press the [Enter] key to return to the
Adjustment Item selection Screen.

<Fig. 4-12-2>

4-13. [F8] : Firmware Download

Attention : When the download of the firmware is needed, FUJI SERVICE BULLETIN is contacted from FTYO/QA. Till then, disregard this item.

<Setup for Firmware Download>



<Step 1>

Select [F8] Firmware Download on the [Adjustment Items Select] screen.

—> The [Firmware Download Start] screen appears.

<Step 2>

Run the adjustment in accordance with the instructions on the screen.

Firmware Download

LED lights to orange while downloading the firmware.

Do not turn off the power while downloading the firmware.

c:\FinePixS3Pro_W\Firmwear\SU500.bin

Press the ENTER Key to start download.

<Fig. 4-13-1>

—> The [Download Complete] screen appears if download is successful.

<Step 3>

Firmware download is completed

- (1) Remove the Power cable jig from the camera.
- (2) Turn off power switch.
- (3) Reconnect Power cable jig.
- (4) Switch-ON the camera power while pressing the shutter button for vertical shooting.
- (5) Check that the shutter speed is displays on the LCD of the camera body.

The system returns to the Jig Mode Setup screen when press the [Enter] key.

<Fig. 4-13-2>

4-14. [F12] : End Setting

(Destination setting, USB_ID write, IEEE1394_ID write, Product mode setting)

1. The End setting consist of the following settings.
 - * Destination setting
 - * USB_ID write
 - * IEEE1394_ID write
 - * Product mode setting (mass storage identification)
2. The setting must always be run when the adjustment software is terminated. Failure to run Terminal Setting will prevent identification as Mass Storage when the camera is connected to the PC.
3. USB_ID write details
 - 1) USB_ID write requires that the USB device (in this case FinePix S3Pro) be unique throughout the world. For this reason, each device has a unique ID as determined by the USB standard. If multiple devices with the same USB_ID are connected to a single PC, the PC will be unable to identify each USB device, thus preventing operation.

Item	Details			
Repair Date	Date information is acquired from the PC and written.			
Administrator ID	C(43)			
Repair Station	U.S.	61(a)	SAPPORO	30(0)
	Canada	62(b)	SENDAI	31(1)
	Hawaii	63(c)	TOKYO	33(3)
	Taiwan	64(d)	NAGOYA	34(4)
	England	66(f)	OSAKA	35(5)
	Germany	67(g)	HIROSHIMA	37(7)
	France	68(h)	FUKUOKA	38(8)
	Spain	69(i)		
	Italy	6A(j)		
	Netherlands	6B(k)		
	Belgium	6C(l)		
	Sweden	6D(m)		
	Switzerland	6E(n)		
	Norway	6F(o)		
	Finland	70(p)		
	Singapore	71(q)		
	China	74(t)		
	Ohter	7A(z)		
Repair Serial No.	A serial No. is assigned automatically and written			

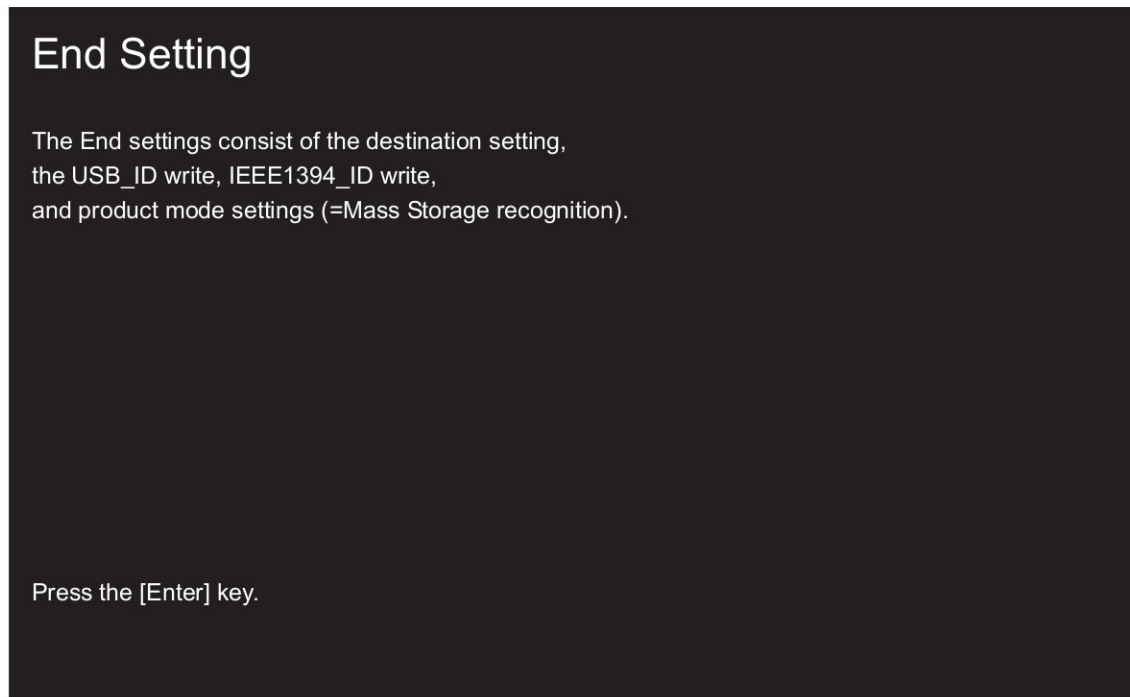
<Step 1>

Select [F12] End Setting on the [Adjustment Items Select] screen.

—> The [End Setting Description] screen appears.

<Step 2>

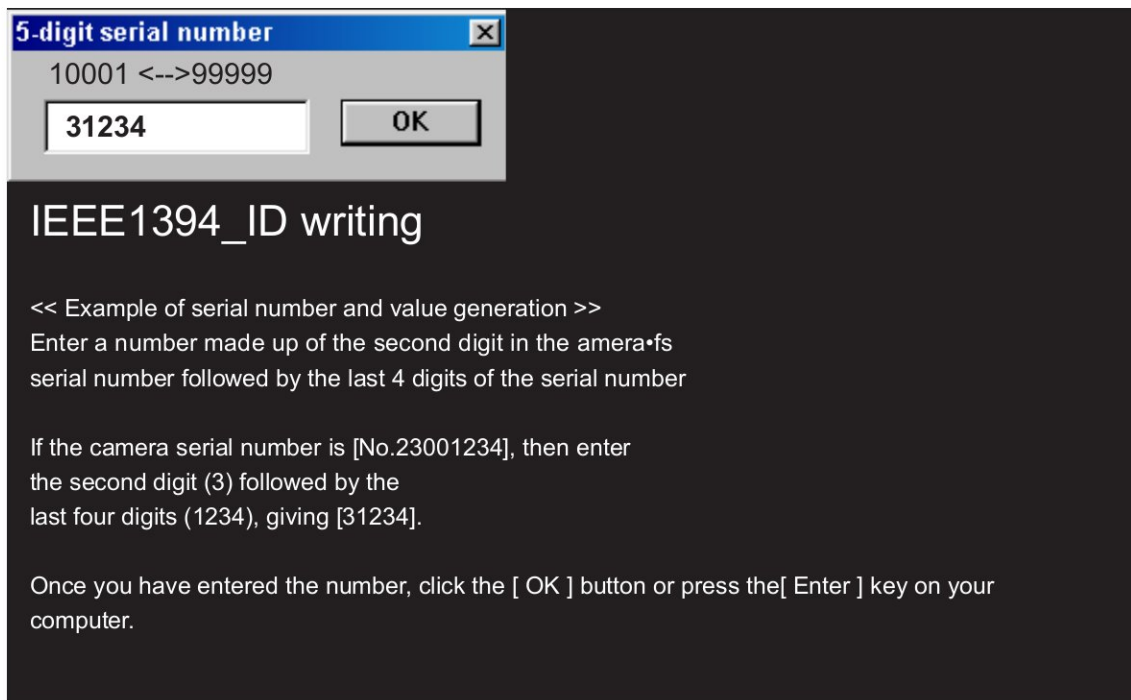
Run the adjustment in accordance with the instructions on the screen.



<Fig. 4-14-1>

—> The [IEEE1394_ID] screen appears.

<Step 3>



<Fig. 4-14-2>

Enter a 5-digit serial number in the serial number input dialog box as directed by the instructions in the "Enter IEEE_ID serial number" window.

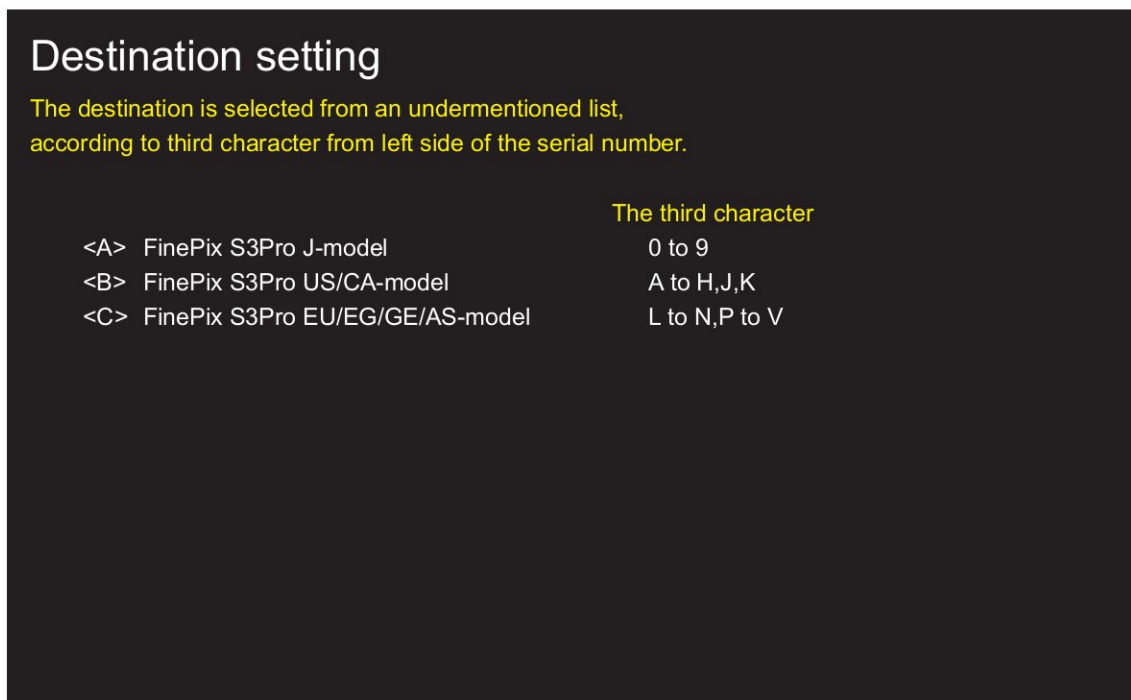
[Example of serial number and value generation]

Enter a number made up of the second digit in the camera's serial number followed by the last 4 digits of the serial number. If the camera serial number is "No.23001234", then enter the second digit (3) followed by the last four digits (1234), giving "31234".

Once you have entered the number, click the [OK] button or press the [Enter] key on your computer.

—> The [Destination Setting] screen appears.

<Step 4>



<Fig. 4-14-3>

<Note>

This example assumes that US-Model has been selected. The following screen therefore appears.

—> The [US-Model selected] screen appears.

<Step 5>

Destination setting

The destination is selected from an undermentioned list, according to third character from left side of the serial number.

	The third character
<A> FinePix S3Pro J-model	0 to 9
 FinePix S3Pro US/CA-model	A to H,J,K
<C> FinePix S3Pro EU/EG/GE/AS-model	L to N,P to V

Selected FinePix S3Pro US/CA-model.

Press the [Enter] key!

<Fig. 4-14-4>

—> The [USB_ID Writing] screen appears.

<Step 6>

USB_ID writing

Repair site ID input menu

The repair site is selected from an undermentioned list.

<A> SAPPORO SS	<M> BRITAIN
 SENDAI SS	<N> GERMANY
<C> TOKYO SS	<O> FRANCE
<D> NAGOYA SS	<P> SPAIN
<E> OSAKA SS	<Q> ITALY
<F> HIROSHIMA SS	<R> NETHERLANDS
<G> FUKUOKA SS	<S> BELGIUM
<H> USA	<T> SWEDEN
<I> CANADA	<U> SWITZERLAND
<J> HAWAII	<V> NORWAY
<K> TAIWAN	<W> FINLAND
	<X> SINGAPORE
<L> CHINA	<Z> OTHERS

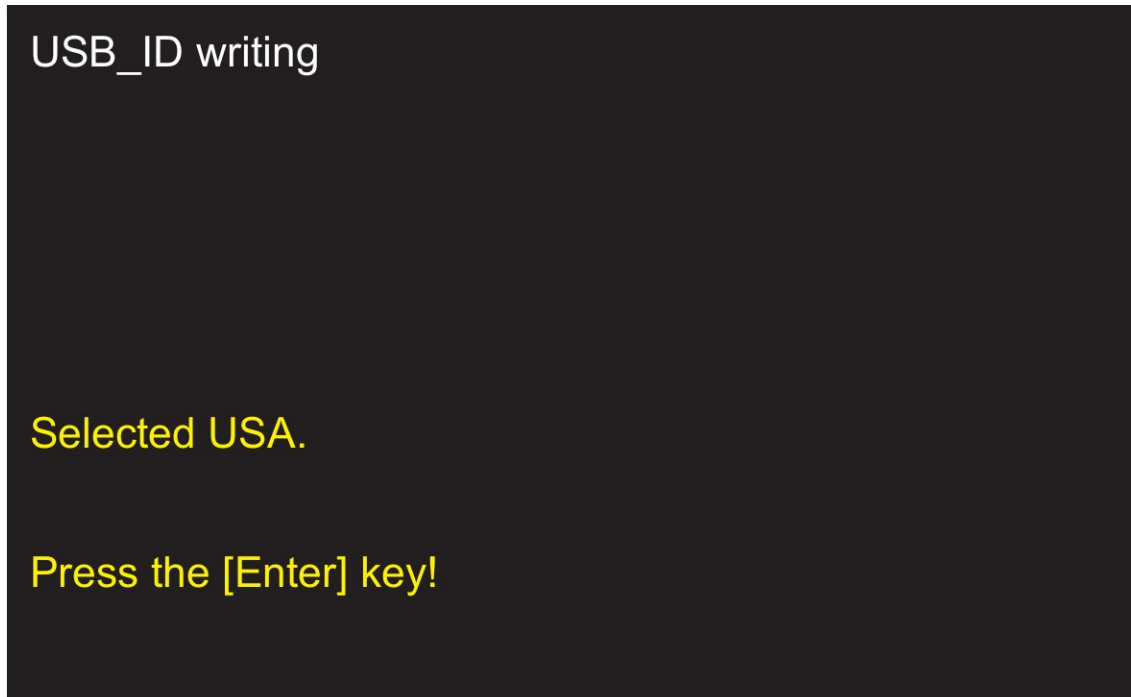
<Fig. 4-14-5>

<Note>

This example assumes that <H>USA has been selected. The following screen therefore appears.

—> The [USA_ID USA] screen appears.

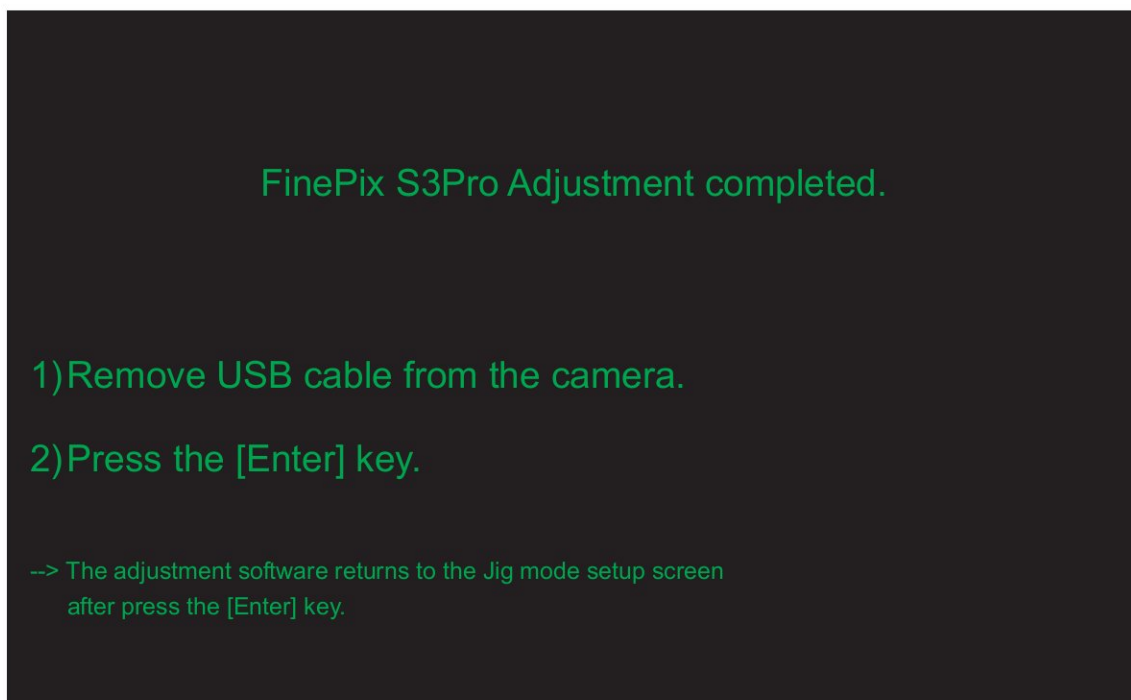
<Step 7>



<Fig. 4-14-6>

—> The [FinePix S3Pro Adjustment End] screen appears.

<Step 8>



<Fig. 4-14-7>

--> The display returns to the [Jig Mode Setup Screen] after pressing the [Enter] key on the computer.

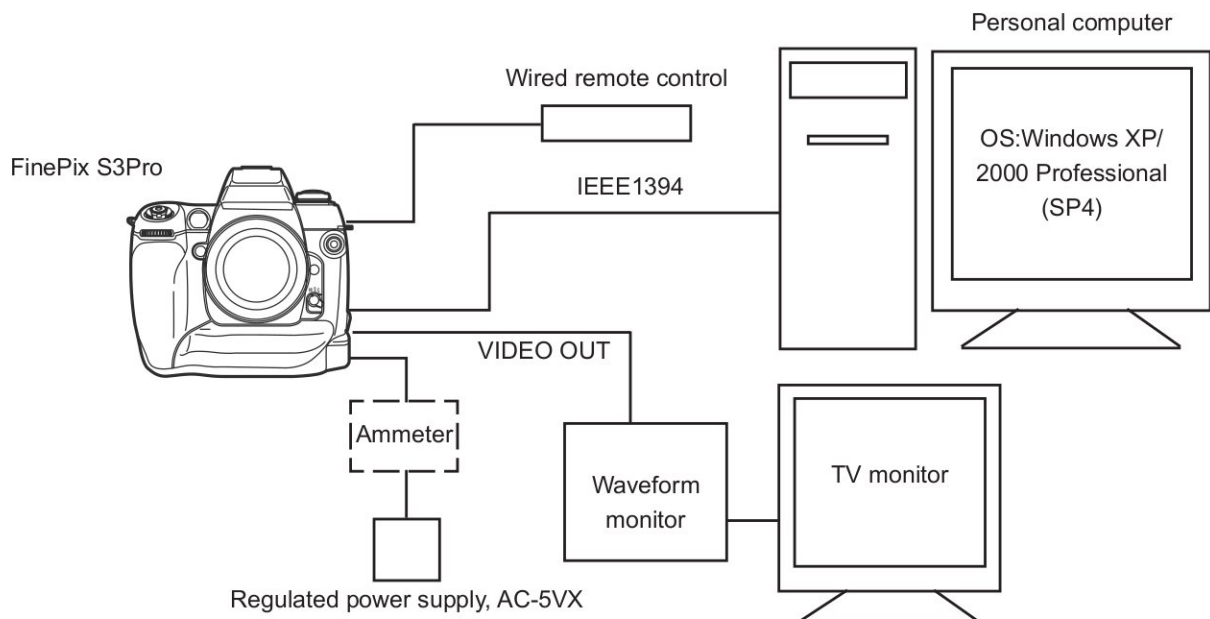
--> End on the adjustment software menu bar in the [Jig Mode Setup Screen] to terminate the adjustment software.

5. Inspection

5-1. Measuring Instruments and Jigs Used for Inspection

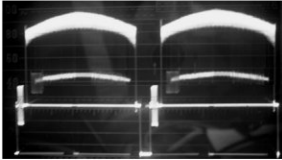
Measuring instrument	Remarks
TV monitor	NTSC TV monitor, minimum resolution 600 lines
Power supply	AC adapter (eg AC-5VX), Regulated power supply
Pattern box	PTB450 or equivalent
Waveform monitor	LEADER: 5870 or equivalent
Digital voltmeter	For general use
Luminance meter	LS-110 (KONICA MINOLTA) or equivalent
Color thermometer	Color Meter IIIF (KONICA MINOLTA) or equivalent
Ammeter	For general use (able to measure up to 1mA)
Replacement Lens for Inspection	Common with adjustment jig: ZJ00396-100
Power cable jig	Common with adjustment jig: ZJ00213-100
Grey chart	Common with adjustment jig: ZJ00254-100
LB140 filter	Common with adjustment jig: ZJ00006-100
High-resolution chart	Common with FinePixS1Pro, FinePix4700Z: ZJ00398-100
Wired remote control	Commercial item (Nikon MC-30)
S3Pro Battery jig	Common with adjustment jig : ZJ00863-100
Camera shooting software	HS-V2 Ver3.0 (Fujifilm) *Version for S3Pro *For Windows2000 Pro (SP4)/XP

5-2. Connection of Measuring Instruments for Inspection



5-3. Inspection and Settings at Shipment

No.	Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
1	Visual check		Visual check of camera.	<ul style="list-style-type: none"> No significant dents in body. Click sound of all switches, and operation of sliders, normal. No significant foreign matter, or cloudiness, in viewfinder. Flash mechanism opens and closes smoothly. 		
2	Power switch check Power supply confirmation from DSC side to camera	P Mode	(1) Insert the Jig cable in DC_JACK. (2) Set power supply voltage. (3) Install the lens for the inspection. (4) Insert the xD picture card which can be recorded. (5) Thing that display by which date setting is urged appears. (6) Push the BACK button. (7) Turn on "Illuminator button" and turn off.	(2) 5.00+-0.5V (5) Confirm there is no garbage no dirt.(Top display panel, Rear display panel, LCD monitor) (7) Thing which lights LED back light of Top display panel and Rear display panel, and is turned off.	Visual	Top display panel LCD monitor Rear display panel
3	IEEE1394 device recognition confirmation	P Mode	(1) Connect the IEEE1394 cable with PC. (2) Stop the device connection of PC, and pull out the IEEE1394 cable from the camera. (3) Switch power OFF.	(1) Thing that "DSC" is displayed in Rear display panel, and camera is recognized as external drive on PC. (2) The any error does not appear in PC. (3) The any "DSC" is displayed in Rear display panel, and camera is recognized as external drive on PC.	PC Visual IEEE1394 cable	Rear display panel
4	Flash Photograph check image	A mode Focus "M" mode	(1) Turn on the Power_on of the main body. (2) Change to A mode. (3) Set to ISO sensitivity 200. (4) Set aperture to F5.6. (5) Set number of recorded pixels to [6M][STD] (others to defaults). (6) Set as for flash adjustment. (7) Take photograph.	(6) See Setup for Flash Adjustment diagram. (7) Recorded on xD picture card.	Gray chart	

No.	Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
5	Long time exposure Photograph check image	M mode	(1) Do the lens cap. (=Shade.) (2) Change to A mode. (3) Set to ISO sensitivity 1600. (4) Set aperture to F5.6. (5) Adjust the shutter speed to ten seconds. (6) Set to the AF mode M. (7) Take photograph.	(7) Recorded on xD picture card.		Lens cap
6	Remote release socket (10-pin terminal) confirmation	P mode	(1) Connect a wired remote controller with 10-pin terminal. (2) The power on. (3) Photograph by a remote controller.	(3) Recorded on xD picture card.	wired remote control	
7	Confirmation of operation of External flash.	P Mode	(1) Change to P Mode. (2) Set the tester's + probe on the flash hot shoe X contacts and the tester's - probe on the flash hot shoe GND contact. (The resistance value at this time should be = inf) Pop down the flash and take a photograph. (3) Take photograph.	(3) Thing which does decrease change by resistance momentarily, and returns to origin immediately.		tester
8	Slot cover detection confirmation		(1) Turn on the Power_on of the main body. (2) Open and tighten the slot cover.	(2) The any Rear display panel disappears.	Visual	
9	Check playback image (Flash / Exposure for a long time)	PLAY Mode	(1) Place the xD picture card which contains the photograph recorded in STEP4 and 5 in image check camera. (2) The PLAY button is pushed. (3) Playback flash check photographic image. (4) Playback Exposure for a long time photographic image.	(3) Playback image within 55 [IRE]+22, -19 [IRE] on waveform monitor display. (4) That is, no white floating in image.	TV monitor Waveform monitor Recorded xD picture card (3) Waveform monitor  (4) TV monitor Visual	
10	Confirming the operation of alkaline battery		(1) The DC_IN cable is pulled out, and the alkaline battery (4) is put in BATT CART. (2) The power on.	(2)The any which LCD monitor displays.		LCD monitor

No.	Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
11	Delete mode check	Delete	(1) S3Pro Battery jig is inserted. (2) Reproduce the recording picture image, and push the "MENU" key. (3) Select "FORMAT", and push the "OK" key. (4) Select "MENU/OK", and push the "OK" key.	(1) 6.00V \pm 0.1V (2) Playback screen disappears. (3) Thing that "FORMAT OK?" is displayed. (4) Thing that "NO IMAGES" is displayed in LCD monitor.	Regulated power supply S3Pro Battery jig Recorded xD picture card	LCD monitor
12	Confirmation of operation of MicroDrive Battery down check (DSC)	PLAY Mode	(1) Replace xD picture card with the MicroDrive and push the PLAY button. (2) Set the voltage to 5.00V \pm 0.1V. (3) Lower the voltage to 4.48V\pm0.03V little by little. (PRE_END voltage) (4) Lower the voltage to 4.32V\pm0.03V little by little. (END voltage)	(1) The test image is played by the LCD monitor. (2) Thing of 1[A] or less current. (3) Thing that battery PRE-END display appears (4) The end mark is a thing that the blinking display is done in Rear display panel.	LCD monitor Recorded MicroDrive S3Pro Battery jig	LCD monitor
13	Leakage current check	Power OFF	(1) Switch power OFF.	(1) Leakage current maximum of 500[uA] .	Regulated power supply S3Pro Battery jig	

No.	Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
14	Settings at shipment	(note) Language is English	(1) Run Full Reset from Settings menu to return to defaults. (2) Defaults are as follows. Image display: OFF Color spaces: sRGB D-range: WIDE Auto rotate: ON Media: xD (ICON) Test shooting: ON Beep: LOW USB mode: Card Reader 1394 mode: Card Reader Frame NO.: CONT Lang: ENGLISH Video System NTSC: US/CA/JP PAL: EU/EG/GE/AS Date/time: Not Set (3) Mode dial: P * Setting at M mode: Shutter speed: 1/125 Aperture: F5.6 * Setting at A mode: Aperture: F5.6 (4) Focus mode: S (5) AE-L/AF-L: Multi pattern (6) ISO sensitivity: 200 (7) Diopter adjustment knob: bottom (8) Power switch: Turning off (9) 4-direction switch: Lock (10) Inspection battery/ inspection SSFDC not in camera. (11) No contamination on LCD/Optical finder. (12) Clean exterior of camera.	(2) The camera may be set to the mode set at shipment from the factory with the following procedure. 1. Connect the camera to the computer with the USB cable. 2. Open the slot cover. 3. Switch power supply ON (AC adapter may also be used). 4. Switch power ON while pressing the back button. 5. Switch the power supply OFF with the camera POWER button. * The "FRAME NO." setting is "CONT" in default (all resets). * Turn off the camera after it sets it to "RENEW" to clear "FRAME NO.".		
	Settings at packaging upgrade		(13) Upgrade packaging in accordance with parts list details.			

5-4. Resolution Checking

<Step 1>

Refer to the settings for resolution checking in the figure at right and set up the camera and the high-resolution chart. Use a light source to illuminate the high-resolution chart so that the surface brightness of the chart is 9.0 to 11.5 EV.

<Step 2>

Prepare the following:

- (1) Insert a formatted 32 MB xD picture card into the camera.
- (2) Supply power to the camera. (Batteries can be used.)
- (3) Set the camera to "A" mode and switch it on.
- (4) Set the camera on a tripod and point it directly at the high-resolution chart (set at 90° horizontally and vertically relative to the chart).
- (5) Position the chart so that it is 1200 ± 5 mm from the camera's F mount.

<Step 3>

Make the following changes to the default photography mode settings:

- (1) Select A mode.
- (2) Select "Fine" and "12M" (4256 x 2848) mode.
- (3) Set the flash to OFF.
- (4) Set the aperture to F4.0.
- (5) Select ISO 200.
- (6) Set the focusing mode to "M".
- (7) Execute the "LIVE IMAGE :ON". And, adjust the position of the camera so that the chart displayed in the LCD monitor may become the same angle as "Fig.5-4-2".

<Step 4>

After you have completed the settings in steps 1 to 3 above, Execute [LIVE IMAGE :ON] and execute [ENLARGE]. Adjust a focus ring so that a chart looks sharp, and press the shutter button taking care to avoid any camera shake. --> A resolution checking image (Fig. 5-4-2) is recorded.

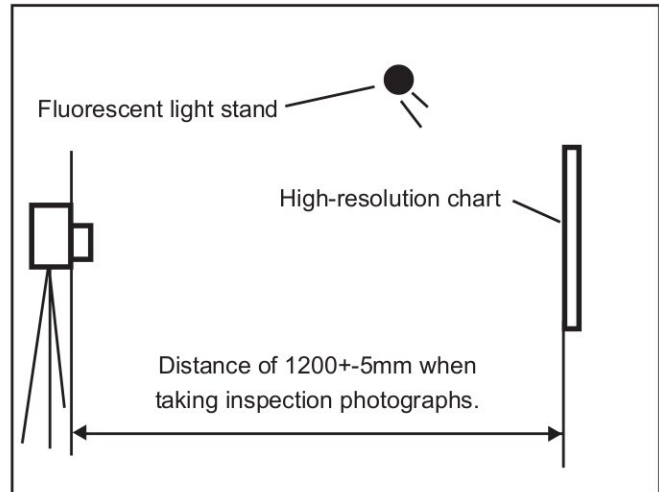
<Step 5>

Download the resolution checking image to your computer.

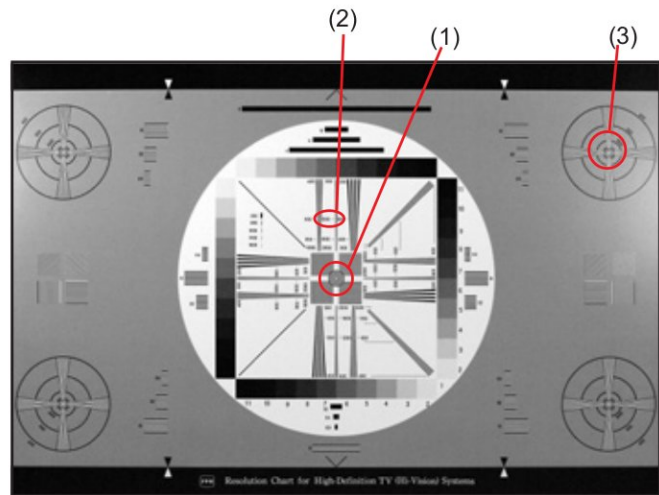
<Step 6>

Resolution checking image enlargement procedure (Fig. 5-4-2 (2)).

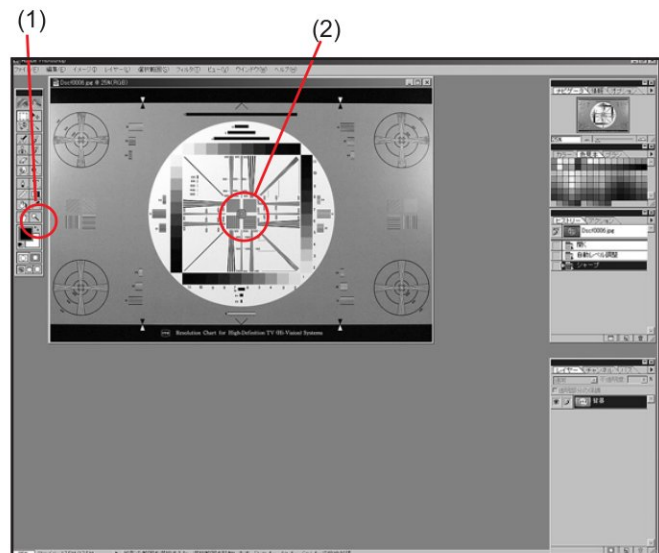
- (1) Open the image in Photoshop 5.0.
- (2) Display the image as shown in Fig. 5-4-3. The procedure varies depending on your software settings.
- (3) Use the zooming tool in the tool box (Fig. 5-4-3 (1)) to enlarge the area shown in Fig. 5-4-2 (2) to 300%.
- (4) When you enlarge the image, the centrally enlarged image (Fig. 5-4-4) appears.



<Fig. 5-4-1> Setting for Inspecting Resolution



<Fig. 5-4-2> Resolution Check Image



<Fig. 5-4-3> Enlargement Using Photoshop

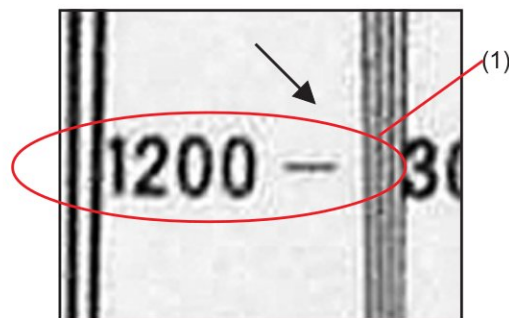
The centrally enlarged image (Fig. 5-4-4 (1)) is normal if a resolution of 1200 lines can be confirmed.

Use the same procedure to check the resolution of peripherally enlarged versions (Fig. 5-4-5 (1)) of the resolution checking image (Fig. 5-4-2 (3)). The peripherally enlarged image is normal if a resolution of 1000 lines can be confirmed.

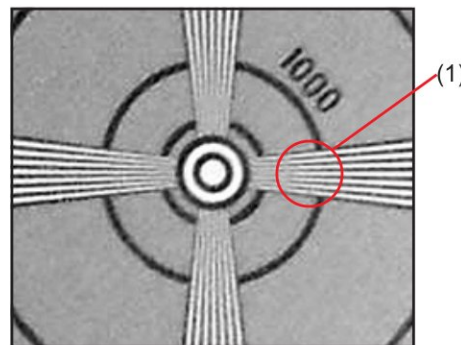
Check location	Service resolution value
Center (horizontal/vertical)	1200
Peripheral (horizontal/vertical)	1000

[Note!]

The resolution values given in this description are not the original "FinePix S3Pro" resolution values (TV resolution). The values given are according to the high-resolution chart set in the jig. Accordingly, the values shown in the above table are for servicing purposes and should be confirmed as being for use in in-house inspections.



<Fig. 5-4-4> Enlargement to 300% (Center)



<Fig. 5-4-5> Enlargement to 300% (Peripheral)

5-5. CCD Cleaning and Inspection Procedures

This camera is fitted with a CCD as its imaging (pickup) element. The CCD is located behind the shutter. Dust or other soiling may stick to the CCD and, depending on the photography settings and the type of subject, may be visible in photographed images if it is not cleaned off. If this occurs, the CCD needs to be cleaned.

[Note]

Always use the AC power adapter when performing this task. Loss of power during cleaning could cause the mirror to drop or the shutter to close, risking damage to the camera.

5-5-1. CCD Cleaning Using a Visual Inspection for Dusting

<Step 1>

Check that the camera is switched off and remove the lithium batteries.

<Step 2>

Connect the AC power adapter to the camera.

<Step 3>

Remove the interchangeable lens from the camera.

<Step 4>

Set the camera's exposure mode dial to "M".

<Step 5>

Hold down the release mode switch lock release button and set the release mode switch to "S1 Frame".

<Step 6>

Hold down the Synchro mode and Illuminator buttons and switch the camera on.

<Step 7>

When you press the shutter button, the mirror stays up and the shutter stays open.

<Step 8>

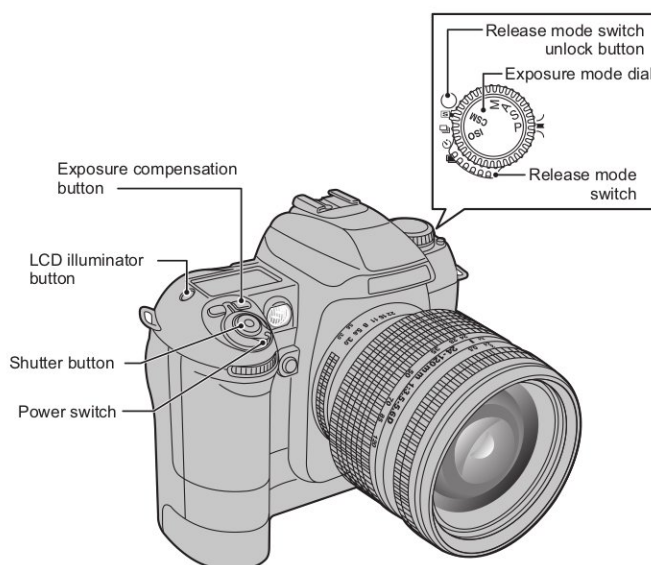
Hold the camera so that light shines on the CCD (OLPF) and check for soiling on the CCD surface either visually or using a stereoscopic microscope. If soiling is found, use a blower to remove it ([Note]).

If the soiling cannot be removed using the blower, wipe the CCD with a lens cleaner or lint-free cloth and EE cleaner or ethanol (95% or higher).

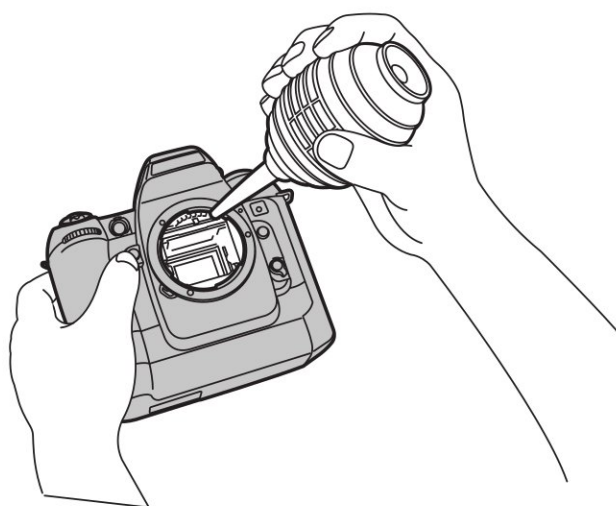
Do not use a blower with a brush attached. Using a blower-brush to clean the CCD can scratch the CCD surface.

[Note]

When using a lens cleaner to wipe the CCD, note that any metallic residue on the CCD (OLPF) surface will cause scratches in the CCD surface during cleaning.



<Fig. 5-5-1> Various button charts



<Fig. 5-5-2> Appearance of blower cleaning

5-5-2. CCD Cleaning Using Test Photography to Detect Dusting

<Step 1>

Supply power to the camera. (AC power adapter or batteries can be used.)

<step 2>

Mount an inspection lens on the camera and set the camera up as described below.

[Camera settings]

- (1) Set the camera's exposure mode dial to "A".
- (2) Set the focusing ring on the lens to infinity (∞).
- (3) Set the lens aperture to the smallest aperture size.
(If this is not set, the aperture cannot be specified on the camera.)
Set the camera aperture to F16.
- (4) Set the number of recorded pixels to 3024x 1616 (6M).
- (5) Set the compression rate to Normal.
- (6) Set the ISO sensitivity to 200
- (7) Set the white balance to Incandescent lamp.

<Step 3>

Take a picture of the white screen shown at right and record the image on an xD picture card.

--> A CCD dust check image (Fig. 5-5-4) is recorded.

<Step 4>

Open the image on your computer using Photoshop and measure the size of any soiling.

The selection tool for the enlarged CCD dusting check image (Fig. 5-5-5) is useful for checking individual pixels.

<Step 5>

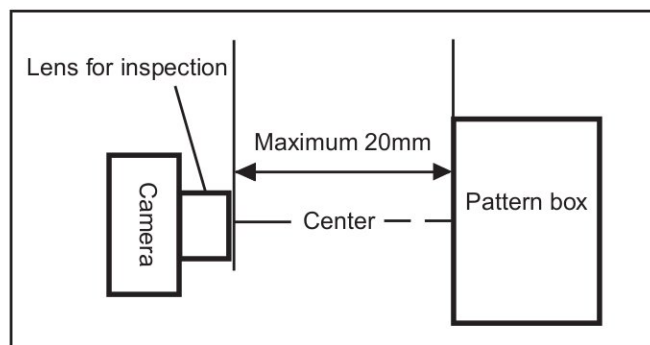
If the dusting is 12 pixels or larger, it can be regarded as CCD (OLPF) dusting and the CCD should be cleaned again. (At shipment from the factory, soiling smaller than 12 pixels is regarded as OK.)

[Note]

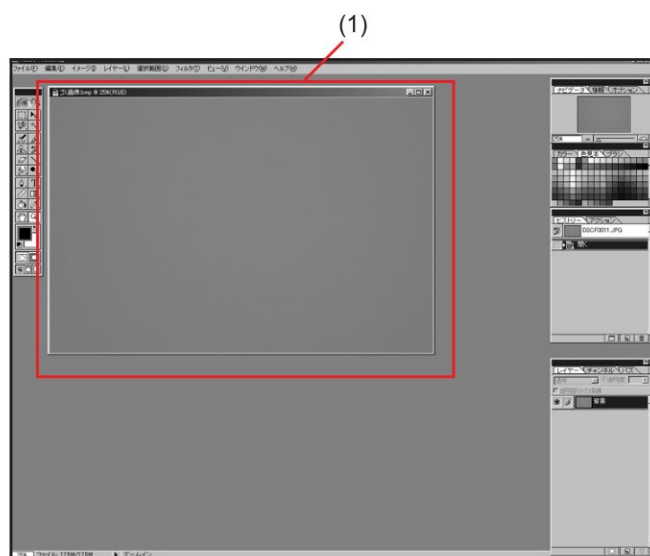
In a normal environment, there will be considerable dusting of the CCD (OLPF) surface. Consequently, there is a possibility that the CCD of a cleaned camera will again become dusted when used by the customer and a request for re-cleaning or some other claim may be made.

Accordingly, to reduce the likelihood of such returns or claims to a minimum, images should be printed before and after cleaning ^(*) so that these can be passed on to the customer if necessary.

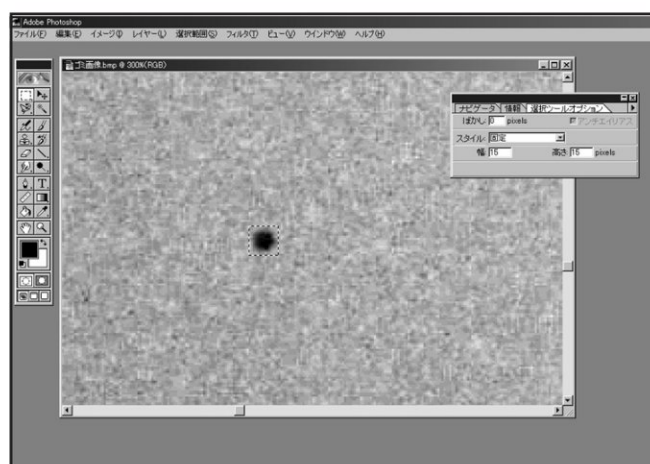
- (*)1 Take a picture before and after cleaning and print the images on a printer such as a consumer-model TA printer. (dusting can readily be seen even on prints produced by a TA printer.)



<Fig. 5-5-3> Environment for CCD dust inspection



<Fig. 5-5-4> CCD dust confirmation image



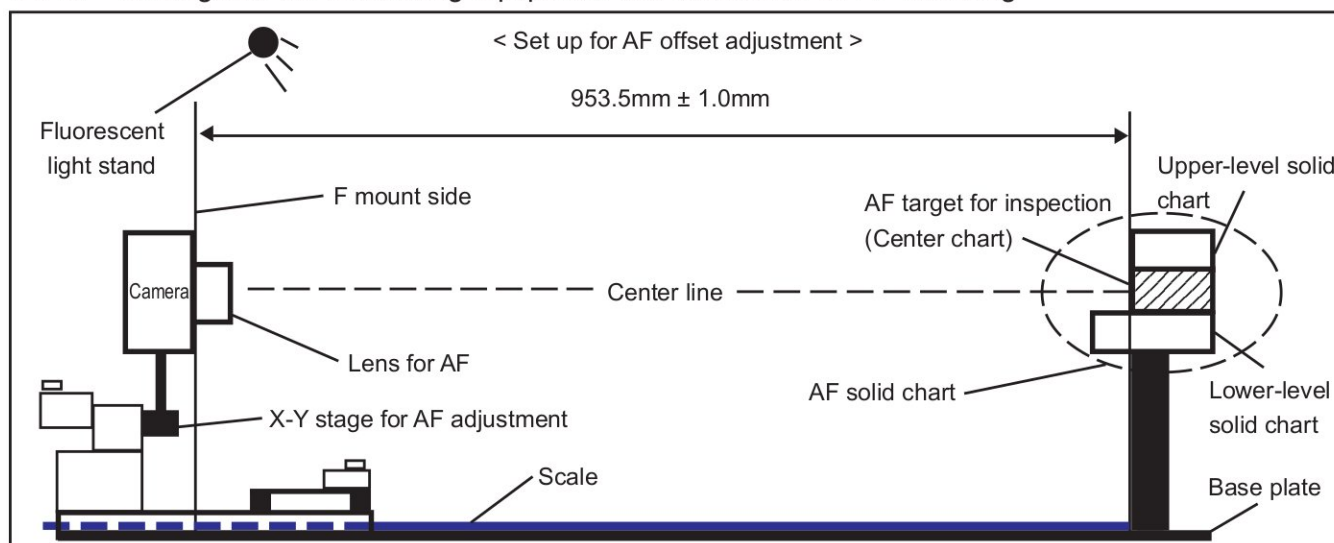
<Fig. 5-5-5> CCD dust expansion confirmation image

5-6. AF Checking

5-6-1. Measuring equipment and tools used for AF checking

Measuring instrument	Remarks
Power supply	AC adapter (eg AC-5VX), Regulated power supply
AF inspection lens of FinePix S2 Pro	ZJ00654-100
AF target for inspection	ZJ00626-100
X-Y stage for AF adjustment	FinePixM603 and commonness: ZJ00611-100
Power cable jig	Common with adjustment jig: ZJ00213-100
Scale (1000mm)	Goods on the market

5-6-2. Settings for the measuring equipment and tools used for AF checking



<Step 1>

Take out the camera stand for the AF Solid chart and set the X-Y stage for AF adjustment on the base plate.

<Step 2>

Mount the camera on the X-Y stage for AF adjustment.

<Step 3>

Remove the hexagonal bolt in the top of the AF solid chart block and remove the upper-level solid chart.

<Step 4>

Align the AF intermediate chart surface horizontally and vertically with the "0" Emarkings on the lower-level and upper-level solid charts and then tighten the hexagonal bolt (long type) provided with the AF intermediate chart.

<Step 5>

Check that there is no tilt or instability in the AF solid chart block.

<Step 6>

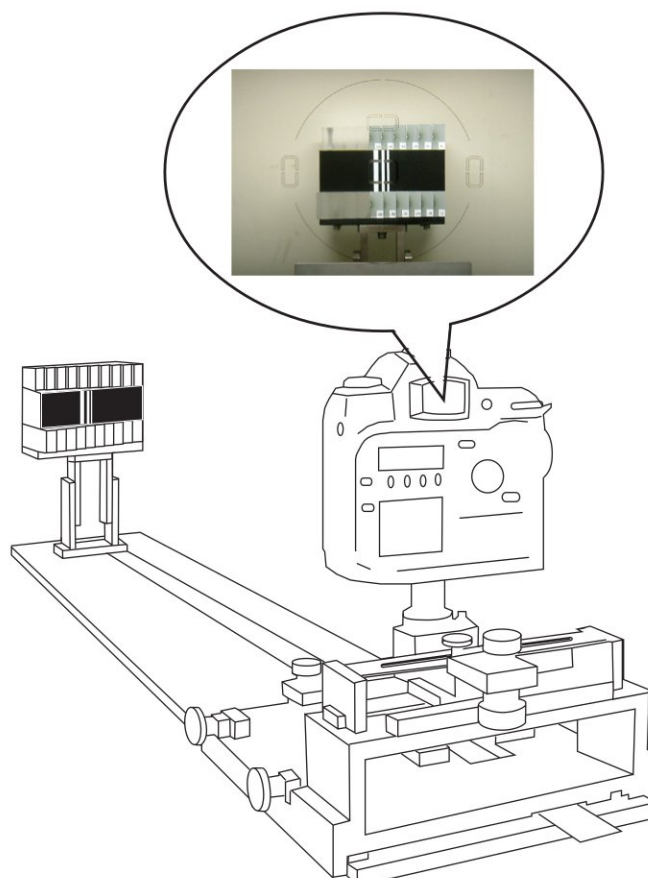
Set the scale on the base plate and adjust the position so that the distance between the AF intermediate chart and the F mount on the camera is 953.5 \pm 1.0 mm.

<Step 7>

Attach the checking lens on the camera and switch the camera on.

<Step 8>

Adjust the X-Y stage so that the center of the AF intermediate chart appears in the AF target (center) in the viewfinder.



5-6-3. AF testing procedure

★ Revised: 27. Dec. 2004

<Step 1>

Select the settings listed below on the camera:

* Perform a 2-button reset.

- (1) Select A mode.
- (2) Do not pop up the flash.
- (3) Set the focusing mode to "S".
- (4) Select Camera Shooting mode.
- (5) Select [Exif-Jpeg (FINE)] [12M (4256 x 2848)] mode.
- (6) Set the aperture to F1.4.
- (7) Select ISO 200.
- (8) Connect the camera to a PC using the IEEE 1394 cable.
- (9) Switch the camera on.

--> The Hyper-Utility2 (Ver3.0) software starts up.

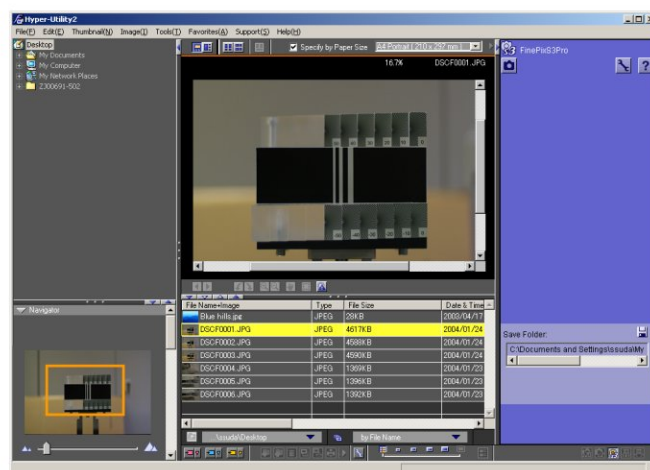
* Refer to the manual of Hyper-Utility2 for the start procedure.

<Step 2>

Hyper-Utility2 (Ver3.0) settings.

- (1) Create a folder to be used for saving files and transfer the files.
- (2) Select "Control FinePix S3Pro" from "Tools (T)" of the toolbar and change to the mode of "Camera shooting".

--> The camera is now ready to shoot.



<Fig. 5-6-1> Screen of Hyper-Utility2 (Ver3.0)

<Step 3>

Manually set the focusing ring on the checking lens to the nearest distance and push the "Shutter button" of the camera.

--> A preview image is displayed and then transferred to the specified folder.

<Step 4>

Repeat step 3 three times.

--> 3 near-focus shots are saved.

<Step 5>

Manually set the focusing ring on the checking lens to INF (the furthest distance) and push the "Shutter button" of the camera.

--> A preview image is displayed and then transferred to the specified folder.

<Step 6>

Repeat step 5 3 times.

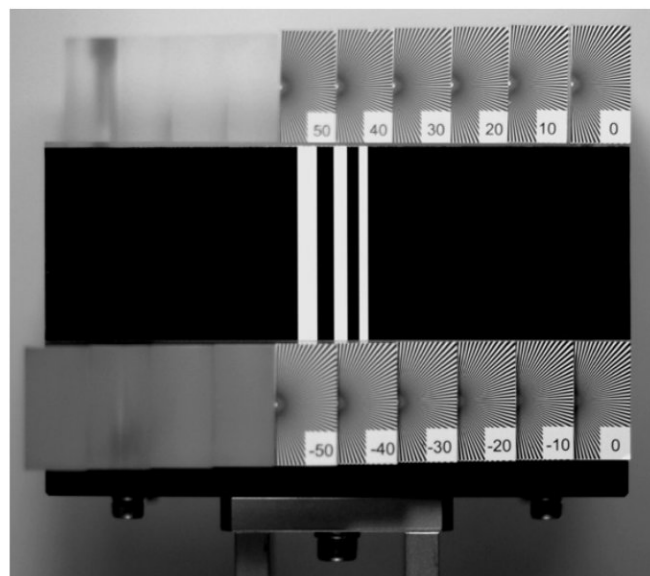
--> 3 far-focus shots are saved.

<Step 7>

Open the 6 shots taken above in Photoshop and note down the sections in each shot that are most clearly focused. Then calculate the average.

<Step 8>

If the average value for the focused sections as confirmed in step 7 is between -50 and 50, the AF performance for the camera is normal.



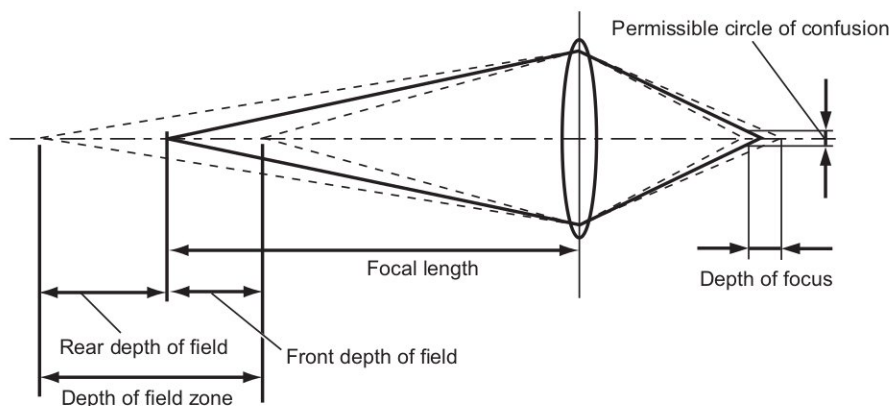
<Fig. 5-6-2> Photographic image sample

5-6-4. Cause identification procedure for focus-related problems

With the FinePix S3Pro, queries and complaints regarding focusing and auto focusing (AF) address a wide range of overlapping factors. These factors include the shallow depth of field for the subject due to the increased resolution of the CCD (the permissible circle of confusion (see figure below) is smaller than that for a conventional camera), the fact that digital images can be viewed enlarged on a PC, the differences in the way images are generated compared with the FinePixS1Pro, lens-related factors and problems that arise due to the way the camera is used. For this reason, methods for differentiating between these various factors are discussed here.

What is the "permissible circle of confusion" ?

A lens resolves the image of a subject located on the optical axis on the image plane. But we often see that subjects at a range of different distances from the camera, both nearer and further away than the focal distance, are also in focus. This is because when the degree of blurring in a subject is below a set amount, we perceive the subject as being in focus. This set amount is known as the permissible circle of confusion. The range on either side of the image plane within which the amount of blurring is smaller than the permissible circle of confusion is called the depth of focus. Similarly, the subject range for which the image is resolved within the depth of focus is called the depth of field. All subjects within the depth of field for a shot are photographed as if they were in focus.



<Cause identification procedure>

The basic causes underlying detected problems can be broadly grouped into 3 categories, as outlined below.

(1) Problems attributable to how the camera is used

- Resolution setting
 - > Can be resolved by selecting a high-quality mode (12M JPEG-Fine, RAW) in the resolution settings.
 - Sharpness setting
 - > Check the resolution problems in SOFT mode.
 - Diffraction when shots are taken using an excessively small aperture^{*1}.
 - > Check the F-stop setting and try taking the shot with an aperture that is slightly larger than the one causing the problem.
- ^{*1} Diffraction refers to the tendency of light to scatter due to its wave-like properties. By reducing the aperture size (stopping down), the proportion of the direct reflection light that is resolved directly onto the CCD surface decreases and the effects of diffraction become noticeable.
- The focusing performance for the focus target deteriorates slightly in all 4 directions (up, down, left and right) when compared with the center of the image because the AF sensors detect light horizontally.
 - > The central focus area should be used to focus the shot.
 - ECamera shake
 - > The use of a tripod is recommended.
 - Photographing subjects that are difficult to focus
 - > As described in the Owner's Manual, use manual focus for objects that are not suited to auto focusing.

(2) Problems attributable to faults in the FinePix S3Pro

- Problems in the Camera Body (AF function defects, body flange back defects, viewfinder matt screen offset, etc.)
 - > Perform AF checking and the Camera Body is repaired.

(3) Problems attributable to performance limitations or defects in the lens used

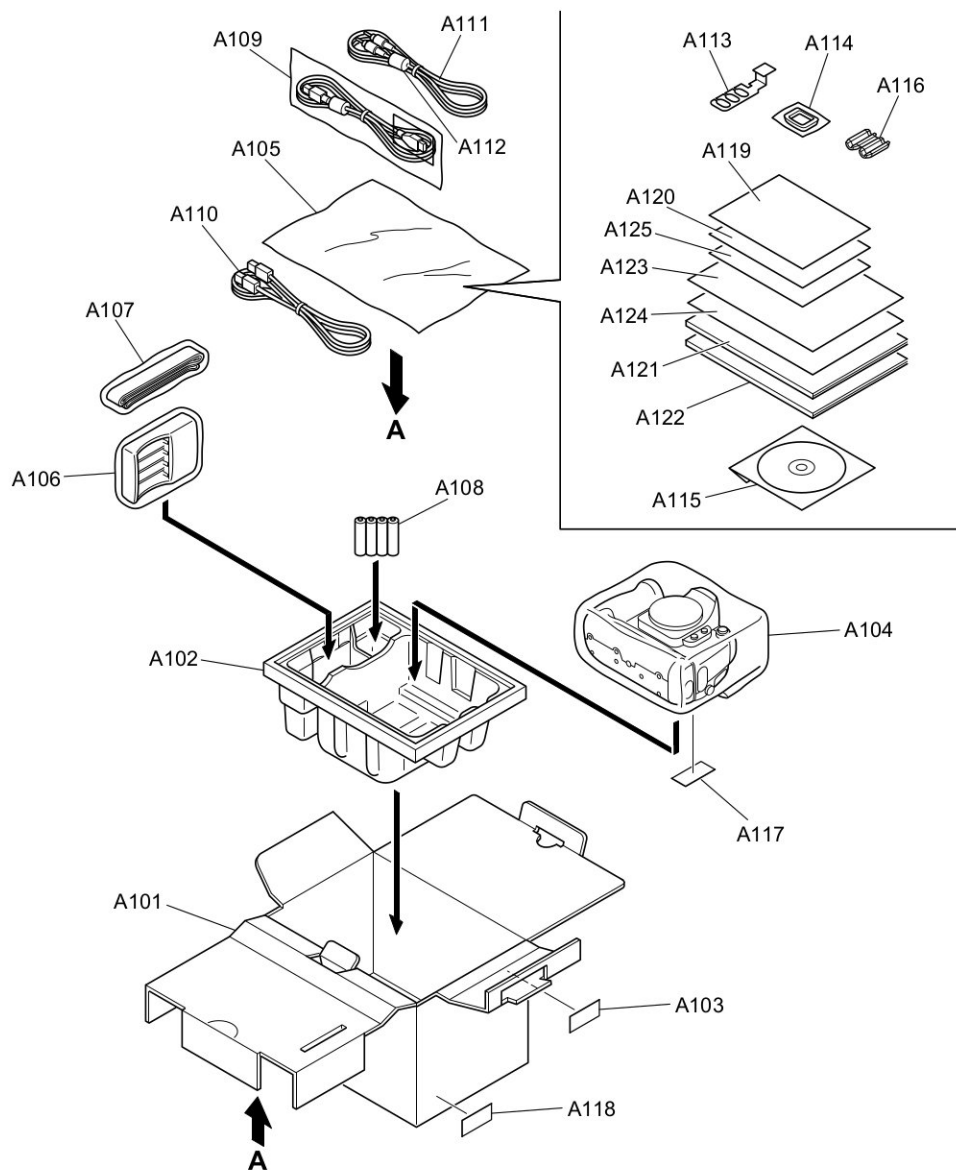
Using the checking lens as reference, determine whether the problem is with the lens or with the FinePix S3Pro.

- Lens AF malfunction (cannot be addressed by Fuji)
- Lens performance (cannot be addressed by Fuji)
- > Get the lens manufacturer to check the lens being used.

6. Parts List

6-1. Packing and Accessories

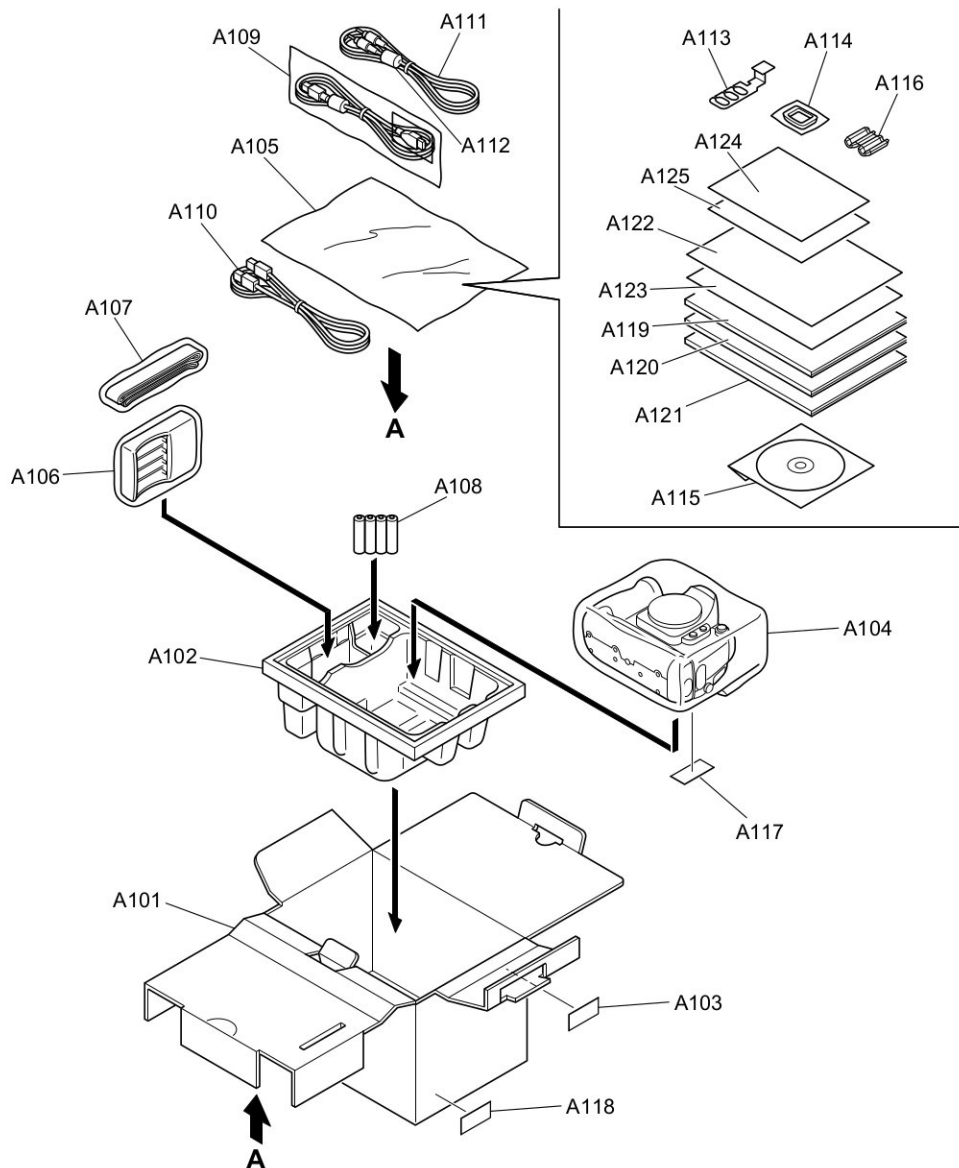
6-1-1. US-model



Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
A101	FZ06042-100	UNITARY BOX (W)		N	A121	BL00430-201	OWNER'S MANUAL S3PRO(ENG)		N
A102	FZ06012-100	SHEET MOLD		N	A122	BL00431-200	I/F MANUAL S3PRO(W)		N
A103	BB12943-100	BAR CODE LABEL BLANK		N	A123	BL00432-200	QUICKMANUAL S3PRO(ENG)		N
A104	AZF0000-321	HDPE BAG NO.12		N	A124	BL00432-500	QUICKMANUAL S3PRO(SPA)		N
A105	AZF0000-101	LDPE BAG NO.10		N	A125	BL00471-200	CAUTION E S3PRO		N
A106	FZ06043-100	BATTERY CHARGER		=					
A107	FZ06044-100	SHOULDER BELT		N					
A108	FZ06040-200	NI-NH-BATTERY NA	HR AA NA BK 4S E	=					
A109	FZ05365-100	USB HARNESS		N					
A110	FZ04797-100	IEEE1394 CABLE		N					
A111	FZ03284-100	VIDEO CABLE		N					
A112	FZ00363-200	CLAMP FILTER		N					
A113	BB18148-100	CABLE HOLDER		N					
A114	FZ04809-100	EYEPiece COVER		N					
A115	FZ05352-600	CD-ROM		N					
A116	FZ06103-100	EMI FILTER		N					
A117	BB18002-100	CERTIFICATION SEAL		N					
A118	BB18385-100	DEST.LBL.5000US J FG		N					
A119	BL00372-100	IMPORTANT SAFETY		N					
A120	BL00373-100	US WARRANTY		N					

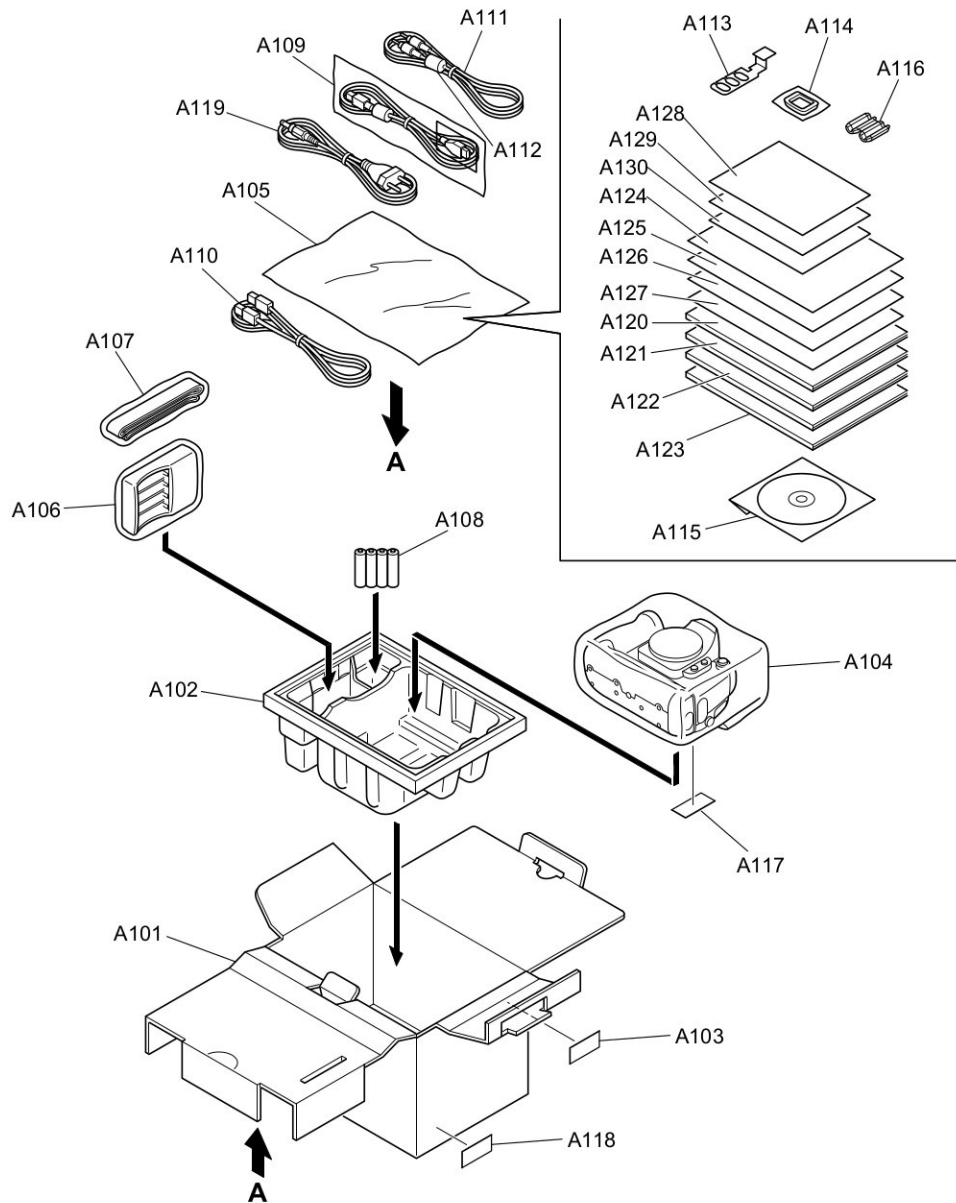
6. Parts List

6-1-2. CA-model



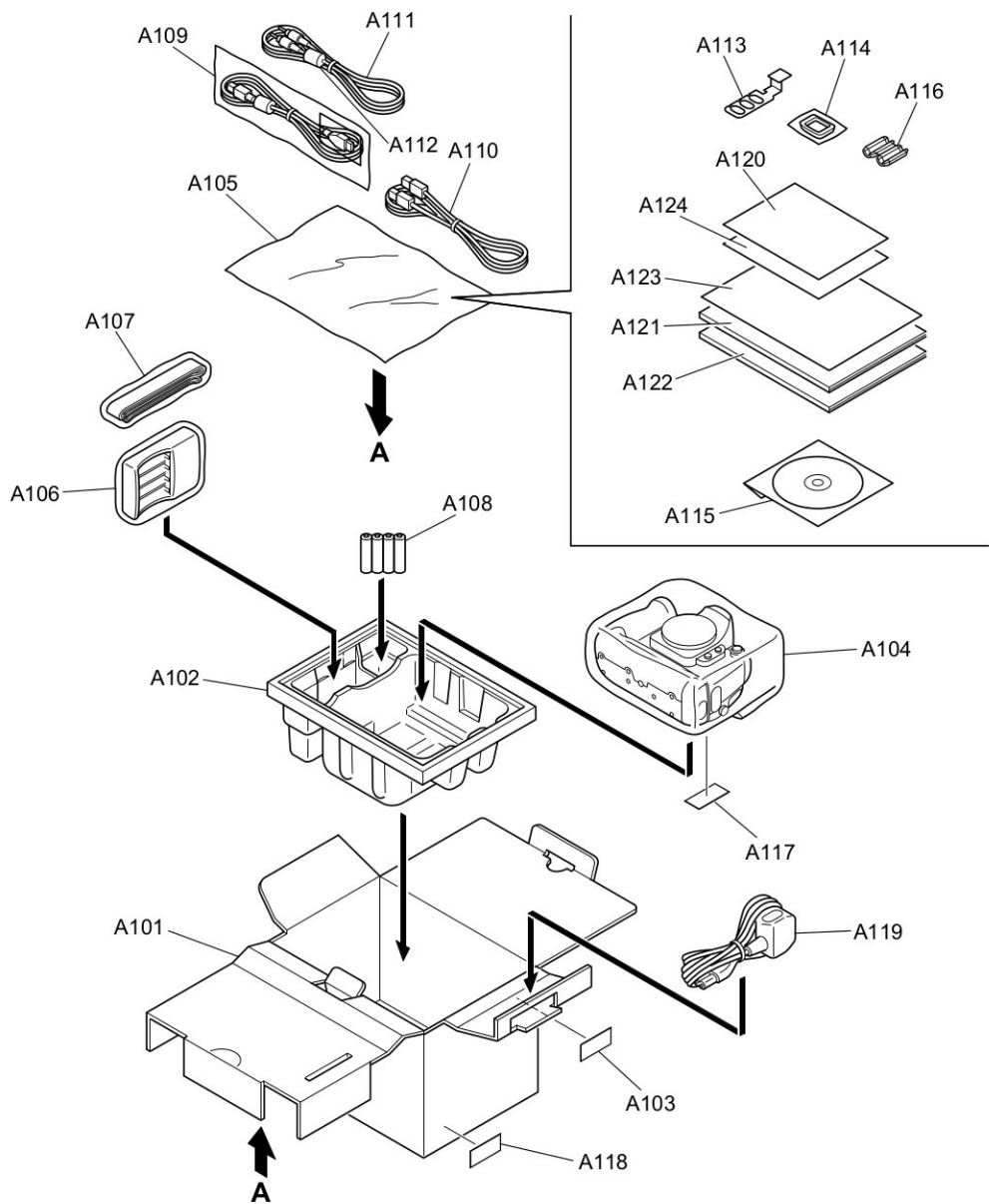
Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
A101	FZ06042-100	UNITARY BOX (W)		N	A121	BL00431-200	I/F MANUAL S3PRO(W)		N
A102	FZ06012-100	SHEET MOLD		N	A122	BL00432-200	QUICKMANUAL S3PRO(ENG)		N
A103	BB12943-100	BAR CODE LABEL BLANK		N	A123	BL00432-300	QUICKMANUAL S3PRO(FRE)		N
A104	AZF0000-321	HDPE BAG NO.12		N	A124	BL00471-200	CAUTION E S3PRO		N
A105	AZF0000-101	LDPE BAG NO.10		N	A125	BL00471-300	CAUTION F S3PRO		N
A106	FZ06043-100	BATTERY CHARGER		=					
A107	FZ06044-100	SHOULDER BELT		N					
A108	FZ06040-200	NI-NH-BATTERY NA	HR AA NA BK 4S E	=					
A109	FZ05365-100	USB HARNESS		N					
A110	FZ04797-100	IEEE1394 CABLE		N					
A111	FZ03284-100	VIDEO CABLE		N					
A112	FZ00363-200	CLAMP FILTER		N					
A113	BB18148-100	CABLE HOLDER		N					
A114	FZ04809-100	EYEPIECE COVER		N					
A115	FZ05352-600	CD-ROM		N					
A116	FZ06103-100	EMI FILTER		N					
A117	BB18002-100	CERTIFICATION SEAL		N					
A118	BB18385-400	DEST.LBL.5000CA J FG		N					
A119	BL00430-201	OWNER'S MANUAL S3PRO(ENG)		N					
A120	BL00430-301	OWNER'S MANUAL S3PRO(FRG)		N					

6-1-3. EU-model



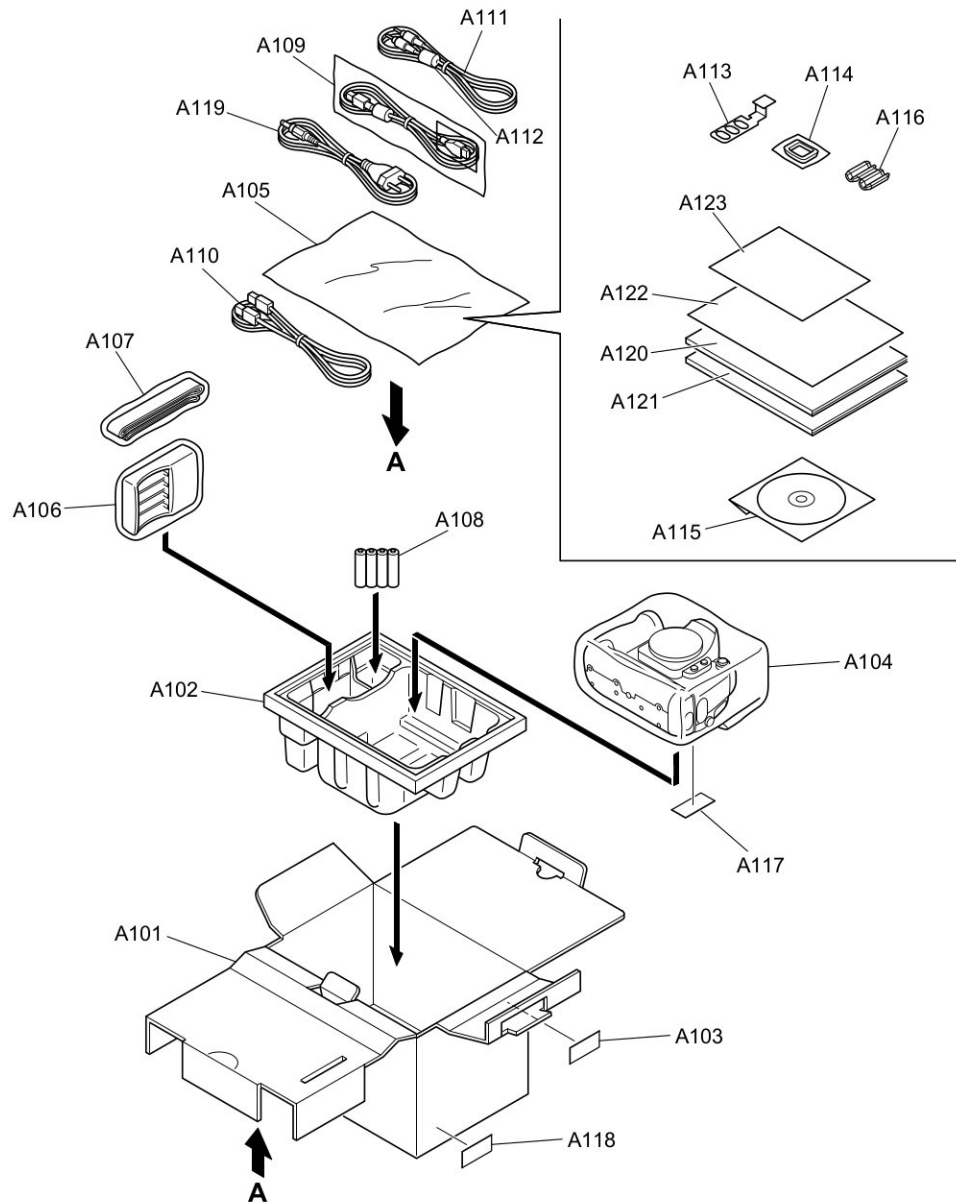
Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
A101	FZ06042-100	UNITARY BOX (W)		N	A121	BL00430-301	OWNER'S MANUAL S3PRO(FRG)		N
A102	FZ06012-100	SHEET MOLD		N	A122	BL00430-401	OWNER'S MANUAL S3PRO(GER)		N
A103	BB12943-100	BAR CODE LABEL BLANK		N	A123	BL00431-200	I/F MANUAL S3PRO(W)		N
A104	AZF0000-321	HDPE BAG NO.12		N	A124	BL00432-200	QUICKMANUAL S3PRO(ENG)		N
A105	AZF0000-111	BAG PLASTIC NO.11		N	A125	BL00432-300	QUICKMANUAL S3PRO(FRE)		N
A106	FZ06043-200	BATTERY CHARGER		=	A126	BL00432-400	QUICKMANUAL S3PRO(GER)		N
A107	FZ06044-100	SHOULDER BELT		N	A127	BL00432-500	QUICKMANUAL S3PRO(SPA)		N
A108	FZ06040-300	NI-NH-BATTERY GN	HR AA GN BK 4S E	=	A128	BL00471-200	CAUTION E S3PRO		N
A109	FZ05365-100	USB HARNESS		N	A129	BL00471-300	CAUTION F S3PRO		N
A110	FZ04797-100	IEEE1394 CABLE		N	A130	BL00471-400	CAUTION G S3PRO		N
A111	FZ03284-100	VIDEO CABLE		N					
A112	FZ00363-200	CLAMP FILTER		N					
A113	BB18148-100	CABLE HOLDER		N					
A114	FZ04809-100	EYEPIECE COVER		N					
A115	FZ05352-600	CD-ROM		N					
A116	FZ06103-100	EMI FILTER		N					
A117	BB18002-100	CERTIFICATION SEAL		N					
A118	BB18385-200	DEST.LBL.5000EU J FG		N					
A119	FZ05210-300	AC POWERCORD E	AC-5VW E	N					
A120	BL00430-201	OWNER'S MANUAL S3PRO(ENG)		N					

6-1-4. EG-model



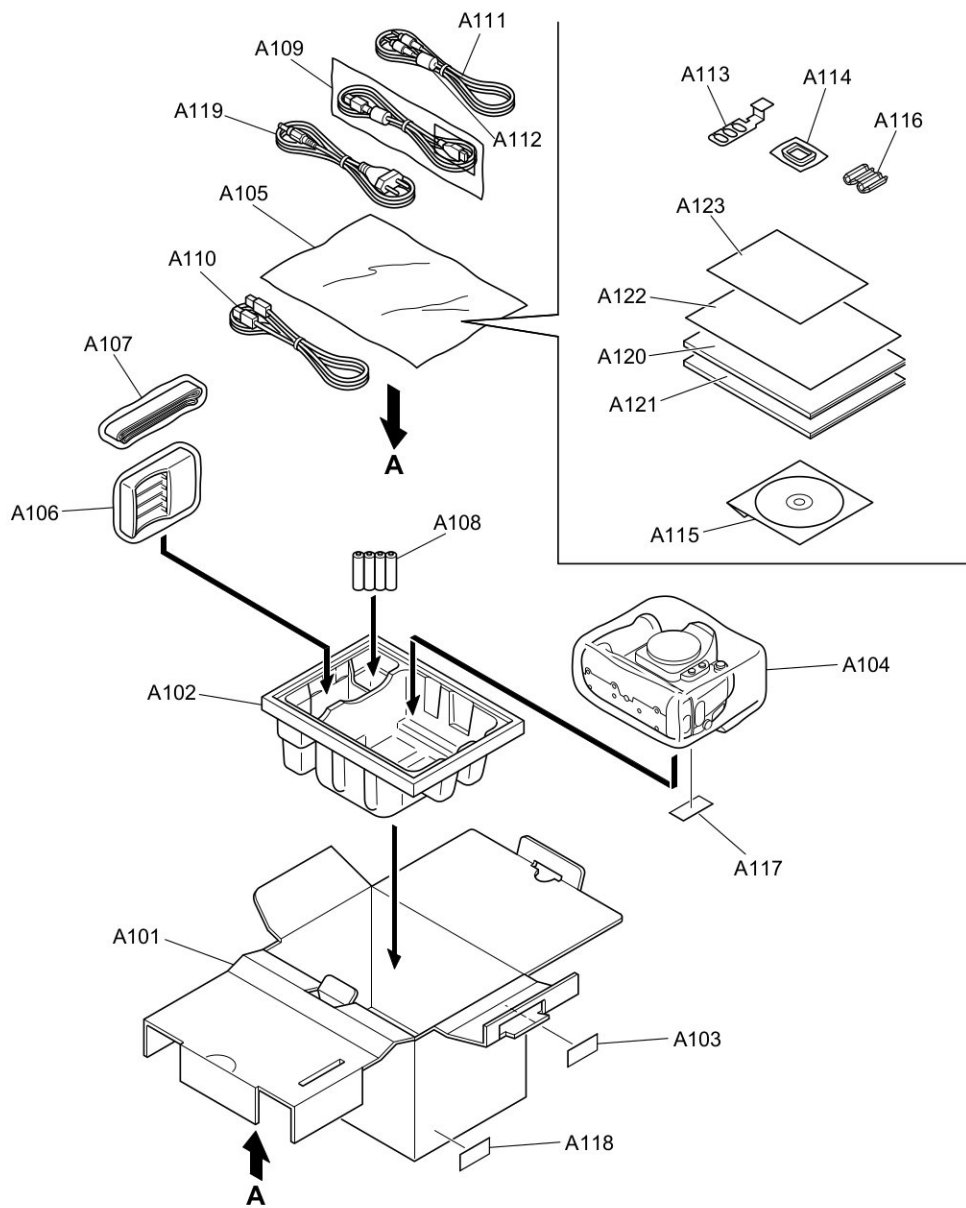
Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
A101	FZ06042-100	UNITARY BOX (W)		N	A121	BL00430-201	OWNER'S MANUAL S3PRO(ENG)		N
A102	FZ06012-100	SHEET MOLD		N	A122	BL00431-200	I/F MANUAL S3PRO(W)		N
A103	BB12943-100	BAR CODE LABEL BLANK		N	A123	BL00432-200	QUICKMANUAL S3PRO(ENG)		N
A104	AZF0000-321	HDPE BAG NO.12		N	A124	BL00471-200	CAUTION E S3PRO		N
A105	AZF0000-101	LDPE BAG NO.10		N					
A106	FZ06043-200	BATTERY CHARGER		=					
A107	FZ06044-100	SHOULDER BELT		N					
A108	FZ06040-300	NI-NH-BATTERY GN	HR AA GN BK 4S E	=					
A109	FZ05365-100	USB HARNESS		N					
A110	FZ04797-100	IEEE1394 CABLE		N					
A111	FZ03284-100	VIDEO CABLE		N					
A112	FZ00363-200	CLAMP FILTER		N					
A113	BB18148-100	CABLE HOLDER		N					
A114	FZ04809-100	EYEPiece COVER		N					
A115	FZ05352-600	CD-ROM		N					
A116	FZ06103-100	EMI FILTER		N					
A117	BB18002-100	CERTIFICATION SEAL		N					
A118	BB18385-300	DEST.LBL.5000EG J FG		N					
A119	FZ05210-400	AC POWERCORD EG	AC-5VW EG	N					
A120	BL00176-100	WARRANTY CARD EG		N					

6-1-5. GE-model



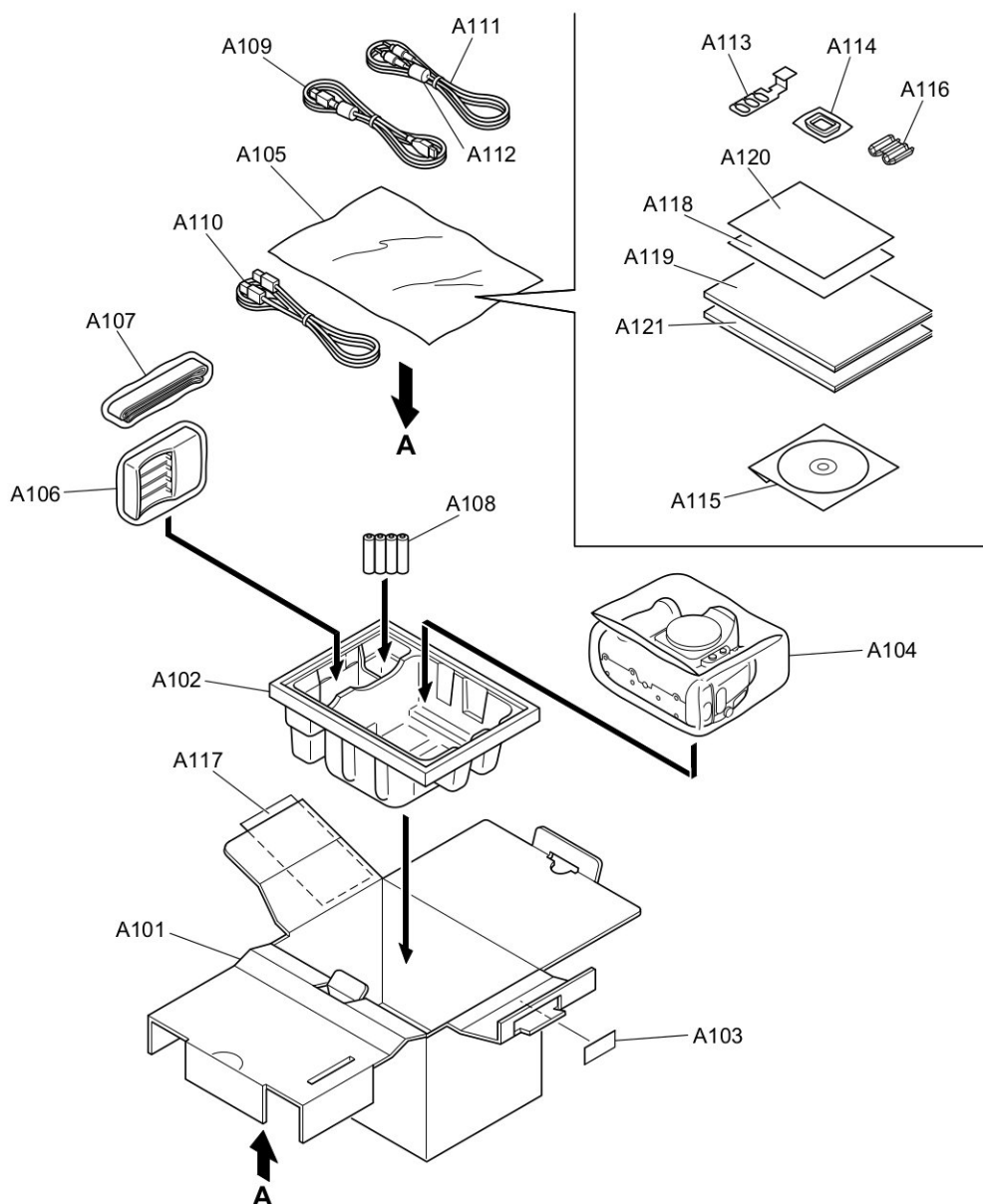
Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
A101	FZ06042-100	UNITARY BOX (W)		N	A121	BL00431-200	I/F MANUAL S3PRO(W)		N
A102	FZ06012-100	SHEET MOLD		N	A122	BL00432-400	QUICKMANUAL S3PRO(GER)		N
A103	BB12943-100	BAR CODE LABEL BLANK		N	A123	BL00471-400	CAUTION G S3PRO		N
A104	AZF0000-321	HDPE BAG NO.12		N					
A105	AZF0000-101	LDPE BAG NO.10		N					
A106	FZ06043-200	BATTERY CHARGER		=					
A107	FZ06044-100	SHOULDER BELT		N					
A108	FZ06040-300	NI-NH-BATTERY GN	HR AA GN BK 4S E	=					
A109	FZ05365-100	USB HARNESS		N					
A110	FZ04797-100	IEEE1394 CABLE		N					
A111	FZ03284-100	VIDEO CABLE		N					
A112	FZ00363-200	CLAMP FILTER		N					
A113	BB18148-100	CABLE HOLDER		N					
A114	FZ04809-100	EYEPiece COVER		N					
A115	FZ05352-600	CD-ROM		N					
A116	FZ06103-100	EMI FILTER		N					
A117	BB18002-100	CERTIFICATION SEAL		N					
A118	BB18385-500	DEST.LBL.5000GE J FG		N					
A119	FZ05210-300	AC POWERCORD E	AC-5VW E	N					
A120	BL00430-401	OWNER'S MANUAL S3PRO(GER)		N					

6-1-6. AS-model



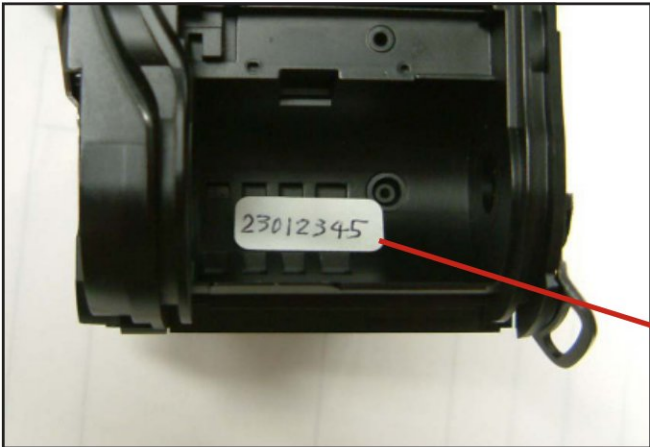
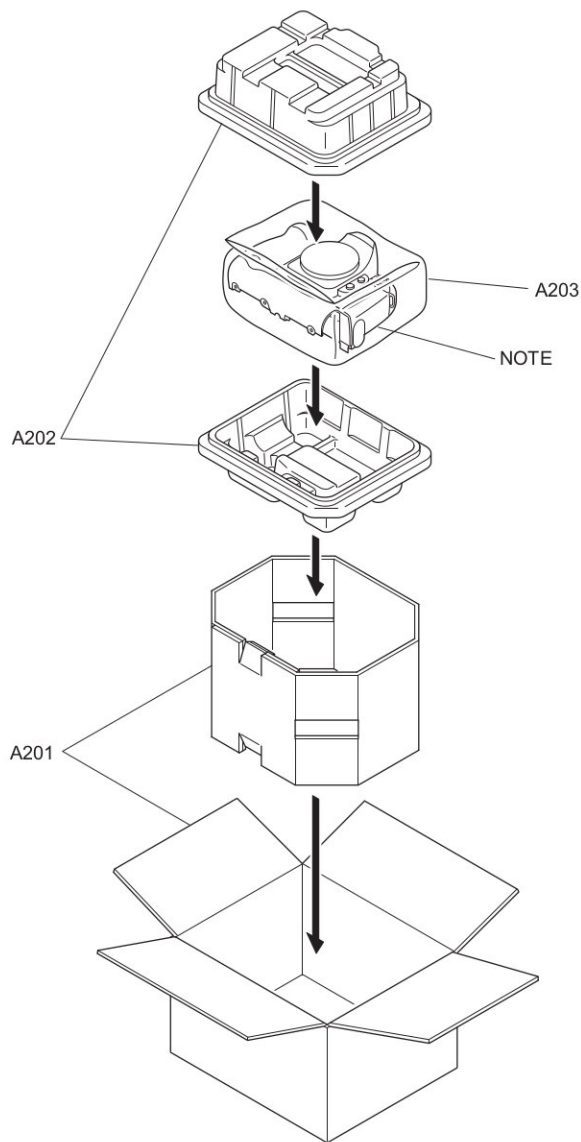
Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
A101	FZ06042-100	UNITARY BOX (W)		N	A121	BL00431-200	I/F MANUAL S3PRO(W)		N
A102	FZ06012-100	SHEET MOLD		N	A122	BL00432-200	QUICKMANUAL S3PRO(ENG)		N
A103	BB12943-100	BAR CODE LABEL BLANK		N	A123	BL00471-200	CAUTION E S3PRO		N
A104	AZF0000-321	HDPE BAG NO.12		N					
A105	AZF0000-101	LDPE BAG NO.10		N					
A106	FZ06043-200	BATTERY CHARGER		=					
A107	FZ06044-100	SHOULDER BELT		N					
A108	FZ06040-300	NI-NH-BATTERY GN	HR AA GN BK 4S E	=					
A109	FZ05365-100	USB HARNESS		N					
A110	FZ04797-100	IEEE1394 CABLE		N					
A111	FZ03284-100	VIDEO CABLE		N					
A112	FZ00363-200	CLAMP FILTER		N					
A113	BB18148-100	CABLE HOLDER		N					
A114	FZ04809-100	EYEPIECE COVER		N					
A115	FZ05352-600	CD-ROM		N					
A116	FZ06103-100	EMI FILTER		N					
A117	BB18002-100	CERTIFICATION SEAL		N					
A118	BB18385-600	DEST.LBL.5000AS J FG		N					
A119	FZ05210-300	AC POWERCORD E	AC-5VW E	N					
A120	BL00430-201	OWNER'S MANUAL S3PRO(ENG)		N					

6-1-7. JP-model



Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
A101	FZ06011-100	UNITARY BOX (J)		N	A121	BL00369-100	MANUAL FPV AX4.2		N
A102	FZ06012-100	SHEET MOLD		N					
A103	BB12943-100	BAR CODE LABEL BLANK		N					
A104	AZF0000-321	HDPE BAG NO.12		N					
A105	AZF0000-101	LDPE BAG NO.10		N					
A106	FZ05823-100	CHAGER		=					
A107	FZ06044-100	SHOULDER BELT		N					
A108	FZ06040-100	NI-NH-BATTERY JN	HR AA JN BK 4S E	=					
A109	FZ05241-100	USB CABLE		N					
A110	FZ04797-100	IEEE1394 CABLE		N					
A111	FZ03284-100	VIDEO CABLE		N					
A112	FZ00363-200	CLAMP FILTER		N					
A113	BB18148-100	CABLE HOLDER		N					
A114	FZ04809-100	EYEPiece COVER		N					
A115	FZ05352-600	CD-ROM		N					
A116	FZ06103-100	EMI FILTER		N					
A117	BB12944-100	WARRANTY CARD		N					
A118	BL00190-100	SAFETY CARD		N					
A119	BL00430-101	OWNER'S MANUAL S3PRO(JPN)		N					
A120	BL00471-100	CAUTION J S3PRO		N					

6-2. Transportable form and necessary parts for camera body repair



<Spool position of the CAMERA BODY ASSY>

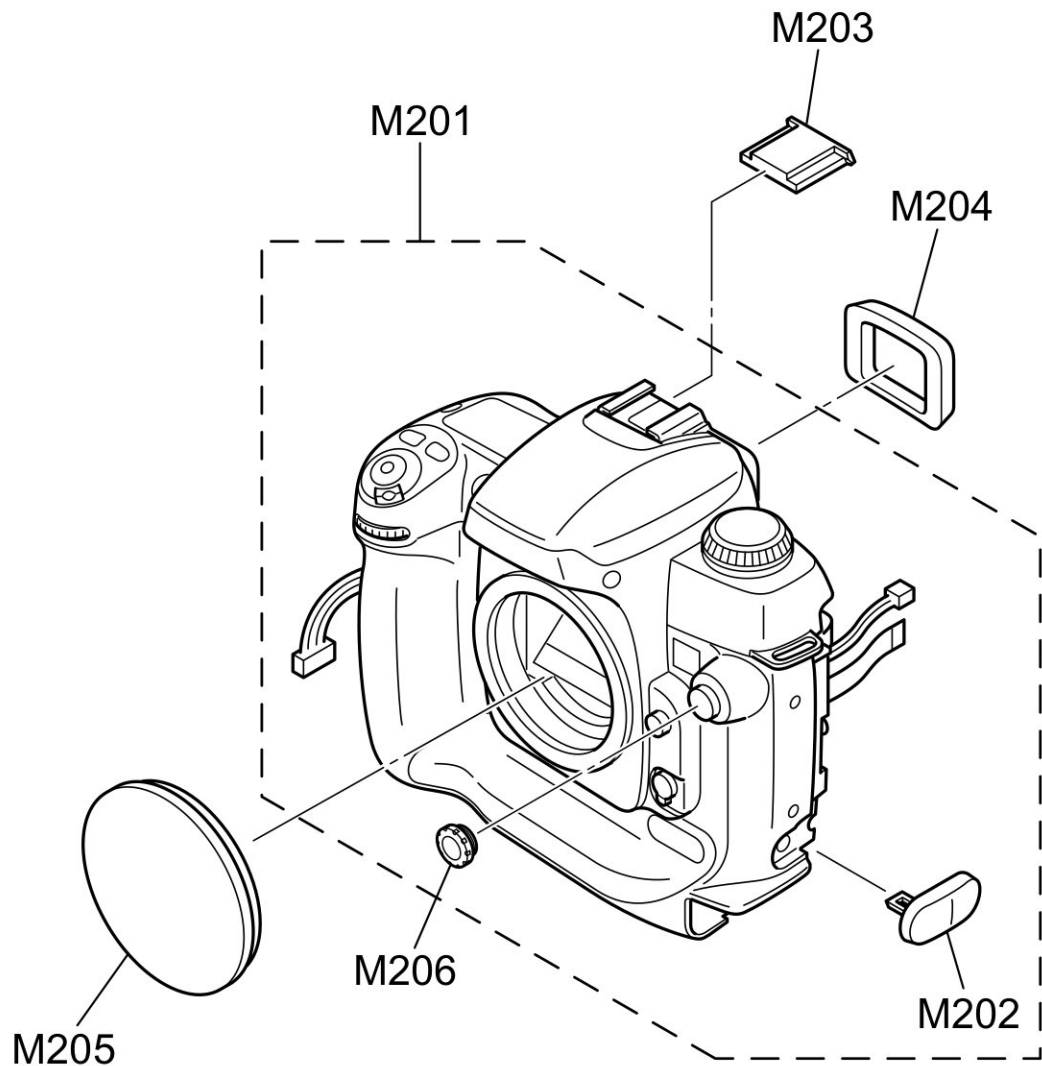
When you ask for repair of Camera Body Assy, please put a label which shows the serial number of FinePix S3pro onto the spool position.

[Notes]
After the repair job for Camera Body Assy is finished, please peel off the above label and put it together with DSC block. After that, adjust it like when you do after replacing Camera Body Assy.

Label

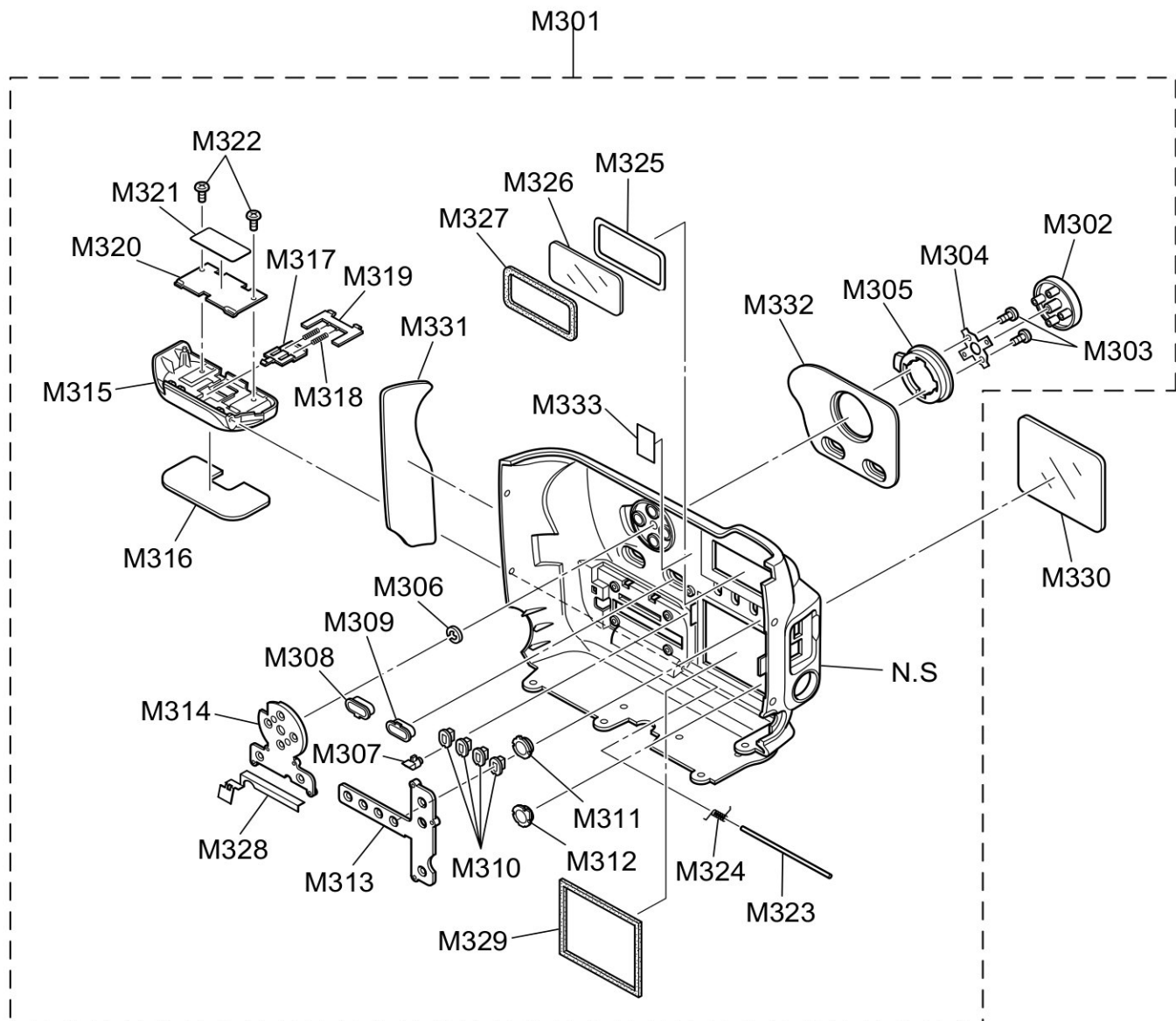
Ref.No.	Parts No.	Description	Remarks
A201	ZPK0102-100	Packing box for S3Pro CAMERA BODY	With inside frame
A202	ZPK0103-100	Protector for S3Pro CAMERA BODY	One pair in the top and bottom.
A203	NAY0083	Bag for transportation	S1Pro and commonness

6-3. CAMERA BODY



Ref No.	Parts No.	Description	Comment	EL
M201	FZ06022-100	CAMERA BODY ASSY		=
M202	BB17618-100	TERMINAL COVER		N
M203	FZ04876-100	SHOECAP		N
M204	FZ04801-100	RUBBER EYECUP		N
M205	BB17663-100	BODY CAP		N
M206	FZ04807-100	SYNCHRO CAP		N

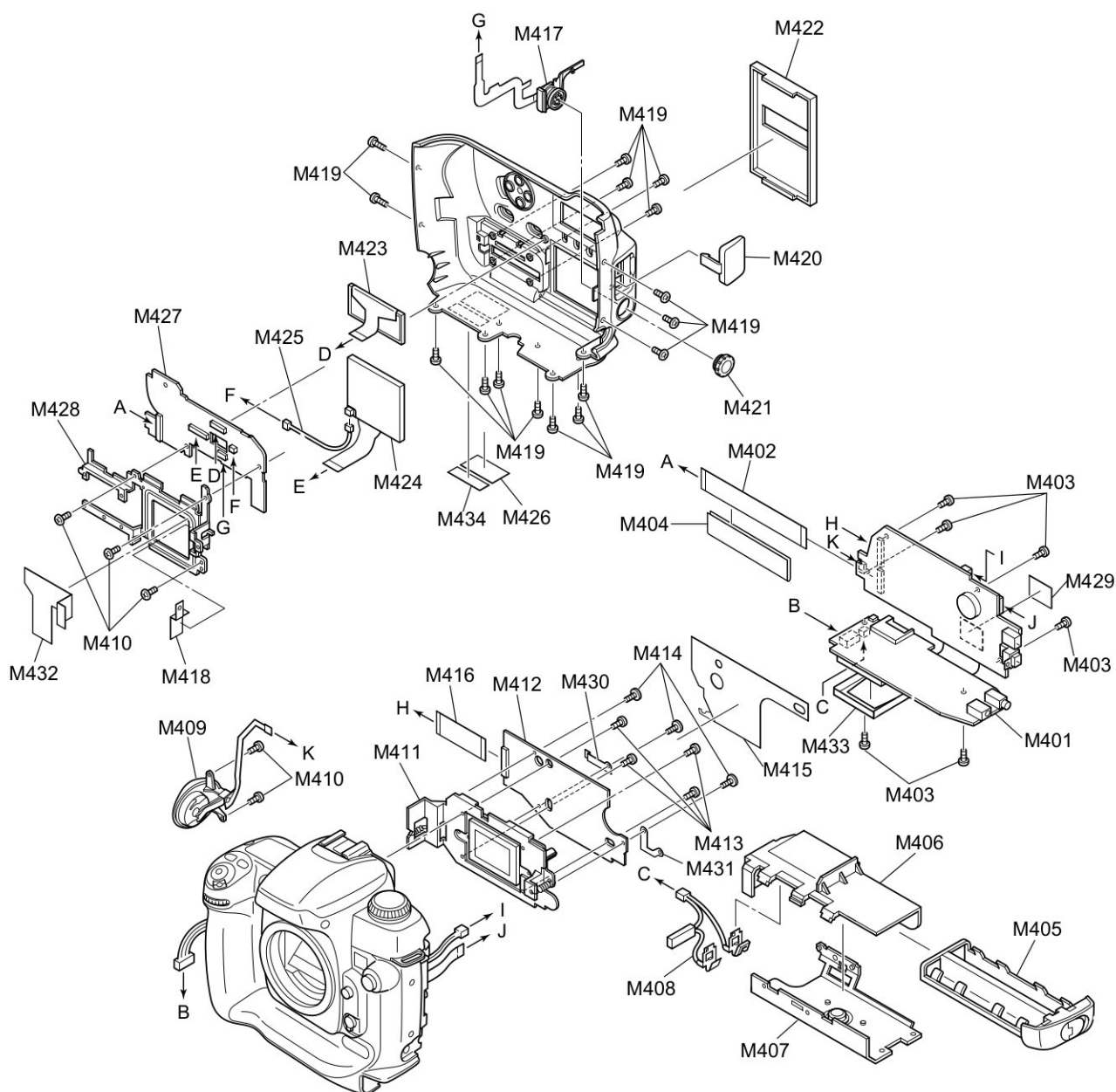
6-4. R CABI



Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
M301	BU03053-100	R CABI ASSY		N	M321	BB17649-100	LABEL(CARD)		N
M302	BB17633-100	CURSOR BUTTON		N	M322	BB17335-100	SCREW BT2M1.7X2.5B		N
M303	BB17335-400	SCREW BT2M1.7X4.0B		N	M323	BB17648-100	SHAFT(CARD)		N
M304	BB17635-100	CURSOR PSP		N	M324	BB17653-100	TSP(CARD)		N
M305	BB17634-100	C LOCK LEVER		N	M325	BB17690-100	W FACE DISP		N
M306	ARE2010-CN1	JIS E-RING 2.0		N	M326	BB17689-100	DISP WINDOW		N
M307	BB17637-100	LED GUIDE		N	M327	BB17655-100	DISP CUSHION		N
M308	BB17638-100	OK BUTTON		N	M328	BB17656-100	BLIND SHEET		N
M309	BB17639-100	BACK BUTTON		N	M329	BB17658-100	LCD CUSHION		N
M310	BB17640-100	CHANGE BUTTON		N	M330	BB17661-100	MONITOR WINDOW		N
M311	BB17641-100	FUNC BUTTON		N	M331	BB17630-100	REAR SIDE RUBBER		N
M312	BB17642-100	PLAY BUTTON		N	M332	BB17628-100	REAR RUBBER		N
M313	BB17643-100	RUBBER KEY F		N	M333	BB18609-100	BLIND SHEET RUBBER		N
M314	BB17644-100	RUBBER KEY C		N					
M315	BB17645-100	CARD COVER		N					
M316	BB17646-100	CARD RUBBER		N					
M317	BB17650-100	CARD KONB		N					
M318	BB18005-100	CSP(CARD)		N					
M319	BB18000-100	CARD LOCK		N					
M320	BB17651-100	CARD PLATE		N					

6-5. Internal parts

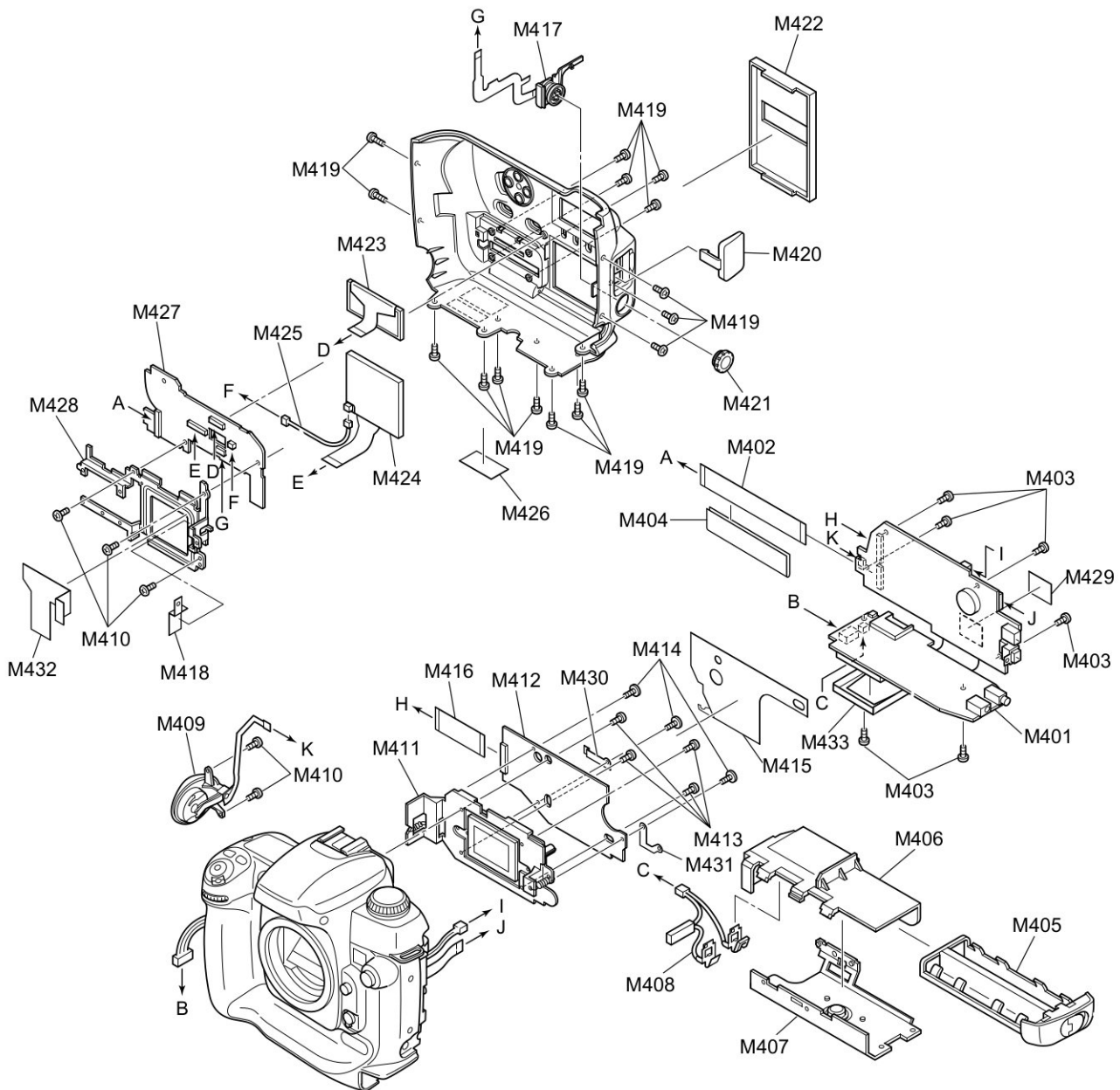
6-5-1. US/CA-model



Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
M401	CB1468-A101	MAIN PWB ASSY		=	M421	FZ06024-100	REMOTE RELEASE SOCKET CAP		N
M402	FZ06035-100	MAIN-SW FPC		N	M422	BB17664-100	WINDOW COVER		N
M403	BB17345-200	SCREW MS2M1.7X3.0N		N	M423	FZ06039-100	DOT MATRIX LCD		N
M404	FZ06117-100	MAIN-SW SHEET		=	M424	BF05369-100	LCD MONITOR		N
M405	BU01990-100	BATT CART ASSY		N	M425	FZ05414-100	WIRE HARNESS		N
M406	BB17622-100	BATT HOLDER		N	M426	BB17662-100	PRODUCT LABEL		N
M407	BU03052-100	BOTTOM FRAME ASSY		N	M427	CB1470-A100	SW PWB ASSY		=
M408	BU03069-100	BATT HARNESS ASSY		N	M428	BB17659-100	REAR FRAME		N
M409	BF05083-100	RELEASE HOLDER CONST		N	M429	FZ06125-100	MAIN SHEET		=
M410	BB17335-400	SCREW BT2M1.7X4.0B		N	M430	BB18526-100	EMI SHEET R		N
M411	BF05370-100	CCD UNIT		=	M431	BB18525-100	EMI SHEET L		N
M412	CB1469-A102	CCD PWB ASSY		=	M432	BB18527-100	EMI SHEET 10FPC		N
M413	BB11386-100	SCREW_M1.2X2.4C		N	M433	FZ04802-100	CF EJECTOR		N
M414	BB18126-100	CCD PWB SCREW		N	M434	BB09250-200	PL SEAL (U)		N
M415	FZ06093-100	SHIELD SHEET		=					
M416	FZ06036-100	MAIN-CCD FPC		N					
M417	BF05086-100	10PIN TERMINAL ASSY		N					
M418	BB18524-100	EMI SHEET 10C/N		N					
M419	BB17336-200	SCREW N-MS2M1.7X3.0BA		N					
M420	BB17657-100	DIGITAL TERMINAL COVER		N					

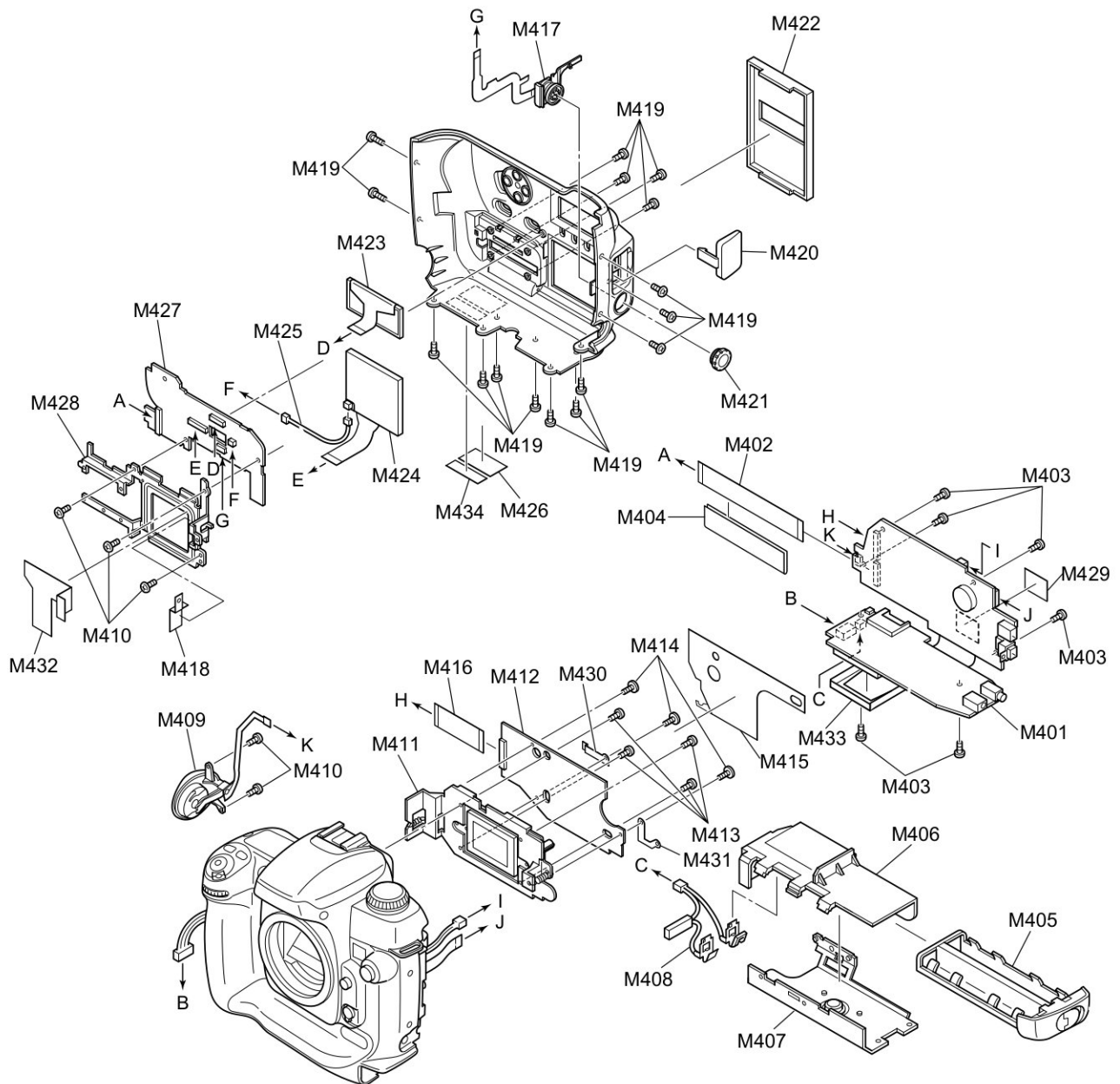
6. Parts List

6-5-2. EU/EG/GE/AS-model



Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
M401	CB1468-A101	MAIN PWB ASSY		=	M421	FZ06024-100	REMOTE RELEASE SOCKET CAP		N
M402	FZ06035-100	MAIN-SW FPC		N	M422	BB17664-100	WINDOW COVER		N
M403	BB17345-200	SCREW MS2M1.7X3.0N		N	M423	FZ06039-100	DOT MATRIX LCD		N
M404	FZ06117-100	MAIN-SW SHEET		=	M424	BF05369-100	LCD MONITOR		N
M405	BU01990-100	BATT CART ASSY		N	M425	FZ05414-100	WIRE HARNESS		N
M406	BB17622-100	BATT HOLDER		N	M426	BB17662-100	PRODUCT LABEL		N
M407	BU03052-100	BOTTOM FRAME ASSY		N	M427	CB1470-A100	SW PWB ASSY		=
M408	BU03069-100	BATT HARNESS ASSY		N	M428	BB17659-100	REAR FRAME		N
M409	BF05083-100	RELEASE HOLDER CONST		N	M429	FZ06125-100	MAIN SHEET		=
M410	BB17335-400	SCREW BT2M1.7X4.0B		N	M430	BB18526-100	EMI SHEET R		N
M411	BF05370-100	CCD UNIT		=	M431	BB18525-100	EMI SHEET L		N
M412	CB1469-A102	CCD PWB ASSY		=	M432	BB18527-100	EMI SHEET 10FPC		N
M413	BB11386-100	SCREW_M1.2X2.4C		N	M433	FZ04802-100	CF EJECTOR		N
M414	BB18126-100	CCD PWB SCREW		N					
M415	FZ06093-100	SHIELD SHEET		=					
M416	FZ06036-100	MAIN-CCD FPC		N					
M417	BF05086-100	10PIN TERMINAL ASSY		N					
M418	BB18524-100	EMI SHEET 10CNN		N					
M419	BB17336-200	SCREW N-MS2M1.7X3.0BA		N					
M420	BB17657-100	DIGITAL TERMINAL COVER		N					

6-5-3. JP-model

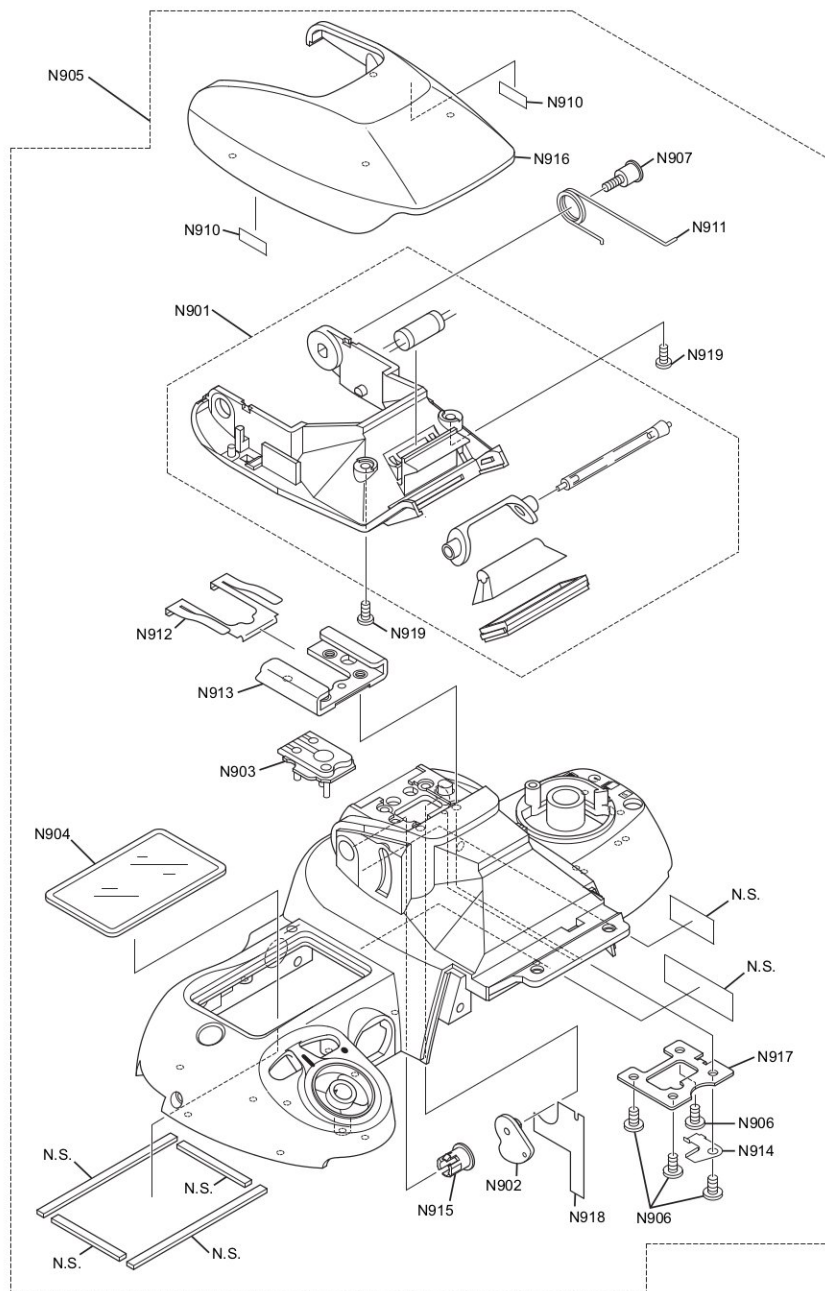


Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
M401	CB1468-A101	MAIN PWB ASSY		=	M421	FZ06024-100	REMOTE RELEASE SOCKET CAP		N
M402	FZ06035-100	MAIN-SW FPC		N	M422	BB17664-100	WINDOW COVER		N
M403	BB17345-200	SCREW MS2M1.7X3.0N		N	M423	FZ06039-100	DOT MATRIX LCD		N
M404	FZ06117-100	MAIN-SW SHEET		=	M424	BF05369-100	LCD MONITOR		N
M405	BU01990-100	BATT CART ASSY		N	M425	FZ05414-100	WIRE HARNESS		N
M406	BB17622-100	BATT HOLDER		N	M426	BB17662-100	PRODUCT LABEL		N
M407	BU03052-100	BOTTOM FRAME ASSY		N	M427	CB1470-A100	SW PWB ASSY		=
M408	BU03069-100	BATT HARNESS ASSY		N	M428	BB17659-100	REAR FRAME		N
M409	BF05083-100	RELEASE HOLDER CONST		N	M429	FZ06125-100	MAIN SHEET		=
M410	BB17335-400	SCREW BT2M1.7X4.0B		N	M430	BB18526-100	EMI SHEET R		N
M411	BF05370-100	CCD UNIT		=	M431	BB18525-100	EMI SHEET L		N
M412	CB1469-A102	CCD PWB ASSY		=	M432	BB18527-100	EMI SHEET 10FPC		N
M413	BB11386-100	SCREW_M1.2X2.4C		N	M433	FZ04802-100	CF EJECTOR		N
M414	BB18126-100	CCD PWB SCREW		N	M434	BB09250-100	PL LABEL		N
M415	FZ06093-100	SHIELD SHEET		=					
M416	FZ06036-100	MAIN-CCD FPC		N					
M417	BF05086-100	10PIN TERMINAL ASSY		N					
M418	BB18524-100	EMI SHEET 10CNN		N					
M419	BB17336-200	SCREW N-MS2M1.7X3.0BA		N					
M420	BB17657-100	DIGITAL TERMINAL COVER		N					

6-6. List of parts related to exterior

★ Revised: 27. Dec. 2004

6-6-1. TOP COVER 1

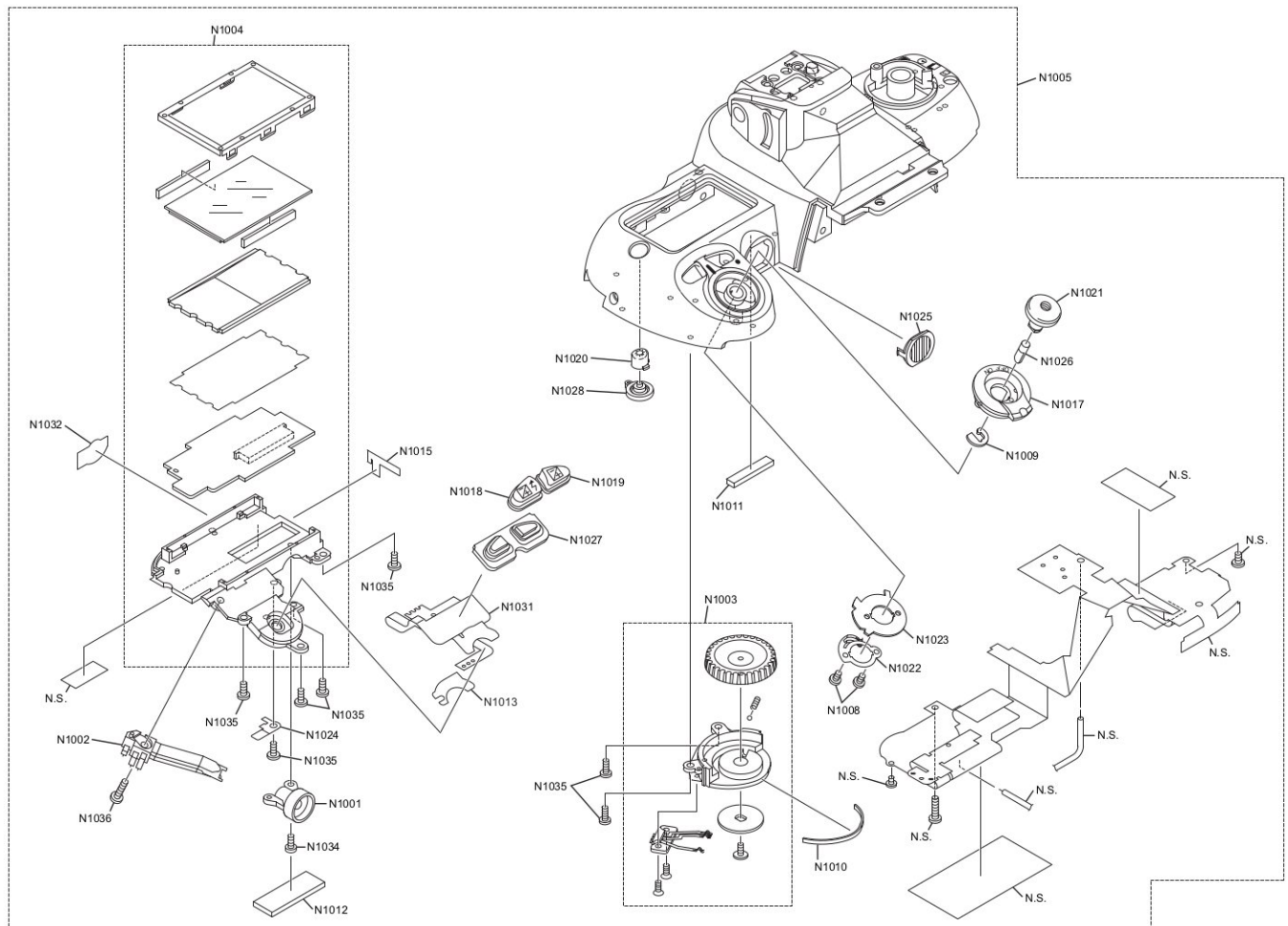


N.S.=Not Supply

Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
N901	1B060-713-2	SB LOWER CASE UNIT		N	N916	1K685-085	SB UPPER CASE		N
N902	1C998-038	SB UP SWITCH UNIT		N	N917	1S700-355	BACKING PLATE		N
N903	1C998-040	SHOE MOLD UNIT		N	N918	1S998-506	SB UP FPC UNIT		N
N904	1C998-042	EXTERNAL LCD WINDOW UNIT		N	N919	G1-17030FD	SCREW		N
N905	1C998-689	TOP COVER UNIT		N	N.S.	N.S.	INSULATE TAPE		N
N906	1K001-077	SCREW		N	N.S.	N.S.	TAPE		N
N907	1K010-469	SCREW		N					
N.S.	N.S.	SPONGE		N					
N.S.	N.S.	SPONGE		N					
N910	1K119-308	RUBBER SEAL		N					
N911	1K230-548	FLASH UP SPRING		N					
N912	1K240-867	SHOE SPRING		N					
N913	1K406-032-1	SHOE		N					
N914	1K611-833	LUG PLATE A		N					
N915	1K631-102	SB CASE AXLE		N					

6-6-2. TOP COVER 2

★ Revised: 27. Dec. 2004



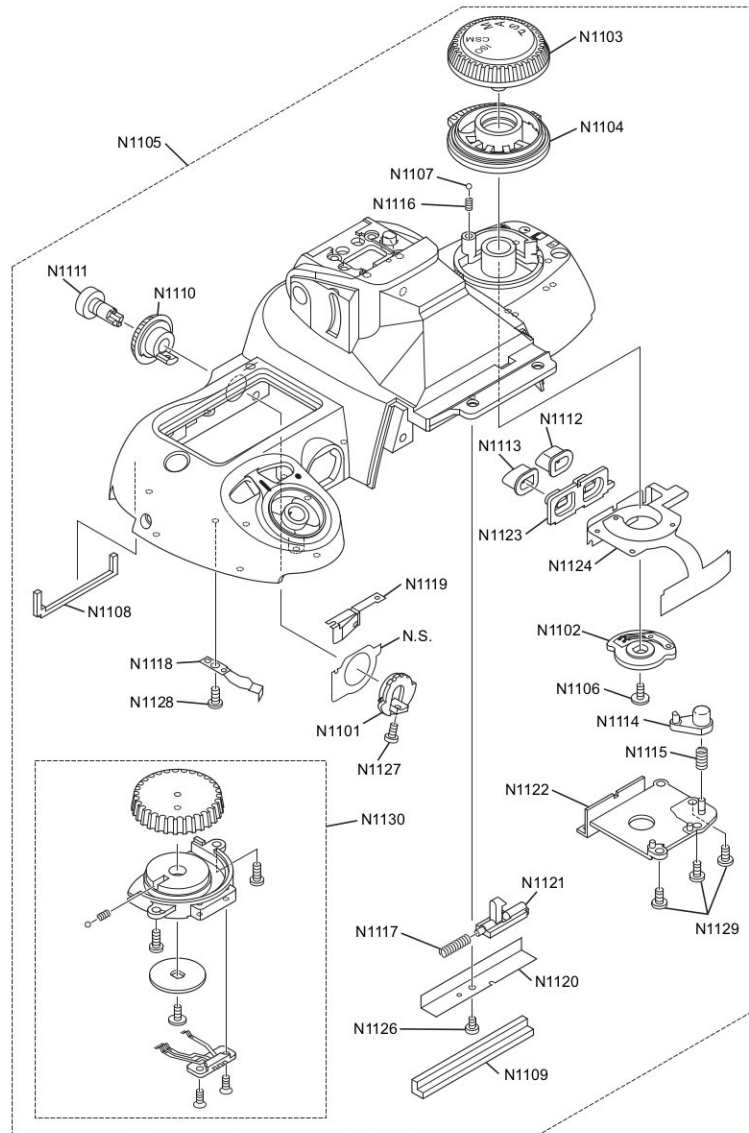
N.S.=Not Supply

Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
N1001	1B060-663	AF ASSIST LAMP UNIT		N	N1021	1K208-245-2	RELEASE BUTTON		N
N1002	1B610-158	RELEASE SWITCH UNIT		N	N1022	1K241-311	POWER DIAL SW BRUSH		N
N1003	1C998-044	SUB C/D BASE UNIT		N	N1023	1K601-630	POWER DIAL CLICK PLATE		N
N1004	1C998-362	EXTERNAL LCD BASE UNIT		N	N1024	1K601-647	BENT PLATE		N
N1005	1C998-689	TOP COVER UNIT		N	N1025	1K682-420	AF ASSIST LAMP COVER		N
N.S.	N.S.	SCREW		N	N1026	1K682-423	RELEASE BUTTON SLEEVE		N
N.S.	N.S.	SCREW		N	N1027	1S758-088	RUBBER SW		N
N1008	1K010-501	SCREW		N	N1028	1S758-089	ILLUMINATION RUBBER SW		N
N1009	1K060-054	E-RING		N	N.S.	N.S.	GND LEAD WIRE		N
N1010	1K103-738	CUSHION F		N	N.S.	N.S.	GND LEAD WIRE		N
N1011	1K119-213	EXPOSURE PREVENT SPONGE		N	N1031	1S998-505	C/D FPC UNIT		N
N1012	1K119-214	SPONGE		N	N1032	1S998-507	AE LOCK BUTTON UNIT		N
N1013	1K119-237	ADHESIVE DOUBLE COATED TAPE		N	N.S.	N.S.	FPC UNIT FOR TOP COVER		N
N.S.	N.S.	TAPE		N	N1034	G1-17030FA	SCREW		N
N1015	1K119-329-1	TAPE		N	N1035	G1-17040FA	SCREW		N
N.S.	N.S.	ADHESIVE DOUBLE COATED TAPE		N	N1036	G1-17060FA	SCREW		N
N1017	1K206-171	POWER DIAL		N	N.S.	N.S.	SCREW		N
N1018	1K208-242	EXPOSURE COMPENSATION BUTTON		N	N.S.	N.S.	INSULATE TAPE		N
N1019	1K208-243	COMPENSATION BUTTON		N					
N1020	1K208-244	ILLUMINATION ON/OFF BUTTON		N					

6. Parts List

6-6-3. TOP COVER 3

★ Revised: 27. Dec. 2004

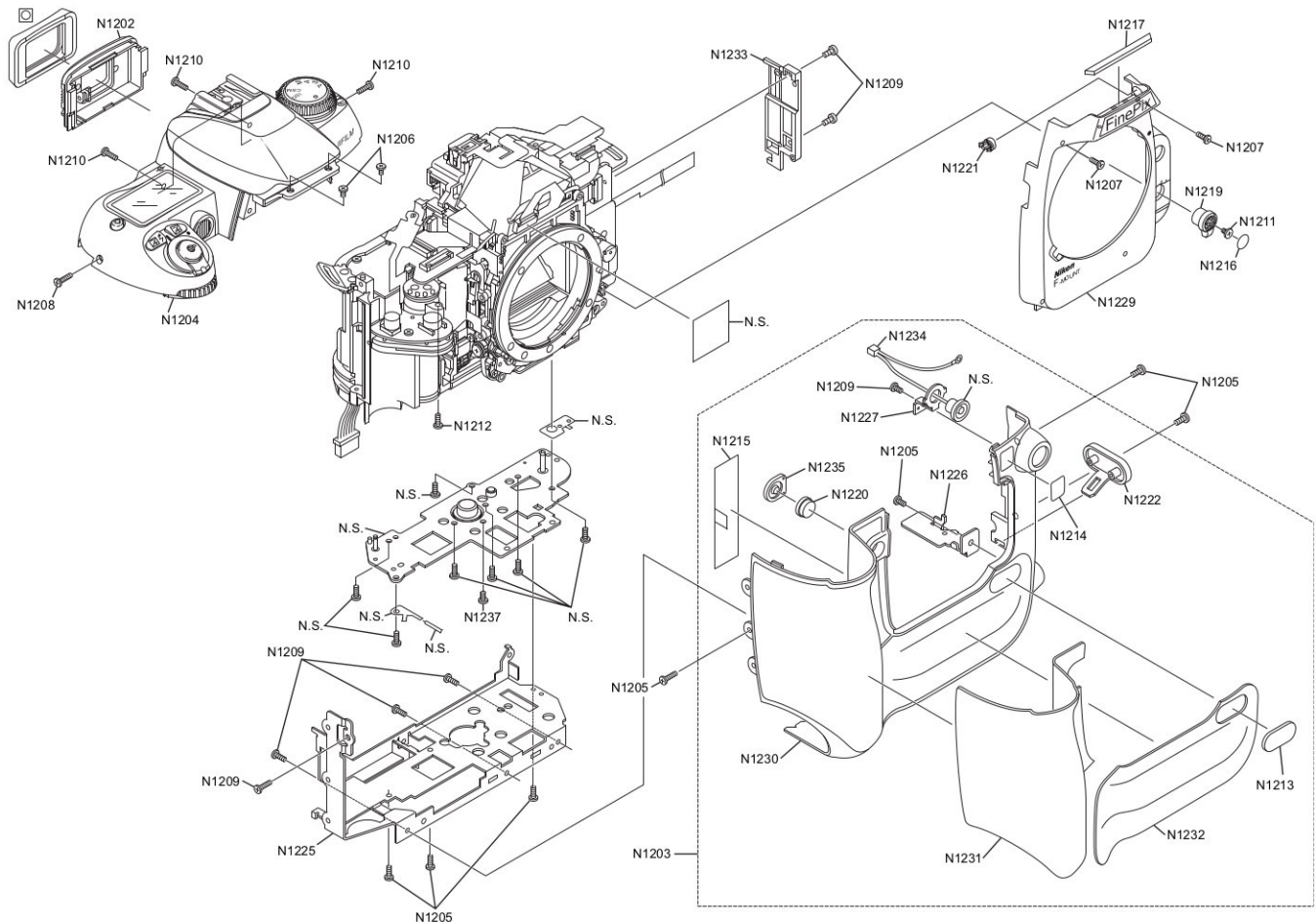


N.S.=Not Supply

Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
N1101	1C998-046	METERING MODE DIAL UNIT		N	N1116	1K220-532	MODE DIAL CLICK SPRING		N
N1102	1C998-048	MODE DIAL SW SPRING UNIT		N	N1117	1K220-548	SB LOCK LEVER SPRING		N
N1103	1C998-070	MODE DIAL UNIT		N	N1118	1K241-310	POWER DIAL CLICK SPRING		N
N1104	1C998-071	WINDING DIAL UNIT		N	N1119	1K241-313	METERING MODE CLICK SPRING		N
N1105	1C998-689	TOP COVER UNIT		N	N1120	1K612-480	SB LOCK LEVER RETAINER		N
N1106	1K010-146	SCREW		N	N1121	1K682-418	SB LOCK LEVER		N
N1107	1K078-011	CLICK BALL		N	N1122	1K682-427-1	PLATE		N
N1108	1K119-318	DROP PROOF SPONGE		N	N1123	1S758-090	RUBBER BUTTON		N
N1109	1K119-327	DROP PROOF SPONGE		N	N1124	1S998-502	M/D FPC UNIT		N
N1110	1K201-143	METERING MODE DIAL		N	N.S.	N.S.	MEASURING MODE DIAL UNIT		N
N1111	1K208-246	AE LOCK BUTTON		N	N1126	G1-14025FD	SCREW		N
N1112	1K208-247	REWIND SIDE PUSH BUTTON CAP A		N	N1127	G1-14030FA	SCREW		N
N1113	1K208-248	REWIND SIDE PUSH BUTTON CAP B		N	N1128	G1-17025FA	SCREW		N
N1114	1K208-249	WINDING LOCK MOLD		N	N1129	H1-17030FA	SCREW		N
N1115	1K220-496	SPRING		N	N1130	1C998-043	MAIN C/D BASE UNIT		N

6-6-4. CAMERA BODY External

★ Revised: 27. Dec. 2004




N.S.=Not Supply










Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
N.S.	N.S.	SYNC TERMINAL		N	N1221	1K208-241	FLASH UP BUTTON		N
N1202	1C998-687	EYE PIECE BASE UNIT		N	N1222	1K467-267	JACK COVER		N
N1203	1C998-688	FRONT CABINET UNIT		N	N.S.	N.S.	PAG PLATE		N
N1204	1C998-689	TOP COVER UNIT		N	N.S.	N.S.	LAG PLATE		N
N1205	1K001-288	SCREW		N	N1225	1K602-644	MAIN FRAME		N
N1206	1K010-462	SCREW		N	N1226	1K602-645	JACK PLATE		N
N1207	1K010-463	SCREW		N	N1227	1K602-646	SYNC. BRACKET		N
N1208	1K010-464	SCREW		N	N.S.	N.S.	BOTTOM BASE PLATE		N
N1209	1K010-648	SCREW		N	N1229	1K683-083	FRONT COVER BLACK		N
N1210	1K010-483	SCREW		N	N1230	1K683-084	FRONT CABINET		N
N1211	1K010-259	SCREW		N	N1231	1K683-086	RUBBER SGF		N
N1212	H1-17060FA	SCREW		N	N1232	1K683-087	RUBBER TGF		N
N1213	1K087-632	MODEL BADGE		N	N1233	1K683-088	BODY PART		N
N1214	1K087-633	CCD BADGE		N	N1234	1S045-389	SYNC. HANES UNIT		N
N1215	1K103-739	SHEET F1		N	N1235	1S758-085	PREVIEW BUTTON SW		N
N1216	1K119-201	A/M COVER PLATE		N	N.S.	N.S.	GND LEAD WIRE		N
N1217	1K119-326	DROP PROOF SPONGE		N	N1237	G1-20035FD	SCREW		N
N.S.	N.S.	TAPE		N	N.S.	N.S.	SCREW		N
N1219	1K206-170	A/M CHANGE LEVER		N					
N1220	1K208-240	PREVIEW BUTTON		N					

6-7. Electrical parts

[NOTE]

The components indicated by mark  are critical for safety. When indicated parts by reference number, please include the board name.

* Due to standardization, replacement in the parts list may be different from the parts list specified in the circuit or the components used on the set.

Ref No.	Parts No.	Description	Comment	EL	Ref No.	Parts No.	Description	Comment	EL
MAIN PWB ASSY					SW PWB ASSY				
[SWITCH]					[CONNECTOR]				
SW200	FZ05764-100	PUSH SWITCH		N	CN1000	FGB144-0061	CONNECTOR	CJ 6P FN 0.5MM NH N	
[FUSE]					CN1001	FGB144-0221	CONNECTOR	CJ 22P FN 0.5MM NH N	
 F600	FP00039-253	FUSE	2.5A 32V UL	N	CN1002	FGB145-0451	CONNECTOR	CJ 45P FN 0.3MM NH N	
 F601	FP00018-503	FUSE	5A	N	CCD PWB ASSY				
 F603	FP00039-253	FUSE	2.5A 32V UL	N	[CONNECTOR]				
 F604	FP00039-203	FUSE	2A 32V UL	N	CN900	FGB145-0571	CONNECTOR	CJ 57P FN 0.3MM NH N	
 F606	FP00039-103	FUSE	1A 32V UL	N					
 F607	FP00039-203	FUSE	2A 32V UL	N					
 F701	FP00039-203	FUSE	2A 32V UL	N					
 F702	FP00039-203	FUSE	2A 32V UL	N					
 F703	FP00040-503	FUSE	5A 24V UL	N					
[CONNECTOR]									
CN100	FGB145-0571	CONNECTOR	CJ 57P FN 0.3MM NH N						
CN101	FGB144-0061	CONNECTOR	CJ 6P FN 0.5MM NH N						
CN102	FGB145-0451	CONNECTOR	CJ 45P FN 0.3MM NH N						
CN103	FGB106-0121	CONNECTOR	CJ 12P FN 0.5MM NH N						
CN104	FGA113-0021	CONNECTOR	CJ 2P RN 1.5MM PH N						
CN300	FZ05869-100	JACK	IEEE1394	N					
CN400	FZ05744-100	JACK	USB MINI-B	N					
CN500	FGB144-0241	CONNECTOR	CJ 24P FN 0.5MM NH N						
CN501	FGA155-0021	CONNECTOR	CJ 2P SN 0.8MM RH N						
CN600	FGA042-0022	CONNECTOR	LJ 2P SN 2MM PN N						
CN700	FGA137-0062	CONNECTOR	LJ 6P RB 2.0MM PH N						
CN800	FGY067-0201	CONNECTOR	CJ 20P B 1MM NN N						
CN801	FZ04925-100	JACK_CF CONNECTOR	CF CONNECTOR	N					
[JACK]									
J100	FZ04373-100	JACK_HSJ1456-010325		N					
J601	FZ05847-100	JACK		N					
[BATTERY]									
BT200	FZ05964-100	BATTERY	BackUp	=					
[BUZZER]									
BZ100	FZ04744-100	BUZZER		N					

7-1. List of Related Technical Updates Issued

[illegible]



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