GENERAL DESCRIPTION OF PRODUCT

CONTENTS

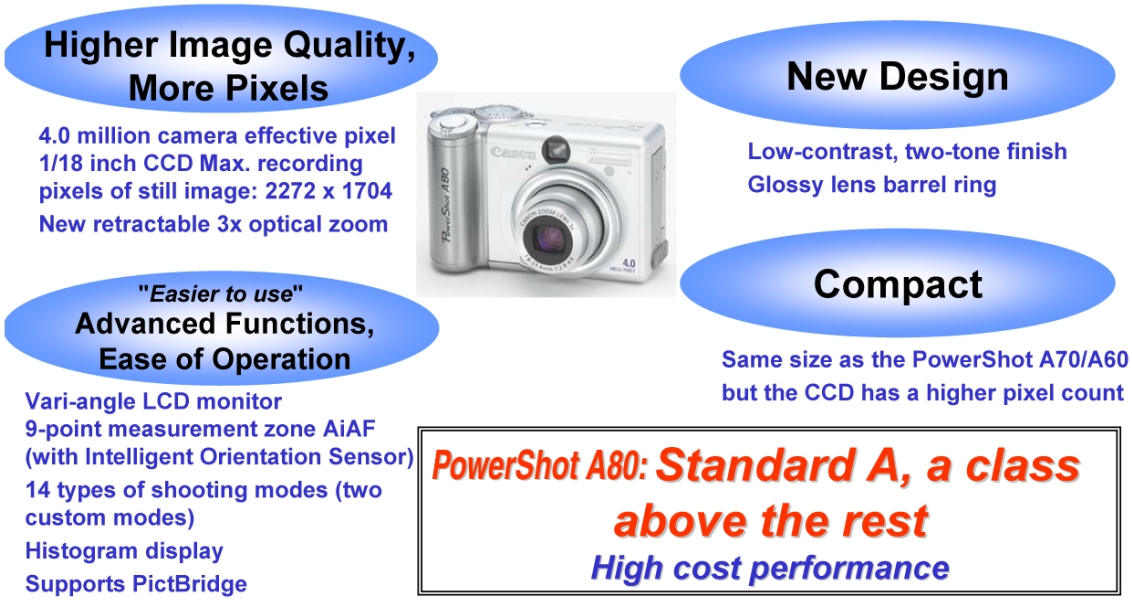
1 Development Background

1-1 Development Objectives

The PowerShot A series was designed based on the concept of affordable pricing and simple operation but with image quality and features to match high-end models, and is characterized by its orthodox design similar to conventional 35mm cameras, its handy size for superb operability, and its versatility in being able to take AA batteries. In addition, with superb image quality, advanced features, and stylish design that outstrip all other products in the popular price bracket, the PowerShot A series, from the PowerShot A20/ A10 released in spring 2001 to the PowerShot A70/A60 released in spring 2003, has consistently won popular acclaim from the market and carved out a stable share.
However, competitors have begun offering their own affordable digital cameras using 4.0 million pixel CCDs, threatening Canon's lead in the market. Consequently, Canon plans to release its new Powershot A80 in autumn 2003, taking the design ideals of the PowerShot A70/A60 to the next level to outdo the competition in the same class by producing a 4.0 megapixel CCD camera with even more functions.
The PowerShot A80 was developed as the flagship model of the PowerShot A series with the aim of enhancing the overall image of the PowerShot A series and expanding its market.

1-2 Product Concept

The concept behind the PowerShot A80 was to achieve a stylish and powerful digital camera distinct from competing models and from the PowerShot A70 in the highly competitive popular price bracket, with the aim of establishing the PowerShot A80 as the "PowerShot A series flag-ship model with features above and beyond the standard specifications."
Specifically, the PowerShot A80 is based on the PowerShot A70 with the following additional specifications.



★ New features unique to the PS A80 (Fall 2003 model)
● Improved features from the PS A70 (Features already provided on other spring 2003 models)
Red characters indicate elements the development section would especially like to promote.
❍ Features carried over from the PS A70 PS: PowerShot

Higher Image Quality / More Pixels

★New high resolution 3x zoom lens (38 - 114mm (35mm film equivalent), F2.8 - 4.9, Retractable)

● Approx. 4.0 million camera effective pixel 1/1.8 inch type CCD (Total number of pixel: approx. 4.1million)
● Maximum recording pixels of still image: 2272 X 1704
● AF/AE/AWB that relies on an Intelligent Orientation Sensor to detect vertical / horizontal orientation

❍ High-definition and fast processing with the Digital Imaging Processor "DIGIC"
❍ High-speed AF and high-definition AE/AWB based on iSAPS technology
❍ Fine color reproduction owing to primary color filters
❍ Iris-type aperture enables multi-stop iris control and elegant blur
❍ Wide range of ISO-equivalent speed settings, including the high-image-quality ISO 50
(AUTO/ISO 50/100/200/400 equivalent)
❍ (Auto + Five preset positions + Custom)
❍ Total of 12 image quality modes (recording pixels (4) x compression (3))
❍ Exif 2.2 (Exif Print) compliant

Advanced Functions

★ Supports PictBridge, which enables direct printing to other-vendor printers

● 9-point AiAF and 1-point AF selectable
● 14 shooting modes (with two customizable modes)
● Digital zoom function with continuously changing angle of view (Approx. 3.6x.
Approx. 11x when used in combination with the optical zoom)
● Automatic detection of vertical/horizontal shooting by Intelligent Orientation Sensor
● Histogram display (during rec-review/playback)

❍ Macro function focuses close to 5 cm (wide-end) and 25 cm (telephoto-end)
❍ Real image type 3x optical viewfinder
❍ On/Off selection of AF-assist beam available
❍ Three metering functions (Evaluative metering, Center-weighted average metering and Spot metering)
❍ From 15-second to 1/2000-second shutter speeds
❍ Built-in flash with 3 flashing modes (Auto, On and Off) with combination of red-eye reduction
(Flash range: 45 cm - 4.4 m (W), 45 cm - 2.5 m (T), 25 - 45 cm (macro))
❍ Use of power-saving LED for emitter of red-eye reduction
❍ Flash strength can be adjusted manually
❍ 5 photo effect modes
❍ Noise reduction function reduces noise with slow shutter speed
❍ Settable display times for rec review (Off, 2 to 10 seconds)(Images can be erased during display)
❍ Self-timer function for approximately 2 or approximately 10 seconds

❍ Manual settings functions designed to meet user needs (Focus, Shutter speed, Aperture value, Exposure compensation)
❍ Two types of recording pixels for movie mode (QVGA/QQVGA)
❍ Long movie recording with audio (internal microphone and speaker, max. of 3 minutes)
❍ Sound memos of up to 60 seconds can be appended during replay
❍ Supports DPOF format image transfer
❍ Canon Direct Print function compatible (Card Photo printers (CP Series) and Bubble Jet printers)
❍ Selectable video output format (NTSC/PAL)
❍ UI can be displayed in twelve languages
❍ My Camera function (Start-up image, start-up sound, shutter sound, operation sound and selftimer sound can be customized; on-camera contents can also be created)

Ease of Operation

★ Vari-angle LCD monitor that can disable mirror imaging
★ Mute mode disabling all sounds except the warning sound
★ Display Off mode that switches off the LCD monitor after a certain time

● Large buttons for easier operation (including zoom lever, shooting mode dial)
● Omni Selector provides easy operation
● Choice of High speed mode (approx. 2.4 shots/sec) or Normal mode (approx. 1.6 shots/sec.) in continuous shooting (Under Large/Fine conditions and LCD monitor off)
● Switchable MF zoom display

❍ Mode switch toggles instantly between shooting and replay
❍ Easy operation with a function button
❍ Reset all settings with one-touch operation
❍ Volume of each operation sound can be adjusted manually
❍ Magnified playback at approx. 2x to 10x zoom for convenient image viewing (Also available during rec-review)
❍ High-speed image transfer during replay
❍ Index replay (9-images)
❍ First frame, Last frame, Next frame, Previous frame, Fast forward and Rewind available during movie replay
❍ Unwanted scenes can be deleted in movie replay mode (image and audio)
❍ USB Interface with multi-use connector (mini-B jack)
❍ Computer connections with Picture Transfer Protocol (PTP) support
❍ Use of widely available size AA batteries (4 cells) (Primary: alkaline; secondary: NiMH)

Compact

★ Compact, new high resolution 3x optical zoom lens

● Space-saving 2-blade lens cover inside the lens barrel

❍ Thin 1.5 inch amorphous silicon TFT LCD monitor with low power consumption back light
❍ Small highly reliable and highly efficient light-guide flash

High Quality Design

Note: See “1-3 Design Concept”

★ High-grade design suitable for the flagship model of the PowerShot A series

❍ Large size grip with high-quality metallic-finish zoom lever on the tip

System Accessories

★ New Tele-Convertor for shooting of 200 mm telephoto angle (35mm film equivalent)*1

● Waterproof case submersible to 40 m (Equipped with double glass and flash light diffusion plate)

❍ New Wide Convertor for shooting of 26.6 mm wide angle (35mm film equivalent)*1
(Adopted from PowerShot A70/A60, A40/A30)
❍ Close-up lens for improved macro shooting
❍ Size AA NiMH rechargeable batteries and charger

*1 The Tele-Convertor / Wide Convertor 35mm equivalent focusing range are the values when a bayonet type conversion lens adapter*2 is also used.

*2 The Tele-Convertor and conversion lens adapter are both new designs.

Application Software

Win: Windows, Mac: Macintosh

● Full Featured Application Software*1
Digital Camera Solution Disk
ArcSoft Camera Suite

- ZoomBrowser EX (Win) / ImageBrowser (Mac), with it’s proven image control and display functionality, improved by integrating RemoteCapture.
- PhotoRecord (Win) for easy layout and printing of many pictures (using the new UI of ZoomBrowser EX)
- PhotoStitch (Win/Mac) for creating panoramic pictures with precision
- TWAIN Driver/WIA Driver (Win)
- Adobe Acrobat Reader (Win/Mac) for reading manual
- Proven third-party software
  - ArcSoft PhotoImpression (Win/Mac) for processing/editing still images
  - ArcSoft VideoImpression (Win/Mac) for processing/editing movies
  - Apple QuickTime (Win) for replaying movies

*1 For more information on application software, see the Software Configuration Guide scheduled for future release.

1-3 Design Concept

The concept was to give the PowerShot A80 a fresh, elegant look that would mark it as a higher-end model to the PowerShot A70. We planned to achieve this by using gently curved surfaces, a fine balance between the interwoven parts, and inspirational two-tone coloring.

- Design points

- High quality look of the leading model in the PowerShot A series

While retaining the simplicity of low-end models, the PowerShot A80 also exudes an elegance associated with quality.

Since both the front and top covers are made from aluminum, the product name can be diamond-cut into the top surface. This aluminum finish gives the product a robust feel and high-grade appearance. The plated ring around the lens is also a sophisticated-looking design feature.

- Larger buttons for easier use

The tilted zoom lever and shutter button and the user-friendly mode dial were all designed for easy operation. The operation buttons stand in relief against the gently concave surrounding surface, making the buttons easy to locate and also a design feature. The large-size grip aims to make the PowerShot A80 easy to hold.

- Compact design

The crosswise ridged R was made as large as possible to make it appear thinner and smaller. The coloring also adds to the compact appearance of the PowerShot A80.

- Two-tone silver

The elegant appearance of the PowerShot A80 comes from its sophisticated two-tone coloring, which emphasizes the simple design lines of the camera by giving the grip and buttons a dark silver sheen, and the lens barrel a light silver sheen.

1-4 Product Specification Comparison

Comparison of the main features of the PowerShot A80 and the PowerShot A70

Note) Highlighted table items show changes from the PowerShot A70.

			PowerShot A80	PowerShot A70
Image Sensor (CCD)			Camera effective pixels : Approx. 4.0 million, 1/1.8 inch (Total pixels: Approx. 4.1 million)	Camera effective pixels : Approx. 3.2 million, 1/2.7 inch (Total pixels: Approx. 3.3 million)
Color Filter			Primary color filter (Bayer type)	←
Lens	Focal Length (35mm film equivalent)		38 – 114 mm	35 – 105 mm
	f/number		f/2.8 – 4.9	f/2.8 – 4.8
	Optical Zoom		3x	←
	Shooting Distance (from the front of the lens)	Normal	45 cm – infinity	46 cm – infinity
		Macro	5 – 45 cm (W), 25 – 45 cm (T)	5 – 46 cm (W), 26 – 46 cm (T)
Optical Viewfinder		Type	Real-image zoom viewfinder	←
		Dioptric Adjustment	—	←
LCD Monitor			1.5 inch amorphous silicon TFT color LCD (Approx. 67000 pixels) with variable-angle function	1.5 inch low-temperature polycrystalline silicon TFT color LCD (Approx. 78000 pixels)
Focusing	Focusing Frame		9-point AiAF/1-point AF (center-point)	5-point AiAF/1-point AF (center-point)
	Manual Focus		❍	←
	AF Lock		❍	←
	AF-assist Beam On/Off		❍	←
Exposure Control	Light Metering System		Evaluative/center-weighted average/spot (Spot metering: Metering is center-pointed.)	←
	Exposure Control System		Program AE/Manual	←
	AE Lock		—	←
	Exposure Compensation		+/- 2 stops in 1/3-stop increments	←
	Sensitivity		Auto, ISO 50/100/200/400 equivalent	←
White Balance			Auto + Pre-set (Daylight/Cloudy/Tungsten/ Fluorescent/Fluorescent H) + Custom	←
Shutter		Type	Mechanical shutter + electronic shutter	←
		Speed	15 – 1/2000 sec.	←
Aperture		Type	Iris type aperture	←
		f/number	f/2.8 – 8.0 (W), f/4.9 – 8.0 (T)	f/2.8 – 8.0 (W), f/4.8 – 8.0 (T)
Flash	Operation Modes		Auto*/On*/Off * Red-eye reduction is available	←
	Flash Range		45 cm – 4.4 m (W), 45 cm – 2.5 m (T), 25 – 45 cm (Macro) (ISO equivalent speed: Auto)	46 cm – 4.2 m (W), 46 cm – 2.5 m (T), 26 – 46 cm (Macro) (ISO equivalent speed: Auto)
	Flash Exposure Compensation		—	←
	Manual Flash Output		3 steps	←
	FE Lock		—	←
	Slow Sync		❍	←
	Second Curtain		—	←
Shooting Specifications	Shooting Modes		Auto/Creative Zone (Program/Shutter speed priority/Aperture priority/Manual/Custom/ Custom 2)/Programmed image control zone (Portrait/Landscape/Night Scene/Fast shutter/Slow shutter/Stitch Assist /Movie)	Auto/Creative Zone (Program/Shutter speed priority/Aperture priority/Manual/Custom/ Custom 2)/Programmed image control zone (Portrait/Landscape/Night Scene/Fast shutter/Slow shutter/Stitch Assist /Movie)
	Digital Zoom		Approx. 3.6x	Approx. 3.2x
	Photo Effects		Vivid/Neutral/Low sharpening/Sepia/Black & White	←
	Image Quality Adjustment		—	←
	Noise Reduction		❍	←
	Focus Bracketing		—	←
	AEB (Auto Exposure Bracketing)		—	←
	Review		❍	←
	Continuous Shooting		High Speed (Approx. 2.4 shots/sec.) / Normal (Approx. 1.6 shots/sec.) <Large / Fine mode and LCD monitor off>	Approx. 2.2 shots/sec. <Large / Fine mode and LCD monitor off>
	Interval Shooting		—	←
	Self-timer		Activates shutter after an approx. 2 sec./an approx. 10 sec. delay.	←
	Wireless Control		—	←
	PC-controlled Shooting		❍	←

			PowerShot A80	PowerShot A70
Recording Specifications	Recording Media		CompactFlash card (Type I)	←
	File Format	Still Images	Design rule for camera file system, DPOF (Ver. 1.1) compliant	←
		Movies	AVI	←
	Recording Format	Still Images	JPEG (Exif 2.2 compliant)	←
		Movies	Image: Motion JPEG Audio: WAVE (Monaural)	←
	Number of Recording Pixels	Still Images	(L) 2272 x 1704, (M1) 1600 x 1200 (M2) 1024 x 768, (S) 640 x 480	(L) 2048 x 1536 (M1) 1600 x 1200 (M2) 1024 x 768 (S) 640 x 480
		Movies	(QVGA) 320 x 240 Approx. 3 min. at 15 fps (QQVGA) 160 x 120 Approx. 3 min. at 15 fps	(VGA) 640 x 480 Approx. 30 sec. at 15 fps (QVGA) 320 x 240 Approx. 3 min. at 15 fps (QQVGA) 160 x 120 Approx. 3 min. at 15 fps
Playback Specifications	Playback Modes		Single/Index (9 thumbnail images)/ Magnification/Movie	←
	Still Images	Magnification	2 – 10x	←
		Automatic V/H Detection	❍ (by Intelligent Orientation Sensor)	←
		Histogram	❍	←
		Sound Memos	The max. record/play time is approx. 60 sec.	←
		DPOF	Print order/Image transfer	←
		Direct Print	CP-300/CP-200/CP-100/CP-10, BJ printers with direct print support (free trimming) Supports PictBridge	CP-100/CP-10, BJ printers with direct print support (free trimming)
	Movies	Special Playback	Next frame, Previous frame, Fast forward, Rewind, First frame, and Last frame	←
		Editing	Unnecessary scenes can be erased.	←
Languages			12 languages (English, German, French, Dutch, Danish, Finnish, Italian, Norwegian, Swedish, Spanish, Simplified Chinese and Japanese)	←
My Camera Settings			Start-up image, Start-up sound, Shutter sound, Operation sound, and Self-timer sound (Creation of new my camara content is possible.)	←
Interface			USB (mini-B), Audio / Video output	←
Power Supplies	Power Source	Primary batteries	Size AA Alkaline battery (x4)	←
		Secondary batteries	Size AA NiMH battery (type: NB-1AH recommended) (x4)	←
		AC Adapter	Compact power adapter (CA-PS500)	←
		Car Battery Adapter	—	←
	Battery Performance	Number of Shots	Approx. 250/350 shots (LCD monitor ON) Approx. 800/1000 shots (LCD monitor OFF) <Size AA Alkaline battery/NB-1AH>	Approx. 250/350 shots (LCD monitor ON) Approx. 800/1000 shots (LCD monitor OFF) <Size AA Alkaline battery/NB-1AH>
		Playback Time	Approx. 280/280 min. <Size AA Alkaline battery/NB-1AH>	Approx. 280 / 280 min. <Size AA Alkaline battery/NB-1AH>
Dimensions			103.1 × 64.6 × 34.7 mm (4.06 x 2.54 x 1.37 in.) (excluding protrusions)	101.0 x 64.0 x 31.5 mm (3.98 x 2.52 x 1.24 in.) (excluding protrusions)
Weight			Approx. 250 g (8.8 oz.)	Approx. 215 g (7.59 oz.)

2 Features

2-1 Higher Image Quality/More Pixels

- New high resolution 3x optical zoom lens

The PowerShot A80 has a 3x zoom lens with focal length of 7.8 - 23.4 mm (35mm film equivalent: 38 - 114mm) for shooting everything from landscapes to close-up portraits. While the PowerShot A80 demonstrates the high resolution expected of a 4.0 million-pixel CCD, we optimized the positions of the lenses in the lens groups and reviewed the shapes of the lenses in order to reduce the radius of the foremost lens and the overall retraction length. The result was a compact configuration of 6 lenses in 5 groups including 2 aspherical lenses, which is 3 lenses fewer than in the PowerShot A70/A60. As a result, though the CCD itself is larger than in the PowerShot A70/60 (1/2.7 inch vs 1/1.8 inch), the lenses are smaller.
By adopting a rear-focus technique that moves only 1 lens in group 3, it was possible to minimize the number of focusing lenses.
The compact lens configuration made more room for accommodating the open lens cover, and the conventional 4-blade lens cover inside the lens barrel was replaced by a simpler 2-blade lens cover.

- Approx. 4.0 million camera effective pixel 1/1.8 inch CCD
(Total number of pixels: Approx. 4.1 million; Max. recording pixels of still image: 2272 x 1704)

The PowerShot A80 uses the CCD sensor with approx. 4.0 million camera effective pixels (approx. 4.1 million total pixels) that was featured in the PowerShot S45 and the IXY DIGITAL 400. This CCD sensor allows the PowerShot A80 to capture still images with a recording pixel as large as 2272 x 1704. (The user can select from four recording pixel settings and three compression settings.)

	W x H (Pixel)
Large	2272 x 1704
Medium 1	1600 x 1200
Medium 2	1024 x 768
Small	640 x 480

Table 2-1 Number of recording pixels in the PowerShot A80

- AF/AE/AWB that relies on an Intelligent Orientation Sensor to detect vertical/horizontal orientation

The PowerShot A80 uses the same Intelligent Orientation Sensor as the PowerShot G series and S series.

- Benefits for AF:

Weighting the AF frame differently for horizontal and vertical shooting reduces the incidence of incorrect selected measurement zone, which tends to occur during vertical shooting where the focal point is often the ground.

- Benefits for AE/AWB control:

When the sky takes up a significant portion of the upper half of a shot, the entire picture can look dim because of the brightness of the sky or can take on a yellowish tinge because of the blueness of the sky. In such cases, the high-precision control of the PowerShot A80 minimizes the effect of the sky on the rest of the shot thanks to the Intelligent Orientation Sensor, which can detect the orientation of the shot.

2-2 Advanced Functions

- Supports PictBridge, which enables direct printing from other-vendor printers

In order to make the PowerShot A80 compliant with the PictBridge standard*[1], enacted in February 2003, the camera was designed to allow direct printing even from non-Canon printers*[2].

*1 The PictBridge standard enables connection between any camera and any printer regardless of the manufacturers.See the PictBridge Technical Guidance for details.

*2 The connected printer must support the PictBridge standard.

- 9-point AiAF and 1-point AF selectable

The PowerShot A80 increases the number of AiAF measurement zones, based on which the camera automatically selects the appropriate AF frame, from the 5 available on the PowerShot A70 to 9. *This improved AiAF system makes focusing even more precise regardless of the position of the subject or the shooting orientation (vertical or horizontal).

The camera is also equipped with standard single center-point AF, enabling users to select the easiest AF function to suit the shooting conditions.

* Features shared with the PowerShot A70:

• When focusing, the positions of the focused measurement zones are displayed in green (when two or more positions are in focus, all focused measurement zones are displayed).

- 14 shooting modes (with two custom modes)

The PowerShot A80 has additional custom shooting modes. Using these custom modes, the user can save their shooting settings, the parameters of the shot such as focus and exposure. By saving often-used settings, the user can automatically recall those settings with a simple turn of the shooting mode dial. Two different shot settings can be saved.

(Savable parameters are shown on page 30, in *4-3 Functions Available in Each Shooting Mode*)

Figure 2-1 Shooting mode dial

- Digital zoom function with continuously changing angle of view (Approx. 3.6x. Approx. 11x when used in combination with the optical zoom)

The PowerShot A80 uses a 4.0 million pixel CCD, thereby increasing the digital zoom magnification from the approx. 3.2x employed on the PowerShot A70 to approx. 3.6x. The field of view can be adjusted to a maximum of approximately 11x (35mm film equivalent: 35 - 383 mm) by combining the 3.6x digital zoom magnification with the 3x optical zoom.

In addition, because it is essential that the image displays smoothly on the LCD monitor when the digital zoom feature is used, there are several dozen image fetch positions for the monitor display.

The functions provided by the "DIGIC" imaging engine allow digital zoom and optical zoom to be performed at equivalent zoom speeds, so that there is no noticeable difference between the two during actual use.

Magnification (Optical* ×Digital)	Focal length (35 mm film equivalent)	Capturing pixels
3x	102 mm	2272 x 1704
Capturing images with several positions for display		
4.3x	145 mm	1600 x 1200
Capturing images with several positions for display		
5.3x	181 mm	1280 x 960
Capturing images with several positions for display		
6.7x	226 mm	1024 x 768
Capturing images with several positions for display		
8.2x	279 mm	832 x 624
Capturing images with several positions for display		
11x	362 mm	640 x 480

* Optical zoom is always set to telephoto-end when using digital zoom.

Table 2-2 Digital zoom focal length and capture pixel resolution

- Automatic detection of vertical/horizontal shooting by Intelligent Orientation Sensor

During playback, images shot vertically or horizontally are so displayed on the LCD monitor. The Card Photo printer (CP-series) will automatically determine the orientation of a shot, and allow the user to add a date to the lower right corner of the image during printout. ZoomBrowser EX (ImageBrowser) also detects the picture orientation and lays out the pictures accordingly.

- Histogram display (during rec-review/playback)

The PowerShot A80 includes a histogram display function.

A histogram is a graph indicating brightness along its horizontal axis and the number of pixels of brightness along its vertical axis, with brighter images distributed towards the right side of the graph. The histogram allows the user to check the brightness distribution of an image, making it possible to know the approximate degree of exposure.

Figure 2-2 Example of histogram display

2-3 Ease of Operation

- Vari-angle LCD monitor that can disable mirror imaging

The PowerShot A80 features a Vari-angle LCD monitor also featured in the PowerShot G series. When you shoot while looking at the LCD monitor from the lens side or from the side of the camera, the display shows a mirror image (reversed laterally). However, in previous models, images displayed in the monitor sometimes appeared unnatural.

The PowerShot A80 has been improved to provide a menu setting whereby the user can elect to disable mirror imaging. (See the example in Figure 2-3.)

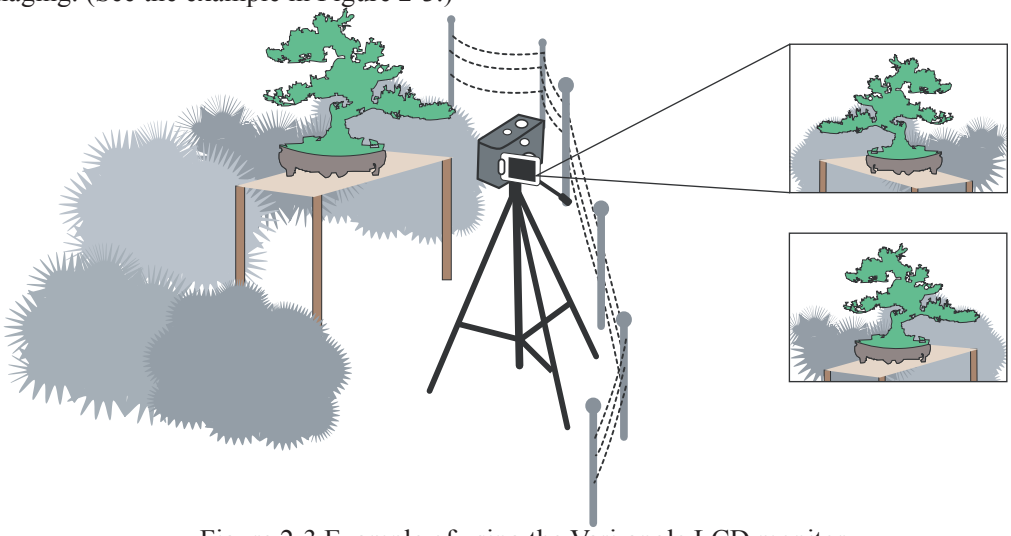


Figure 2-3 Example of using the Vari-angle LCD monitor

- Mute mode disabling all sounds except the warning sound

The PowerShot A80 has a mute function that can be used to disable all sounds (except the warning sound) with one-touch operation. This allows shooting even in locations where silence is needed.

- Display Off mode that switches off the LCD monitor after a certain time

The PowerShot A80 has a Display Off mode that switches off the relatively power-hungry LCD monitor when the camera is not operated for a certain period of time, thereby saving energy.

- Large buttons for easier operation

The PowerShot A80 features an Omni selector and larger operating buttons than the PowerShot A70/60, including a zoom lever and shooting mode dial for an improved look and easier camera operation.

See *1-3 Design Concept* on page 5.

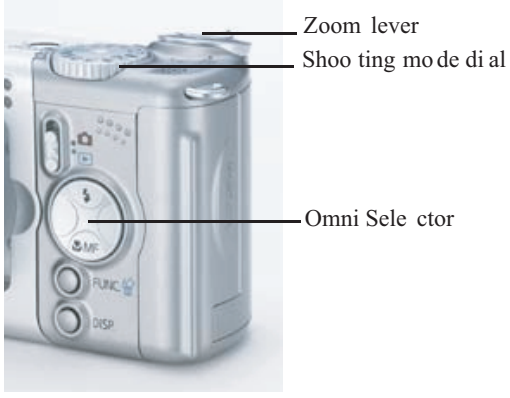


Figure 2-4 Large buttons

- Choice of High Speed mode or Normal mode in continuous shooting

Similar to the PowerShot G series, the PowerShot A80 comes equipped with two selectable continuous shooting modes, the High Speed mode and the Normal mode.

In High Speed mode, the camera saves image data temporarily to a buffer, enabling high-speed continuous shooting. However, past a certain shooting speed, the display can no longer keep up, and the LCD monitor blacks out.

While Normal mode has a slower continuous shooting speed than High Speed mode, the display can handle the a greater number of successive shots than in High Speed mode, allowing the user to view images on the LCD monitor during shooting.

In either mode, the continuous shooting speed slows when the image buffer becomes full due to the need to create additional space for each picture while continuing to shoot. Shooting can still continue at this pace until the CF card becomes full.

- Switchable MF zoom display

The PowerShot A80 offers the same MF zoom function as the PowerShot G series and S series. This allows precise zoom focus positioning.

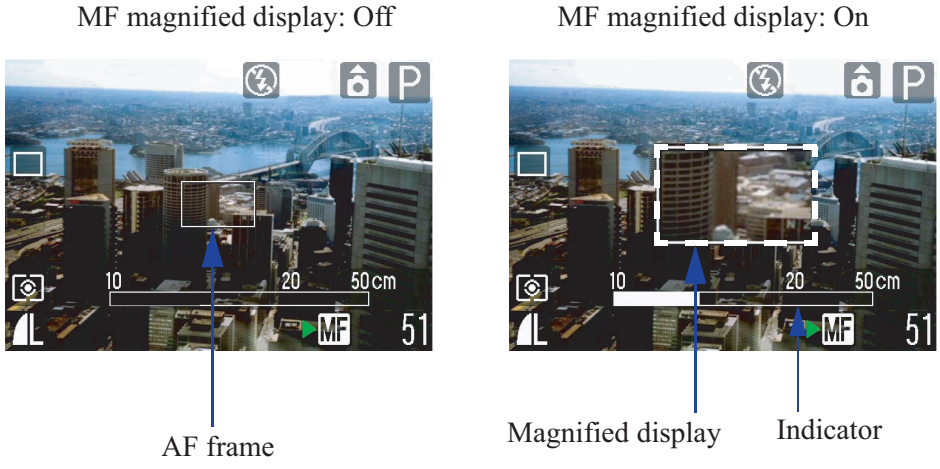


Figure 2-5 MF zoom example

2-4 Compact

- Compact, new high resolution 3x optical zoom lens
See *New high resolution 3x optical zoom lens* on page 8.

- Space-saving 2-blade lens cover inside the lens barrel
See *New high resolution 3x optical zoom lens* on page 8.

2-5 High Quality Design

- High-grade design suitable for the flagship model of the PowerShot A series
See *1-3 Design Concept* on page 5.

2-6 System Accessories

- Tel-Convertor for shooting at 200 mm telephoto angle (35mm film equivalent)
The PowerShot A80 is equipped with a 38 - 114 mm (35mm film equivalent) lens, but the newly developed Tele-convertor TC-DC52A makes it possible to shoot at telescopic range.
The TC-DC52A increases the focal length of the master lens by approximately 1.75x, allowing the equivalent of 200 mm*1 telescopic shooting*2 (maximum of 720 mm equivalent*1 when the digital zoom is also used). This allows a shooting magnification of approximately 7.5x with just the optical system, from 26.6 mm equivalent*1 when the WC-DC52 Wide convertor is used, to 200 mm equivalent*1 when the TC-DC52A Tele-Convertor is used.
Both the Tele-convertor and Wide Convertor require the new LA-DC52D conversion lens adapter for mounting onto the camera, but this new adapter uses the same bayonet ring as the previous model LA-DC52C, allowing for one-touch mount and dismount.
In addition, TC-DC52A can be used for the previous PowerShot A series (A70/60/40/30/20/10)*3.

*1 All are 35mm film equivalent
*2 Optical viewfinder cannot be used in combination with the Tele-Convertor (use the LCD monitor). In addition, the flash cannot be used due to shading.
*3 If the previous model TC-DC52 is used for PowerShot A80, the performance is not guaranteed.

- Waterproof case submersible to 40 m (Equipped with double glass and flash light diffusion plate)
The PowerShot A80 differs in shape from the PowerShot A70/A60, so a new waterproof case WP-DC900 was developed.*

* This case is functionally identical to the waterproof case for the PowerShot A70/A60 (WP-DC700). For more information on the waterproof case, see the technical guidance scheduled for future release.

3 Exterior

3-1 Exterior Photos

Photo 3-1 PowerShot A80 Front

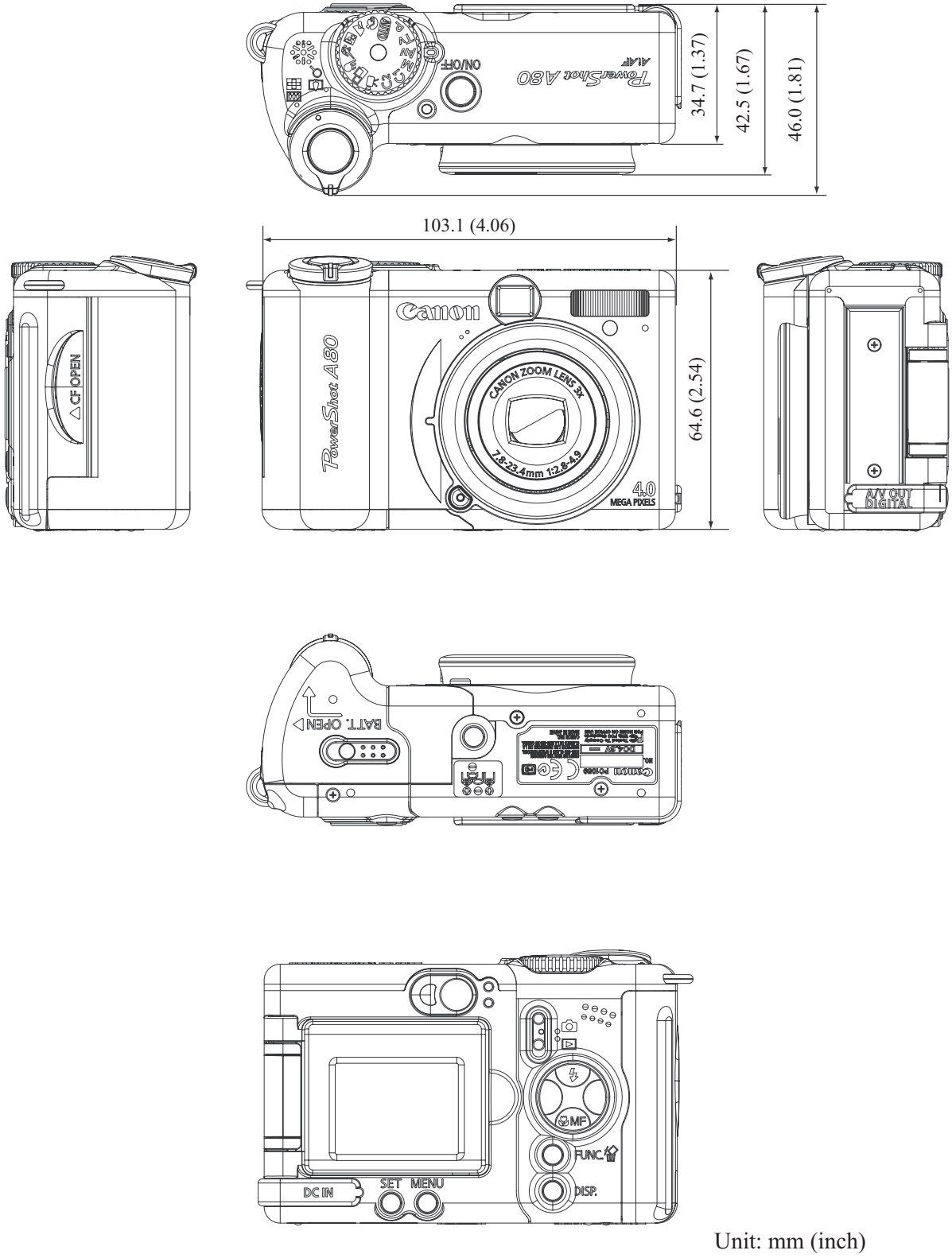
Photo 3-2 PowerShot A80 Back
(with LCD Monitor opened)

Photo 3-3 PowerShot A80 Back

Photo 3-4 Tele-Convertor
(TC-DC52A)

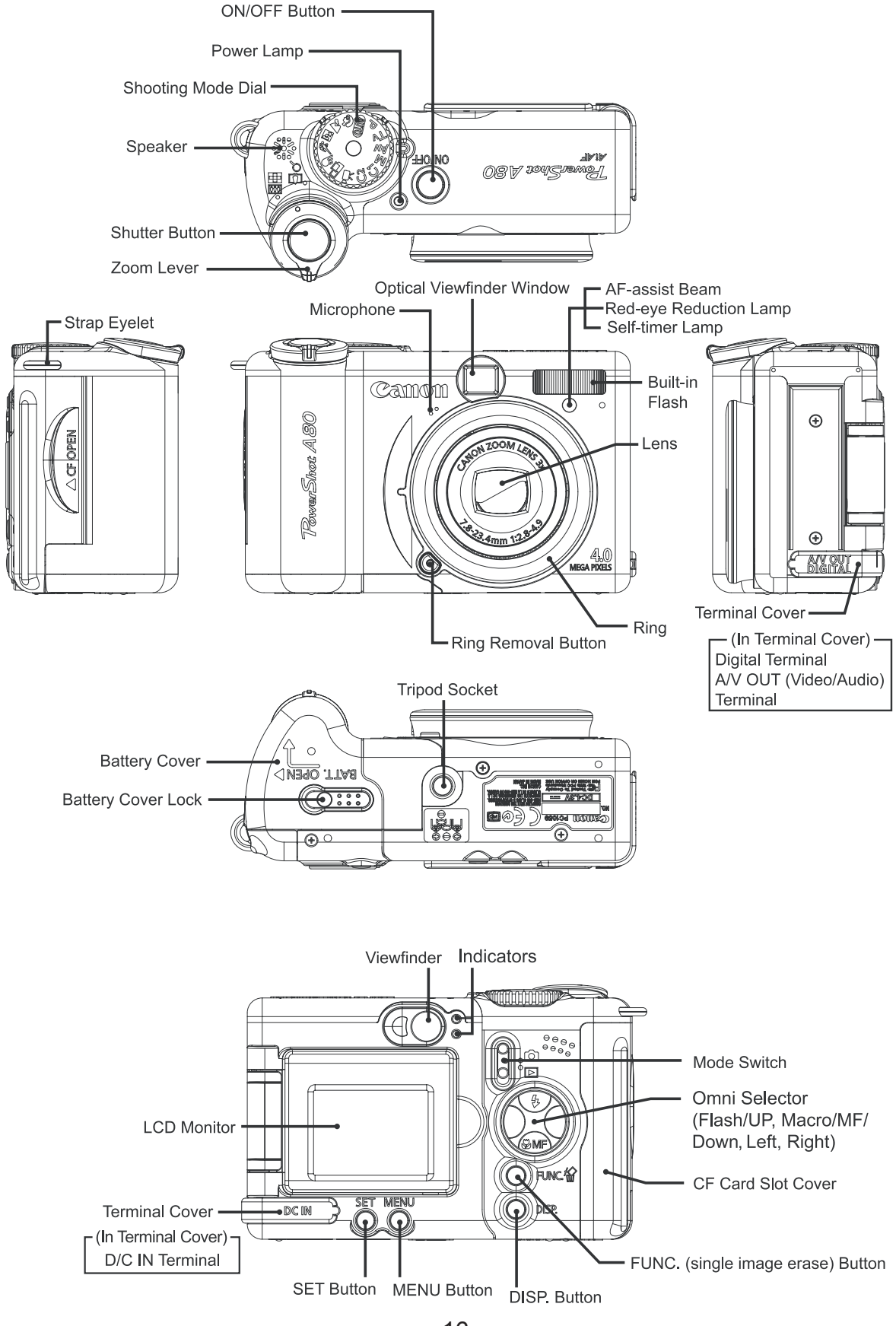
Photo 3-5 Conversion Lens Adapter
(LA-DC52D)

3-2 6-dimensional diagram



Unit: mm (inch)

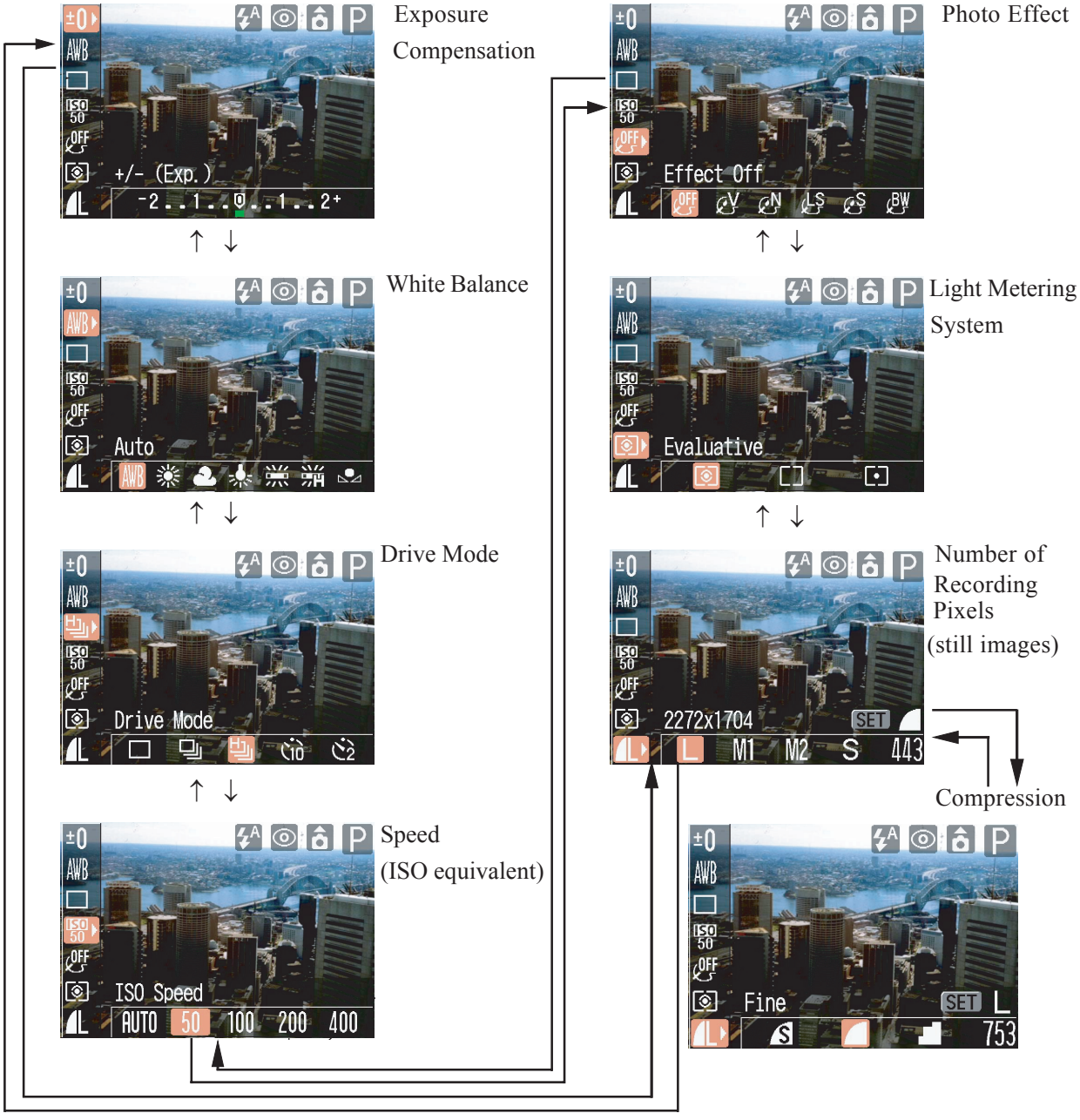
3-3 Nomenclature



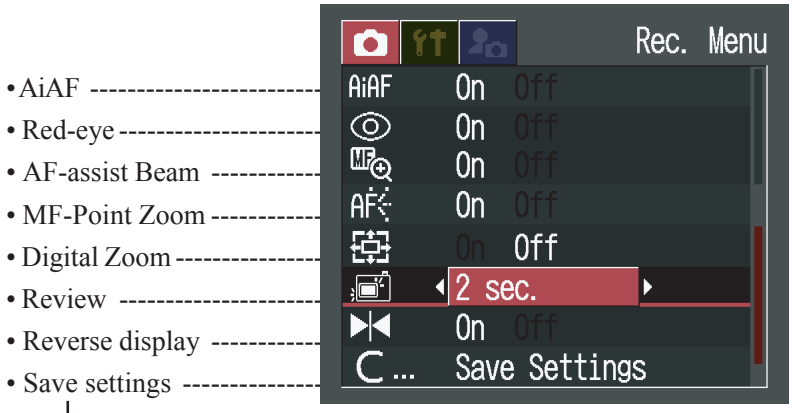
3-4 UI Information

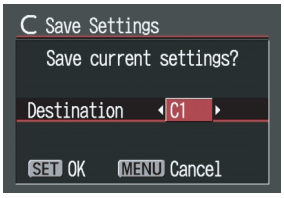
- Shooting Menu (Shooting mode: Auto)

- FUNC.Menu (Shooting mode: Program)



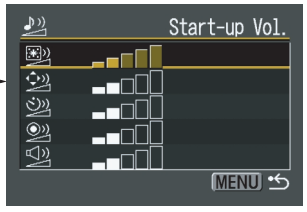
- Rec. Menu



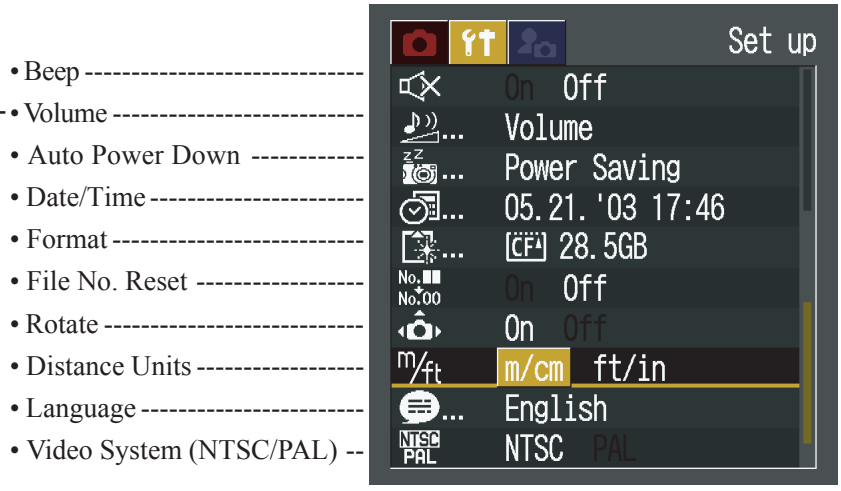


* All menu items are displayed on the above screen, some items may not appear in certain shooting modes.

- Set up Menu

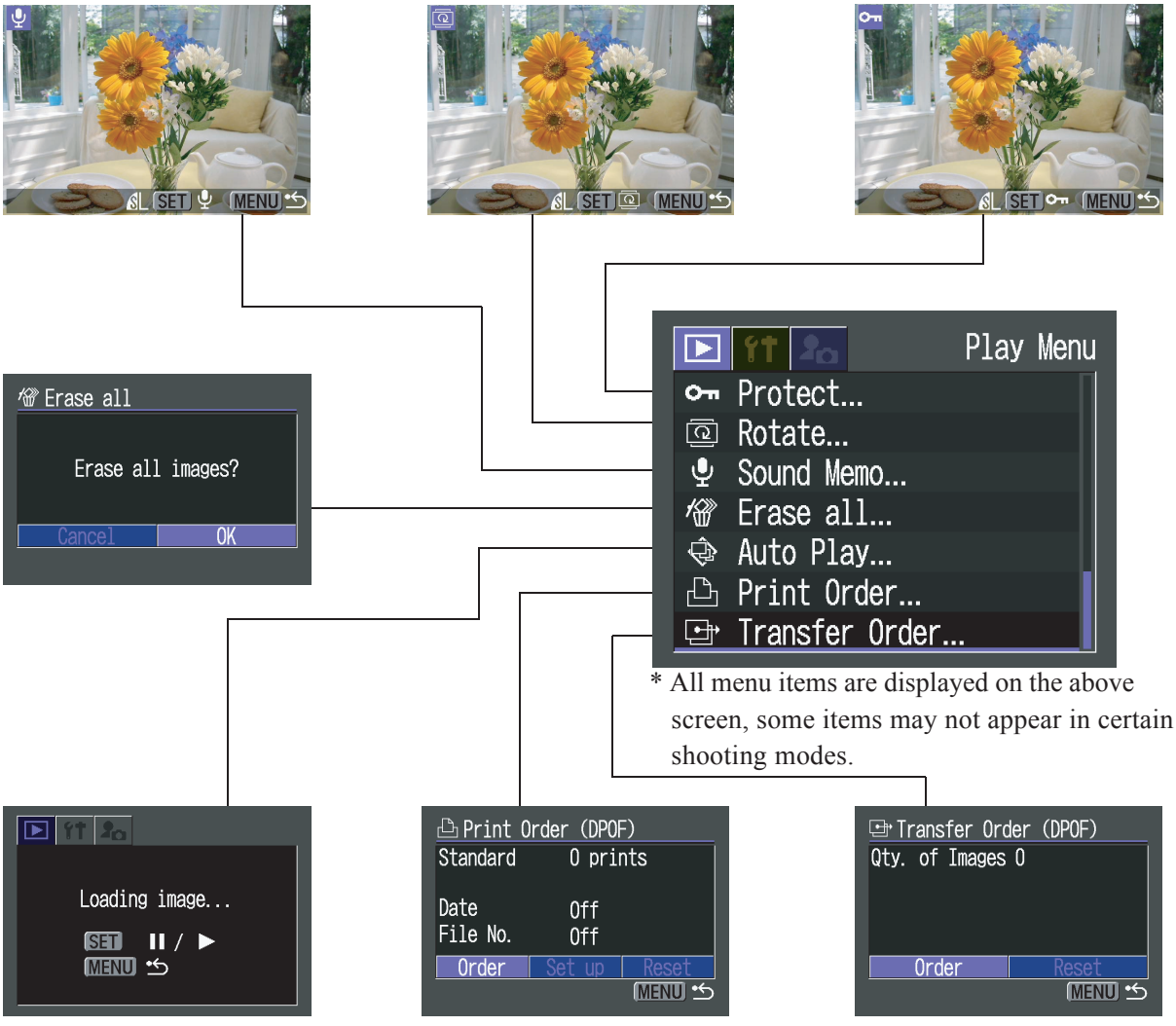


• Start-up Vol.
• Operation Vol.
• Self timer Vol.
• Sutter Volume
• Playback Vol.



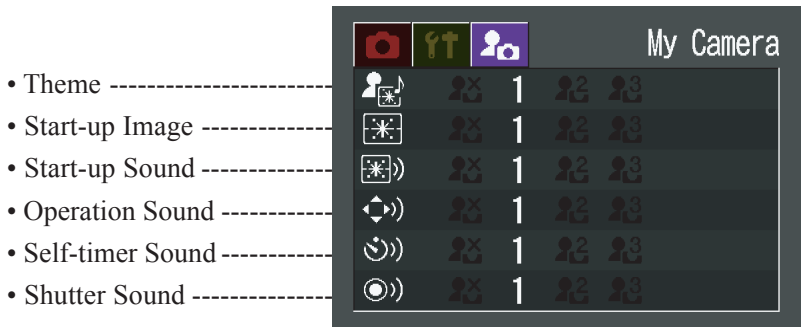
* All menu items are displayed on the above screen, some items may not appear in certain shooting modes.

- Play Menu



* All menu items are displayed on the above screen, some items may not appear in certain shooting modes.

- My Camera Menu



4 Specifications

4-1 Camera Specifications

■ Image Sensor (CCD)	
Camera Effective Pixels	Approx. 4.0 million pixels
Total Pixels	Approx. 4.1 million pixels
Transfer Method	Interline
Chip Size	1/1.8 in.
Aspect Ratio	4:3
Filter Type	Primary color filter (Bayer type)
■ Lens	
Focal Length	7.8 (W) – 23.4 (T) mm (35mm film equivalent: 38 (W) – 114 (T) mm)
f/number	f/2.8 (W) – 4.9 (T)
Lens Construction	6 elements in 5 groups (including 2 aspherical lenses)
Optical Zoom	3 x
Shooting Distance (from the front of the lens)	Normal : 45 cm (1.5 ft.) – infinity Macro : 5 – 45 cm (2.0 in. – 1.5 ft.)(W), 25 – 45 cm (9.8 in. – 1.5 ft.)(T) Manual : 5 cm (2.0 in.) – infinity, 25 cm (9.8 in.) – infinity
Area of Photograph (at the minimum focal distance: W x H)	56 x 42 mm (2.2 x 1.6 in.)(W), 87 x 65 mm (3.4 x 2.6 in.)(T) * When close-up lens 250D (52 mm) is attached : 45 x 34 mm (W) (1.75 x 1.31 in.) <8 cm (3.1 in.) from tip of the lens>
Magnification of Photograph (at the minimum Shooting Distance)	0.64 x (W) , 0.40 x (T)(35mm film equivalent)
■ Optical Viewfinder	
Type	Real-image zoom viewfinder
Eye point	16 mm
Dioptric Adjustment	Not available
■ LCD Monitor	
Type	Amorphous silicon TFT color LCD (Vari-angle type)
Effective Pixels	Approx. 67 K pixels
Display Size	37 mm diagonal (1.5 in.)
Picture Coverage	100%
Brightness Adjustment	Not available

■ Focusing	
Control System	TTL Auto focus
Manual Focus	Available
Focusing Frame	9-point AiAF/1-point AF 1-point AF: Center
Focusing Range	Normal/Macro
AF Lock	Available
AF-assist Beam On/Off	Available
■ Exposure Control	
Light Metering System	Evaluative/Center-weighted average/Spot *Metering frame with Spot mode: Center
Exposure control System	Program AE/Shutter speed-priority AE/Aperture priority AE/Manual exposure
AE Lock	Not available
Exposure Compensation	+/- 2 stops in 1/3-stop increments
Sensitivity	Auto, ISO 50/100/200/400 equivalent *Camera automatically sets optimum speed when “Auto” is selected.
On/Off Selection of ND (Neutral Density) Filter	Not available
■ White Balance	
Modes	TTL auto/Pre-set (Daylight/Cloudy/Tungsten/Fluorescent/Fluorescent H) /Custom

■ Shutter and Aperture

Shutter Type
Mechanical shutter and electronic shutter

Aperture Type
Iris type aperture

Shutter Speed
15 – 1/2,000 sec.

- 1.3 – 15.0 sec. shutter speed is only available in Shutter speed-priority mode or Manual mode.
- Values in the table below are available in Shutter speed-priority mode or Manual mode.

1/2000, 1/1600, 1/1250, 1/1000, 1/800, 1/640, 1/500, 1/400, 1/320, 1/250, 1/200, 1/160, 1/125, 1/100, 1/80, 1/60, 1/50, 1/40, 1/30, 1/25, 1/20, 1/15, 1/13, 1/10, 1/8, 1/6, 1/5, 1/4, 0"3, 0"4, 0"5, 0"6, 0"8, 1", 1"3, 1"6, 2", 2"5, 3"2 , 4", 5", 6", 8", 10", 13", 15"

- The shutter speed set by camera in relation to f/number in Aperture-priority mode or settable shutter speed in relation to f/number in Manual mode is as shown in the table below.

(W)

f/number availability	f/2.8	f/3.2 – f/4.0	f/4.5 – f/8.0
Shutter Speed	15 – 1/1000	15 – 1/1250	15 – 1/2000

(T)

f/number availability	f/4.9	f/5.6 – f/7.1	f/8.0
Shutter Speed	15 – 1/1000	15 – 1/1250	15 – 1/2000

f/number
f/2.8 – 8.0 (W), f/4.9 – 8.0 (T)

- Settable values in Aperture-priority mode or Manual mode
  W: f/2.8, 3.2, 3.5, 4.0, 4.5, 5.0, 5.6, 6.3, 7.1, 8.0
  T : f/4.9, 5.6, 6.3, 7.1, 8.0

■ Flash (Built-in)

Operation Modes
Auto*/On*/Off
* Red-eye reduction is available.

Flash Range
45 cm – 4.4 m (1.5 – 14 ft.)(W), 45 cm – 2.5 m (1.5 – 8.2 ft.)(T)
25 – 45cm (9.8 in. – 1.5 ft.)(Macro)(When sensitivity is set to Auto)

Flash Sync Speed
1/60 – 1/500 sec.
(15 – 1/500 sec. when in Shutter priority AE or manual mode)

Recycling Time (Full flash)
10 sec. or less (battery voltage = 6.0 V (Type AA alkaline battery))

Flash Exposure
Not available

Manual Flash Output setting
3 steps (strong [100 % flash]/normal/low)

FE Lock
Not available

Slow Sync
Available

Second Curtain
Not available

■ Flash (External) — Not available

Flash Contacts

Recommended Flashes

Flash Exposure Compensation

FE Lock

Slow Sync

Second-curtain Sync

■ Shooting Specifications

Shooting Modes — Auto/Creative zone (Program/Shutter speed priority/Aperture priority/Manual/Custom 1/Custom 2)
Programmed image control zone (Portrait/Landscape/Night Scene/Fast shutter/Slow shutter/Stitch Assist/Movie)

Shooting Functions

Digital Zoom — Approx. 3.6x (Maximum of approx. 11 x zoom is available when combined with optical zoom.)

Photo Effects — Vivid/Neutral/Low sharpening/Sepia/Black & White

Image Quality Adjustment — Not available

Noise Reduction — When shutter speed is set between 1.3 sec and 15 sec.

Bracketing — Not available

Focus Bracketing

AEB (Auto Exposure Bracketing)

Review — Off / 2–10 sec. (1 sec. increments)

Camera start-up Time /Release Time Lag

Mode	Finder	Camera start-up	Release time lag
Shooting	LCD monitor On (Start-up display On)	Approx. 2.8 sec.	Less than 0.1 sec.
	LCD monitor On (Start-up display Off)	Approx. 2.8 sec.	Less than 0.1 sec.
	LCD monitor Off (Start-up display Off)	Approx. 2.4 sec.	Less than 0.1 sec.
Replay	Start-up display On	Approx. 2.2 sec.	-
	Start-up display Off	Approx. 1.9 sec.	-

Shooting Interval — 1.9 sec. (LCD monitor On) / 2.2 sec. (LCD monitor Off)

*Focus : Normal range and wide angle

*The actual shooting interval time consists of the shutter speed time added to the above times.

■ Shooting Specifications

Continuous Shooting

Speed Mode Selection

High speed*/Normal

*Shooting operation with LCD monitor as viewfinder is not possible in high speed mode.

Speed

High speed: approx. 2.4 shots/sec., Normal: approx. 1.6 shots/sec. (Large/Fine mode and LCD monitor is Off)

Number of Shots

Recording Pixels			Compression SF	F	N
	L	High Speed	3	5	9
		Normal Speed	4	8	15
	M1	High Speed	5	9	16
		Normal Speed	8	15	29
	M2	High Speed	8	14	25
		Normal Speed	15	25	47
	S	High Speed	17	28	49
		Normal Speed	33	54	96

*The above data shows the maximum number of shots for recording pixels and compression setting.

*After exceeding the maximum number of shots, continuous shooting is still available. However the shooting speed is reduced.

Interval Shooting

Not available

Self-timer

Activates shutter after an approx. 2-sec./10-sec. delay.

Wireless Control

Not available

PC-controlled Shooting

Shooting operation is possible with the use of “Remote Capture” software when camera is connected to the PC.

■ Recording Specifications

<Still Image>

File Format: Design rule for camera file system,
Digital Print Order Format (DPOF) Version 1.1 compliant

Recording Format: JPEG (Exif 2.2)

JPEG compression mode: Super Fine/Fine/Normal

Number of Recording Pixels: Large: 2272 x 1704, Medium 1: 1600 x 1200,
Medium 2: 1024 x 768, Small: 640 x 480

Recording Capacity*

	L/SF	L/F	L/N	M1/SF	M1/F	M1/N	M2/SF	M2/F	M2/N	S/SF	S/F	S/N
File Size (KB)	2002	1116	556	1002	558	278	570	320	170	249	150	84
FC-8M	3	6	13	7	13	26	12	23	42	29	47	83
FC-16M	7	13	26	14	26	52	25	46	84	58	94	165
FC-32M	14	27	54	30	54	108	53	94	174	120	196	337
FC-64M	30	54	110	61	109	217	107	189	349	241	393	676
FC-128M	61	110	220	122	219	435	215	379	700	482	788	1355
FC-256MH	123	222	443	246	440	868	431	762	1390	962	1563	2720

Unit: images

* The above data is measured under Canon testing standard and may vary depending on the scene, subjects or camera settings.

<Movies>

File Format: AVI

Recording Format: Image: Motion JPEG, Audio: WAVE (Monaural)

Number of Recording Pixels: QVGA: 320 x 240 QQVGA: 160 x 120

Frame Rate/Recording Time

	Frame rate (fps)	Recording time*
320 x240	15	3 min.
160 x120	15	3 min.

* The maximum recording time with an individual movie clip
* The SD memory card is required to contain the fixed space or over.

Recording Capacity

	320 x 240	160 x 120
File Size (KB)	330	120
FC-8M	21	58
FC-16M	44	118
FC-32M	91	242
FC-64M	183	486
FC-128M	368	973
FC-256MH	735	1954

Unit: Second

* Above data is measured under Canon's testing standard and may vary depending on the scene, subjects or camera settings.

<Common>

Recording Media: CompactFlashTM (CF) card (Type I)

■ Playback Specifications

Playback Modes	Single/Index (9 thumbnail images)/Magnification/Movie
<Still Image>	
Magnification	Approx. 2 – 10x
Automatic Vertical/ Horizontal Detection	Possible (Owing to IO sensor) * Images are displayed vertically or horizontally according to the camera's shooting position.
Image Rotation	Rotate image to 90 degrees or 270 degrees
Histogram Display	Display brightness allocation of image. (Available during Rec review.)
Sound Memos	Maximum of 60 sec. sound recording and sound replaying per image.
Auto Play	Interval time: 3 sec. Repeat: Always set to On
DPOF	Print order/Image transfer
Direct Print	
Canon Direct Print	Card photo printers: CP-300, CP-200, CP-100, CP-10 BJ printers with Direct print support: (for Japan) BJ 895PD, BJ 535PD, PIXUS 50i, PIXUS 450i, PIXUS 470PD (for overseas) S830D, S530D, i70, i450, i470D
PictBridge	Supported
<Movies>	
Special Playback	First frame/Last frame/Next frame/Previous frame/Fast forward/Rewind
Editing	Unnecessary scenes (image + sound) can be erased. (Refer to Erasing modes.)

■ Erasing Specifications

Erasing Modes	Still images: Single image/All images * The image data recorded with the Design rule for camera file system's format can be erased. However, protected images can not be erased. Movies: Part of movie*/All of movie * Can be erased from start-point to mid-point or from mid-point to end-point with the movie editing function. Furthermore, can be erased both from start-point to mid-point and from mid-point to end-point.
Protection (Camera)	Erase prohibited (Set in playback modes.)

■ Interface

Computer I/F	USB* (mini-B jack) * All procedures performed with a connection to a USB 2.0 compliant board are not guaranteed.
Communication Settings	PTP
Video Out	NTSC/PAL
Audio Out	Monaural

■ Others

Languages	12 languages are available for menu and messages. English, German, French, Dutch, Danish, Finnish, Italian, Norwegian, Swedish,Spanish, Simplified Chinese, and Japanese
My Camera Settings	
Selectable Items	Start-up image, Start-up sound, Shutter sound, Operation sound, and Self-timer sound * Each item can be created by users with the camera.
Specifications	

Items	File size	Specifications		
Start-up image	20 KB	320×240 pixels, JPEG file with 4: 2: 0 or 4: 2: 2, Aspect ratio of 4: 3		
Start-up sound	10.9 KB	WAVE (monaural) 8bit	11 kHz : 1.0 sec. or less	8 kHz : 1.3 sec. or less
Shutter sound	3.36 KB		11 kHz : 0.3 sec. or less	8 kHz : 0.4 sec. or less
Operation sound	3.36 KB		11 kHz : 0.3 sec. or less	8 kHz : 0.4 sec. or less
Self-timer sound	21.7 KB		11 kHz : 2.0 sec. or less	8 kHz : 2.0 sec. or less

■ Power Supplies

Primary Batteries	Type AA alkaline battery (x 4)
Secondary Batteries	NiMH battery (x 4)(type: NB-1AH is recommended)
AC Adapter	Compact Power Adapter (CA-PS500)*
Car Battery Adapter	Not available
Sub-battery	Coin-type secondary lithium battery (MS614S)
Battery Performance	Use of type AA alkaline battery (Panasonic brand)*
Number of Shots	LCD monitor On: Approx. 250 shots LCD monitor Off: Approx. 800 shots Use of NiMH battery (NB-1AH)* LCD monitor On: Approx. 350 shots LCD monitor Off: Approx. 1000 shots * Under Canon testing standard: Normal temperature (23°C). Shoot images at wide angle and at telephoto end alternately with 20 seconds intervals. Use flash at every fourth shot. Turn camera off and on at every eight shot.
Playback time	Use of type AA alkaline battery (Panasonic brand)* Approx. 280 min. Use of NiMH battery (NB-1AH)* Approx. 280 min. * Under Canon standard conditions: Normal temperature (23°C). Repeat replay automatically at a speed of 1 image per 3 seconds. Factory default brightness setting.
Battery Charging Time	
Inside the Camera	Not available
Charger	Approx. 220 minutes. (CB-3AH)
Power-saving Function On/Off	Available Shooting modes: Powers down approx. 3 minutes after last operation. Playback modes: Powers down approx. 5 minutes after last operation. Does not power down in Auto Play mode. Printer connection: Power down approx. 5 minutes after last operation. PC connection: Does not powers down even if power-saving function is On.

■ Camera Specifications

Operating Temperature	0 – 40°C
Operating Humidity	10 – 90 %
Dimensions	103.1 x 64.6 x 34.7 mm (4.06 x 2.54 x 1.37 in.)(Excluding protrusions)
Weight	Approx. 250 g (8.8 oz.)(Camera body only)

4-2 Accessory Specifications

- Conversion Lens Adapter (LA-DC52D)

Dimensions : See Figure 4-1.
Weight : Approx.14 g (2.6 oz)
Attachment method : Bayonet type

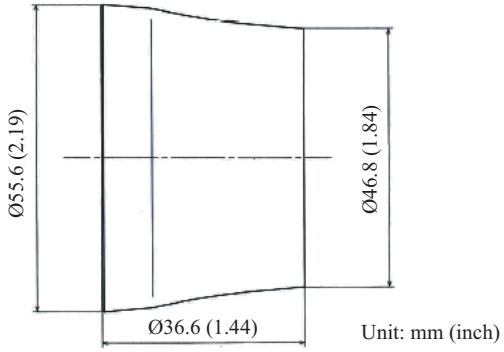


Figure 4-1 Conversion Lens Adapter (LA-DC52D)

- Tele-Convertor (TC-DC52A)

Magnification : Approx. 1.75x (shooting of 200 mm telephoto angle, 35mm film equivalent)
Lens construction : 3 elements in 2 groups (Multicoat finishing)
Dimensions : See Figure 4-2.
Weight : Approx. 86 g (3.0 oz)
Thread diameter : Diameter 52 mm (via conversion lens adapter)

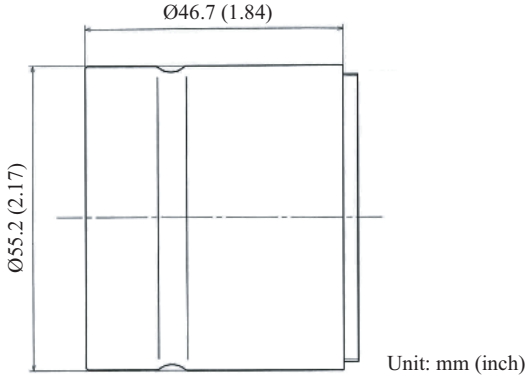


Figure 4-2 Tele-Convertor (TC-DC52A)

- Wide Convertor (WC-DC52)

Magnification : Approx. 0.7x (shooting of 26.6 mm telephoto angle, 35mm film equivalent)
Lens construction : 2 elements in 2 groups (Multicoat finishing)
Dimensions : Ø55.7 x 23.7 mm
Weight : Approx. 74 g (2.6 oz)
Thread diameter : Diameter 52 mm (via conversion lens adapter)
* Adopted from PowerShot A70/A60/A40/A30/A20/A10

4-3 Functions Available in Each Shooting Mode

1) Settings saved at power off

		Creative						Auto	Image1					Image2	
		C2	C1	M	Av	Tv	P	Auto	Land-scape	Night	Portrait	Fast	Slow	Stitch	Movie
Exposure Compensation	±0	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	-2 – +2	□	□	×	O	O	O	×	O	O	O	O	O	△	O
White Balance	Auto	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	Daylight	□	□	O	O	O	O	×	O	O	O	O	O	△	O
	Cloudy	□	□	O	O	O	O	×	O	O	O	O	O	△	O
	Tungsten	□	□	O	O	O	O	×	O	O	O	O	O	△	O
	Fluorescent	□	□	O	O	O	O	×	O	O	O	O	O	△	O
	Fluorescent H	□	□	O	O	O	O	×	O	O	O	O	O	△	O
	Custom1 *1	□	□	O	O	O	O	×	O	O	O	O	O	△	O
Drive *2	Single shot	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	Continuous (Normal)	□	□	O	O	O	O	×	O	O	O	O	O	×	×
	Continuous (High-speed)	□	□	O	O	O	O	×	O	O	O	O	O	×	×
	Self-timer (2 sec)	□	□	O	O	O	O	O	O	O	O	O	O	△	O
	Self-timer (10 sec)	□	□	O	O	O	O	O	O	O	O	O	O	△	O
Speeds (Equivalent ISO film speed)	AUTO	□	□	×	O	O	O	O*	O*	O*	O*	O*	O*	O*	O*
	ISO 50	□	□	O*	O*	O*	O*	×	×	×	×	×	×	×	×
	ISO 100	□	□	O	O	O	O	×	×	×	×	×	×	×	×
	ISO 200	□	□	O	O	O	O	×	×	×	×	×	×	×	×
	ISO 400	□	□	O	O	O	O	×	×	×	×	×	×	×	×
Photo Effect	Off	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	Vivid color	□	□	O	O	O	O	×	O	O	O	O	O	△	O
	Neutral color	□	□	O	O	O	O	×	O	O	O	O	O	△	O
	Low sharpening	□	□	O	O	O	O	×	O	O	O	O	O	△	O
	Sepia	□	□	O	O	O	O	×	O	O	O	O	O	△	O
	Black & White	□	□	O	O	O	O	×	O	O	O	O	O	△	O
Manual Setting of Flash Output	Under	□	□	O*	×	×	×	×	×	×	×	×	×	×	×
	Middle	□	□	O	×	×	×	×	×	×	×	×	×	×	×
	Over	□	□	O	×	×	×	×	×	×	×	×	×	×	×
Number of Recording Pixels (Still image)	L	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	×
	M1	□	□	O	O	O	O	O	O	O	O	O	O	△	×
	M2	□	□	O	O	O	O	O	O	O	O	O	O	△	×
	S	□	□	O	O	O	O	O	O	O	O	O	O	△	×
Number of Recording Pixels	320x240	×	×	×	×	×	×	×	×	×	×	×	×	×	O*
	160x120	×	×	×	×	×	×	×	×	×	×	×	×	×	O
JPEG Compression Mode	Super Fine	□	□	O	O	O	O	O	O	O	O	O	O	△	×
	Fine	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	×
	Normal	□	□	O	O	O	O	O	O	O	O	O	O	△	×
Light Metering System	Evaluative	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	Center-weighted average	□	□	O	O	O	O	×	×	×	×	×	×	×	×
	Spot	□	□	O	O	O	O	×	×	×	×	×	×	×	×
AvTv *2	Av	□	□	O	O	×	×	×	×	×	×	×	×	×	×
	Tv	□	□	O	×	O	×	×	×	×	×	×	×	×	×
Zoom Position *3	Optical (Wide)	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	Optical (Other)	□	□	O	O	O	O	O	O	O	O	O	O	△	O
	Digital zoom	□	□	O	O	O	O	O	O	O	O	O	O	×	×
AF Range	Normal	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	Macro	□	□	O	O	O	O	O	×	O	O	O	O	△	O
Focus System	AF	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	MF	□	□	O	O	O	O	×	O	O	O	O	O	×	O
MF Distance		□	□	O	O	O	O	×	O	O	O	O	O	×	O
Flash	Auto	□	□	×	×	×	O	O*	O	O*	O*	O*	O	×	×
	Flash On	□	□	O	O	O	O	×	O	O	O	O	O	△	×
	Flash Off	□	□	O*	O*	O*	O*	O	O*	O	O	O	O*	O*	×
Display EVF	OVF	□	□	O	O	O	O	O	O	O	O	O	O	×	×
	EVF only	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	EVF+INFO	□	□	O	O	O	O	O	O	O	O	O	O	O	O
Stitching Direction Selection	Left	×	×	×	×	×	×	×	×	×	×	×	×	O*	×
	Right	×	×	×	×	×	×	×	×	×	×	×	×	△	×

○ Selectable
□ Selectable(The setting follows the registered shooting mode)
△ Only the first shot in stitch assist can be selected.
× Not selectable
* Default value

Colord cell ■: The setting is memorized even when the camera is off.

* MF, Digital zoom and AE/FE lock are not available with the LCD monitor off.
* White balance can not be selected when the photo effect is to Sepia or Black & White.

*1 Stitch assist shooting is not memorized.
*2 Default value of Av/Tv : f/4.0, 1/125 sec.
*3 Default value of Volume is 2.
*4 Default value of Dsplay Off is 1.
*5 Settings vary according to region as follows:

Region	Japan	USA	Europe	Oceania
Date/Time	The time is not set before shipping			
Date style	YYMMDD	MMDDYY	DDMMYY	DDMMYY
Language	Japanese	English	English	English
Video System	NTSC	NTSC	PAL	PAL

		Creative						Auto	Image1					Image2	
REC MENU		C2	C1	M	Av	Tv	P	Auto	Land-scape	Night	Portrait	Fast	Slow	Stitch	Movie
AiAF	On	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	Off	□	□	O	O	O	O	×	O	O	O	O	O	×	×
Red-eye Reduction	On	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	×
	Off	□	□	O	O	O	O	O	O	O	O	O	O	△	×
MF-point Zoom	On	□	□	O*	O*	O*	O*	×	O*	O*	O*	O*	O*	×	×
	Off	□	□	O	O	O	O	O*	O	O	O	O	O	O*	O*
AF-assist Beam	On	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	Off	□	□	O	O	O	O	O	O	O	O	O	O	△	O
Digital Zoom	On	□	□	O	O	O	O	O	O	O	O	O	O	×	×
	Off	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	×	×
Review (REC. review)	Off	□	□	O	O	O	O	O	O	O	O	O	O	△	×
	2 sec.	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	×
	- 10 sec.	□	□	O	O	O	O	O	O	O	O	O	O	△	×
Reverse Display	On	□	□	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	×	O*
	Off	□	□	O	O	O	O	O	O	O	O	O	O	O*	O
Save Settings	C save setting 1	O*	O*	O*	O*	O*	O*	×	×	×	×	×	×	×	×
	C save setting 2	O	O	O	O	O	O	×	×	×	×	×	×	×	×

		Creative						Auto	Image1					Image2	
SETUP MENU		C2	C1	M	Av	Tv	P	Auto	Land-scape	Night	Portrait	Fast	Slow	Stitch	Movie
Beep	On	O	O	O	O	O	O	O	O	O	O	O	O	△	O
	Off	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O	O
Volume Setting*3															
Start-up sound vol.	0,1,2,3,4,5	O	O	O	O	O	O	O	O	O	O	O	O	△	O
Operation sound vol.	0,1,2,3,4,5	O	O	O	O	O	O	O	O	O	O	O	O	△	O
Self-timer sound vol.	0,1,2,3,4,5	O	O	O	O	O	O	O	O	O	O	O	O	△	O
Shutter sound vol.	0,1,2,3,4,5	O	O	O	O	O	O	O	O	O	O	O	O	△	O
Playback vol.	0,1,2,3,4,5	O	O	O	O	O	O	O	O	O	O	O	O	△	O
Auto Power Down Setting															
Auto Power Off	On	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O	O
	Off	O	O	O	O	O	O	O	O	O	O	O	O	△	O
Display Off *4	10, 20, 30 sec., 1, 2, 3 min.	O	O	O	O	O	O	O	O	O	O	O	O	△	O
Date/Time *5		O	O	O	O	O	O	O	O	O	O	O	O	△	O
Date Style *5	mdy,dmy,ymd	O	O	O	O	O	O	O	O	O	O	O	O	△	O
Format		O	O	O	O	O	O	O	O	O	O	O	O	×	O
File No. Reset	On	O	O	O	O	O	O	O	O	O	O	O	O	△	O
	Off	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
Rotate	On	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	×
	Off	O	O	O	O	O	O	O	O	O	O	O	O	△	O*
Distance Units	m/cm	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*	O*
	ft/in	O	O	O	O	O	O	O	O	O	O	O	O	△	O
Language *5		O	O	O	O	O	O	O	O	O	O	O	O	△	O
Video System *5	NTSC	O	O	O	O	O	O	O	O	O	O	O	O	△	O
	PAL	O	O	O	O	O	O	O	O	O	O	O	O	△	O

2) Settings saved when changing shooting modes

		Creative						Auto	Image1						Image2	
		C2	C1	M	Av	Tv	P	Auto	Land-scape	Night	Portrait	Fast	Slow	Stitch	Movie
Exposure Compensation	±0	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	-2 – +2	□	□	×	○	○	○	×	○	○	○	○	○	△	○
White Balance	Auto	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	Daylight	□	□	○	○	○	○	×	○	○	○	○	○	△	○
	Cloudy	□	□	○	○	○	○	×	○	○	○	○	○	△	○
	Tungsten	□	□	○	○	○	○	×	○	○	○	○	○	△	○
	Fluorescent	□	□	○	○	○	○	×	○	○	○	○	○	△	○
	Fluorescent H	□	□	○	○	○	○	×	○	○	○	○	○	△	○
	Custom1 *1	□	□	○	○	○	○	×	○	○	○	○	○	△	○
Drive *2	Single shot	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	Continuous (Normal)	□	□	○	○	○	○	×	○	○	○	○	○	×	×
	Continuous (High-speed)	□	□	○	○	○	○	×	○	○	○	○	○	×	×
	Self-timer (2 sec)	□	□	○	○	○	○	○	○	○	○	○	○	△	○
	Self-timer (10 sec)	□	□	○	○	○	○	○	○	○	○	○	○	△	○
Speeds (Equivalent ISO film speed)	AUTO	□	□	×	○	○	○	○*	○*	○*	○*	○*	○*	○*	○*
	ISO 50	□	□	○*	○*	○*	○*	×	×	×	×	×	×	×	×
	ISO 100	□	□	○	○	○	○	×	×	×	×	×	×	×	×
	ISO 200	□	□	○	○	○	○	×	×	×	×	×	×	×	×
	ISO 400	□	□	○	○	○	○	×	×	×	×	×	×	×	×
Photo Effect	Off	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	Vivid color	□	□	○	○	○	○	×	○	○	○	○	○	△	○
	Neutral color	□	□	○	○	○	○	×	○	○	○	○	○	△	○
	Low sharpening	□	□	○	○	○	○	×	○	○	○	○	○	△	○
	Sepia	□	□	○	○	○	○	×	○	○	○	○	○	△	○
	Black & White	□	□	○	○	○	○	×	○	○	○	○	○	△	○
Manual Setting of Flash Output	Under	□	□	○*	×	×	×	×	×	×	×	×	×	×	×
	Middle	□	□	○	×	×	×	×	×	×	×	×	×	×	×
	Over	□	□	○	×	×	×	×	×	×	×	×	×	×	×
Number of Recording Pixels (Still image)	L	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	×
	M1	□	□	○	○	○	○	○	○	○	○	○	○	△	×
	M2	□	□	○	○	○	○	○	○	○	○	○	○	△	×
	S	□	□	○	○	○	○	○	○	○	○	○	○	△	×
Number of Recording Pixels	320x240	×	×	×	×	×	×	×	×	×	×	×	×	×	○*
	160x120	×	×	×	×	×	×	×	×	×	×	×	×	×	○
JPEG Compression Mode	Super Fine	□	□	○	○	○	○	○	○	○	○	○	○	△	×
	Fine	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	×
	Normal	□	□	○	○	○	○	○	○	○	○	○	○	△	×
Light Metering System	Evaluative	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	Center-weighted average	□	□	○	○	○	○	×	×	×	×	×	×	×	×
	Spot	□	□	○	○	○	○	×	×	×	×	×	×	×	×
AvTv *2	Av	□	□	○	○	×	×	×	×	×	×	×	×	×	×
	Tv	□	□	○	×	○	×	×	×	×	×	×	×	×	×
Zoom Position *3	Optical (Wide)	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	Optical (Other)	□	□	○	○	○	○	○	○	○	○	○	○	△	○
	Digital zoom	□	□	○	○	○	○	○	○	○	○	○	○	×	×
AF Range	Normal	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	Macro	□	□	○	○	○	○	○	×	○	○	○	○	△	○
Focus System	AF	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	MF	□	□	○	○	○	○	×	○	○	○	○	○	×	○
MF Distance		□	□	○	○	○	○	×	○	○	○	○	○	×	○
Flash	Auto	□	□	×	×	×	○	○*	○	○*	○*	○*	○	×	×
	Flash On	□	□	○	○	○	○	×	○	○	○	○	○	△	×
	Flash Off	□	□	○*	○*	○*	○*	○	○*	○	○	○	○*	○*	×
Display EVF	OVF	□	□	○	○	○	○	○	○	○	○	○	○	×	×
	EVF only	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	EVF+INFO	□	□	○	○	○	○	○	○	○	○	○	○	○	○
Stitching Direction Selection	Left	×	×	×	×	×	×	×	×	×	×	×	×	○*	×
	Right	×	×	×	×	×	×	×	×	×	×	×	×	△	×

		Creative						Auto	Image1						Image2	
REC MENU		C2	C1	M	Av	Tv	P	Auto	Land-scape	Night	Portrait	Fast	Slow	Stitch	Movie
AiAF	On	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	Off	□	□	○	○	○	○	×	○	○	○	○	○	×	×
Red-eye Reduction	On	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	×
	Off	□	□	○	○	○	○	○	○	○	○	○	○	△	×
MF-point Zoom	On	□	□	○*	○*	○*	○*	×	○*	○*	○*	○*	○*	×	×
	Off	□	□	○	○	○	○	○*	○	○	○	○	○	○*	○*
AF-assist Beam	On	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	Off	□	□	○	○	○	○	○	○	○	○	○	○	△	○
Digital Zoom	On	□	□	○	○	○	○	○	○	○	○	○	○	×	×
	Off	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	×	×
Review (REC. review)	Off	□	□	○	○	○	○	○	○	○	○	○	○	△	×
	2 sec.	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	×
	- 10 sec.	□	□	○	○	○	○	○	○	○	○	○	○	△	×
Reverse Display	On	□	□	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	×	○*
	Off	□	□	○	○	○	○	○	○	○	○	○	○	○*	○
Save Settings	C save setting 1	○*	○*	○*	○*	○*	○*	×	×	×	×	×	×	×	×
	C save setting 2	○	○	○	○	○	○	×	×	×	×	×	×	×	×

		Creative						Auto	Image1						Image2	
SETUP MENU		C2	C1	M	Av	Tv	P	Auto	Land-scape	Night	Portrait	Fast	Slow	Stitch	Movie
Beep	On	○	○	○	○	○	○	○	○	○	○	○	○	△	○
	Off	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○	○
Volume Setting*3															
Start-up sound vol.	0,1,2,3,4,5	○	○	○	○	○	○	○	○	○	○	○	○	△	○
Operation sound vol.	0,1,2,3,4,5	○	○	○	○	○	○	○	○	○	○	○	○	△	○
Self-timer sound vol.	0,1,2,3,4,5	○	○	○	○	○	○	○	○	○	○	○	○	△	○
Shutter sound vol.	0,1,2,3,4,5	○	○	○	○	○	○	○	○	○	○	○	○	△	○
Playback vol.	0,1,2,3,4,5	○	○	○	○	○	○	○	○	○	○	○	○	△	○
Auto Power Down Setting															
Auto Power Off	On	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○	○
	Off	○	○	○	○	○	○	○	○	○	○	○	○	△	○
Display Off *4	10, 20, 30 sec., 1, 2, 3 min.	○	○	○	○	○	○	○	○	○	○	○	○	△	○
Date/Time *5		○	○	○	○	○	○	○	○	○	○	○	○	△	○
Date Style *5	mdy,dmy,ymd	○	○	○	○	○	○	○	○	○	○	○	○	△	○
Format		○	○	○	○	○	○	○	○	○	○	○	○	×	○
File No. Reset	On	○	○	○	○	○	○	○	○	○	○	○	○	△	○
	Off	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
Rotate	On	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	×
	Off	○	○	○	○	○	○	○	○	○	○	○	○	△	○*
Distance Units	m/cm	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*	○*
	ft/in	○	○	○	○	○	○	○	○	○	○	○	○	△	○
Language *5		○	○	○	○	○	○	○	○	○	○	○	○	△	○
Video System *5	NTSC	○	○	○	○	○	○	○	○	○	○	○	○	△	○
	PAL	○	○	○	○	○	○	○	○	○	○	○	○	△	○

○ Selectable
□ Selectable(The setting follows the registered shooting mode)
△ Only the first shot in stitch assist can be selected.
× Not selectable
* Default value

Colored cell (□ ■)
The setting remains in effect even if the settings are switched among modes in same color.

When switched to a mode in another color, its default value will be set.
Example) High speed continuous shooting in Av mode:
switches to Tv → High speed continuous shooting
switches to Auto or Landscape → single shot

* MF, Digital zoom and AE/FE lock are not available with the LCD monitor off.
* White balance can not be selected when the photo effect is to Sepia or Black & White.

*1 Stitch assist shooting is not memorized.
*2 Default value of Av/Tv : f/4.0, 1/125 sec.
*3 Default value of Volume is 2.
*4 Default value of Dsplay Off is 1.
*5 Settings vary according to region as follows:

Region	Japan	USA	Europe	Oceania
Date/Time	The time is not set before shipping			
Date style	YYMMDD	MMDDYY	DDMMYY	DDMMYY
Language	Japanese	English	English	English
Video System	NTSC	NTSC	PAL	PAL

4-4 Playback compatibility

			Playback Cameras																
			PS 350	PS A5 PS A5Z	PS Pro70	PS A50	PS S10 PS S20	PS G1 PS G2 PS Pro90IS PS S40 PS S30	IXY D PS A20 PS A10	ID 200 ID 300 ID 300a ID 200a PS A40 PS A30 PS A200 PS A100	EOS D30 D60	EOS 1Ds EOS 1D	PS S45 PS G3 PS S50	ID 320 PS A70 ID 400 PS A300	PS A60	ID 30	PS G5	PS A80	**PS SD10**
Image taking Cameras	Canon	PS 350	CIFF	○	○	○	○	○	×	×	×	×	×	×	×	×	×	×	×
		PS A5/A5 Z	CIFF	△	○*1	○*1	○*1	○*1	×	×	×	×	×	×	×	×	×	×	×	×
		PS Pro70	CIFF	△	○*2	○*1	○*1	○*1	×	×	×	×	×	×	×	×	×	×	×	×
		PS A50	CIFF	△	○*2	○*1	○*1	○*1	×	×	×	×	×	×	×	×	×	×	×	×
			DCF	×	×	×	○*1	○*1	○*1	○*1	○*1	○*1	○*7	○*1	○*1	○*1	×	○*1	○*1	×
		PS S10/S20	DCF (Still)	×	×	×	○*3	○	○	○	○	○	○*7	○	○	○	×	○	○	×
		PS G1/G2/S40/S30 PS Pro90 IS	DCF (Still)	×	×	×	○*1*3	○*1	○	○*1	○*1	○	○*7	○	○*1	○*1	×	○	○*1	×
			(Movie)	×	×	×	▲	▲	○	▲	○*5	▲	▲	○	○	○*5	×	○	○	×
		ID 300/200/300a/200a PS A40/A30/A200/A100	DCF (Still)	×	×	×	○	○	○	○	○	○	○*7	○	○	○	×	○	○	×
			(Movie)	×	×	×	▲	▲	○	▲	○	▲	▲	○	○	○	×	○	○	×
		IXY D/PS A10/A20	DCF (Still)	×	×	×	○	○	○	○	○	○	○*7	○	○	○	×	○	○	×
		EOS D30/D60/1D	DCF (Still)	×	×	×	○*1*3	○*1	○	○*1	○*1	○	○*7	○	○*1	○*1	×	○	○*1	×
		EOS 1Ds	DCF (Still)	×	×	×	○*1*3	○*4	○*4	○*4	○*4	○*4	○*7	○*4	○*4	○*4	×	○	○	×
		PS S45/G3 PS S50/G5	DCF (Still)	×	×	×	○*1*3	○*1	○	○*1	○*1	○	○*7	○	○*1	○*1	×	○	○*1	×
			(Movie)	×	×	×	▲	▲	○*5*6	▲	○*5*6	▲	▲	○	○	○*5	×	○	○	×
		ID 320/400/PS A80 PS A70/A300	DCF (Still)	×	×	×	○*3	○	○	○	○	○	○*7	○	○	○	×	○	○	×
			(Movie)	×	×	×	▲	▲	○*5*6	▲	○*5*6	▲	▲	○	○	○*5	×	○	○	×
		PS A60	DCF (Still)	×	×	×	○*3	○	○	○	○	○	○*7	○	○	○	×	○	○	×
			(Movie)	×	×	×	▲	▲	○*6	▲	○*6	▲	▲	○	○	○	×	○	○	×
		ID 30/**PS SD10**	DCF (Still)	×	×	×	×	×	×	×	×	×	×	×	×	×	○	×	×	○
			(Movie)	×	×	×	×	×	×	×	×	×	×	×	×	×	○	×	×	○
	Other Company	DCF that uses CF card	DCF (Still)	×	×	×	○*3	○*4	○*4	○*4	○*4	○*4	○*7	○*4	○*4	○*4	×	○*8	○*8	×
			(Movie)	×	×	×	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	×	▲	▲	×
		DCF that uses SD memory card	DCF (Still)	×	×	×	×	×	×	×	×	×	×	×	×	×	○*4	×	×	○*8
			(Movie)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
		DCF that uses other media	DCF (Still)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
			(Movie)	×	×	×	×	×	×	×	×	×	×	×	×		×	×	×	×

○ : Playbackable
△ : Not playbackable when RAW image
▲ : Thumbnail plays back when movie
× : Not playbackable

*1 : Thumbnail displays of RAW image
*2 : Thumbnail displays of RAW image / JPEG file plays back up to 1024×768 pixels
*3 : JPEG file plays back up to 1632×1232 pixels / (Thumbnail displays when more than 1632×1232 pixels)
*4 : JPEG file plays back up to 3200×2400 pixels / (Thumbnail displays when more than 3200×2400 pixels)
*5 : Not play back when file size exceeds fixed capacity
*6 : Not play back when movie's play time exceeds time limit
*7 : Thumbnail displays
*8 : JPEG file plays back up to 4064×3048 pixels / (Thumbnail displays when more than 4064×3048 pixels)

5 System

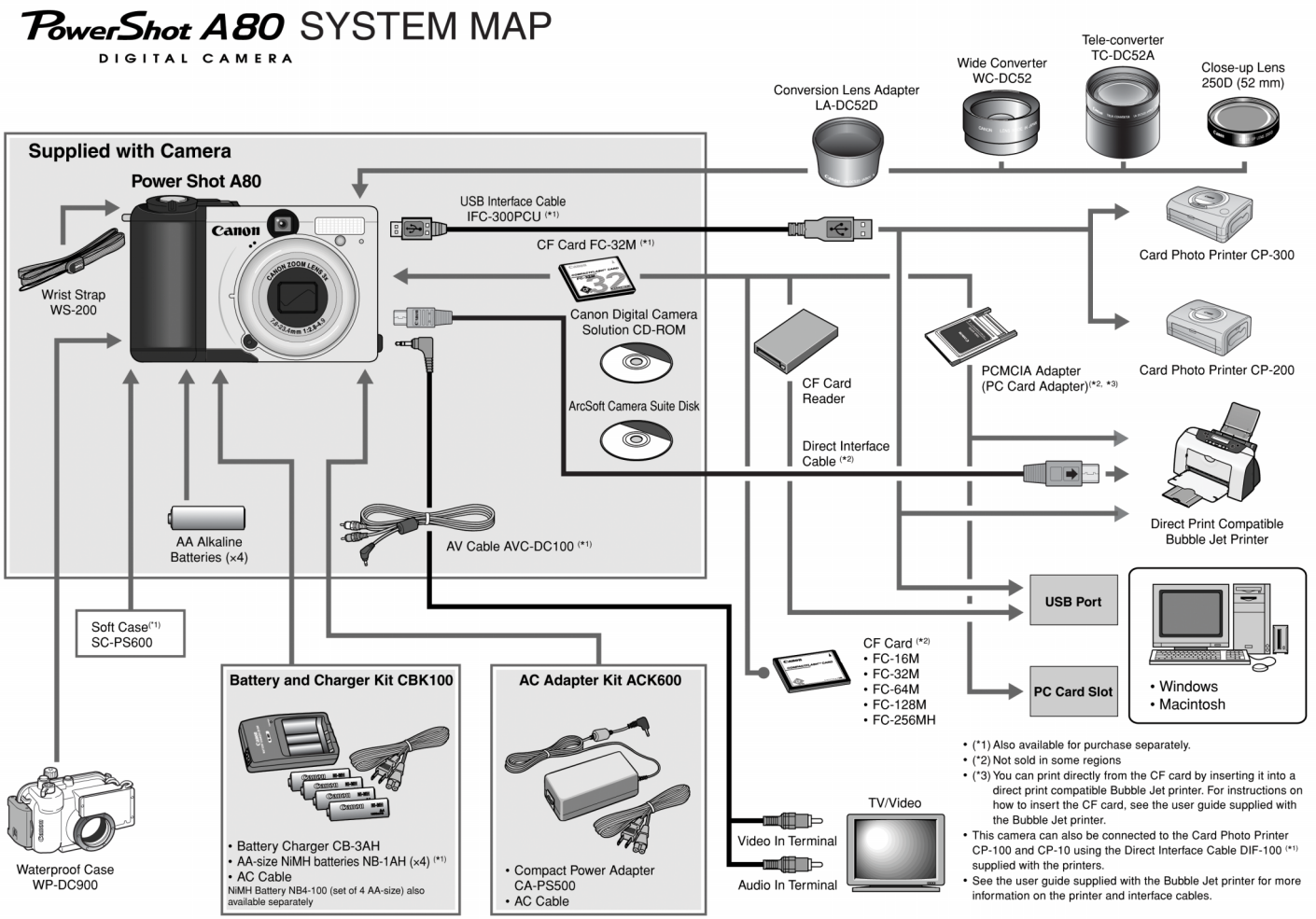
5-1 Accessory compatibility

	PS A80	PS G3 PS G5	ID 30	PS A300 PS A200 PS A100	ID 400	PS A70 PS A60	PS S50 PS S45 PS S40 PS S30	I D 320 I D 200a I D 200	I D 300a I D 300	PS A40 PS A30	PS G2	PS A20 PS A10	IXY DIGITAL	PS Pro 90 IS	PS G1	PS S10 PS S20	PS Pro70	PS A5 PS A5Z PS A50
<Battery>																		
NB-5H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-	O
NB-4H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-
NB-1L/1LH	-	-	-	-	O	-	-	O	O	-	-	-	O	-	-	-	-	-
BP-511	-	O	-	-	-	-	-	-	-	-	O	-	-	O	O	-	-	-
BP-512	-	O	-	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-
NB4-100	O	-	-	O*1	-	O	-	-	-	O	-	O	-	-	-	-	-	-
NB-2L	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-
NB-3L	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					*1: 2 sets of 2 batteries (4 battery packages).													
<Adapter/Charger>																		
CA-PS100/100E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-	O
CA-PS200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-
CA-PS300	-	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-	-
CA-PS500	-(O)*2	-	O	-	O	-(O)*2	-	O	O	-(O)*2	-	-(O)*2	O	-	-	-	-	-
CA-560	-	O	-	-	-	-	-	-	-	-	O	-	-	O	O	-	-	-
CA-PS700	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-
CR-560	-	O	-	-	-	-	-	-	-	-	O	-	-	O	O	-	-	-
CA-PS800	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CB-2L/2LE	-	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-	-
CB-2LS/2LSE	-	-	-	-	O	-	-	O	O	-	-	-	-	-	-	-	-	-
CB-3AH	O	-	-	O*3	-	O	-	-	-	O	-	O	-	-	-	-	-	-
CBK100	O	-	-	O*3	-	O	-	-	-	O	-	O	-	-	-	-	-	-
CB-2LT/CB-2LTE	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-
CB-2LU/2LUE	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CBC-NB1	-	-	-	-	O	-	-	O	O	-	-	-	-	-	-	-	-	-
CBC-NB2	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-
CB-5L	-	O	-	-	-	-	-	-	-	-	O	-	-	O	O	-	-	-
CA-570 + CG-570	-	O	-	-	-	-	-	-	-	-	O	-	-	O	O	-	-	-
					*2: It is possible to use by inserting the adapter's DC plug in the jack of PS A70/A60/A40/A30/A20/A10 cameras directly without using DC coupler.													
<DC Coupler>					*3: 4 batteries (2 set of 2) can be recharged.													
DR-100/100A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-	O
DR-200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-
DR-300	-	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-	-
DR-500	-	-	-	-	O	-	-	O	O	-	-	-	-	-	-	-	-	-
DR-700	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-
DR-900	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	PS A80	PS G3 PS G5	ID 30	PS A300 PS A200 PS A100	ID 400	PS A70 PS A60	PS S50 PS S45 PS S40 PS S30	I D 320 I D 200a I D 200	I D 300a I D 300	PS A40 PS A30	PS G2	PS A20 PS A10	IXY DIGITAL	PS Pro 90 IS	PS G1	PS S10 PS S20	PS Pro70	PS A5 PS A5Z PS A50
<Lens Accesory>																		
WC-DC58	-	-	-	-	-	-	-	-	-	-	O	-	-	O	O	-	-	-
WC-DC52	O	-	-	-	-	O	-	-	-	O	-	O	-	-	-	-	-	-
WC-DC58N	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TC-DC58	-	-	-	-	-	-	-	-	-	-	O	-	-	-	O	-	-	-
TC-DC58N	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250D 58mm	-	O	-	-	-	-	-	-	-	-	O	-	-	-	O	-	-	-
500D 58mm	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-
250D 52mm	O	-	-	-	-	O	-	-	-	O	-	O	-	-	-	-	-	-
LA-DC58	-	-	-	-	-	-	-	-	-	-	O	-	-	-	O	-	-	-
LA-DC52	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-	-	-
LA-DC58N	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LH-DC58	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-
TC-DC52	-	-	-	-	-	O	-	-	-	O	-	O	-	-	-	-	-	-
TC-DC52A	O	-	-	-	-	O	-	-	-	O	-	O	-	-	-	-	-	-
LA-DC52B	-	-	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-
LA-DC52C	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-
LA-DC52D	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<Speed Lite>																		
220EX	-	O	-	-	-	-	-	-	-	-	O	-	-	O	O	-	O	-
380EX	-	O	-	-	-	-	-	-	-	-	O	-	-	O	O	-	O	-
550EX	-	O	-	-	-	-	-	-	-	-	O	-	-	O	O	-	-	-
420EX	-	O	-	-	-	-	-	-	-	-	O	-	-	O	O	-	-	-
(MR-14EX)	-	O	-	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-
(MT-24EX)	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<Remote Switch>																		
WL-DC100	-	O	-	-	-	-	-	-	-	-	O	-	-	O	O	-	-	-
RS-8N3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-
<Cable/Others>																		
VC-100	-	-	-	-	-	-	-	-	-	O(A30)	-	O(A20)	-	-	-	O	O	O
VC-200	-	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-	-
AVC-DC100	O	O	O	-	O	O	O	-	O	O(A40)	O	-	-	O	O	-	-	-
AVC-DC200	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-
IFC-100PCS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	O
IFC-100MC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	O
IFC-200PCS	-	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	-	-
IFC-200PCU	-		-	-	-	-	-	O	-	-	O	-	O	O	O	O	-	-
IFC-200MC	-	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	-	-
IFC-300PCU	O	O	O	O	O	O	O	-	O	O	-	O	-	-	-	-	-	-
AD-PC98	-	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	O
DIF-100	O	O	O	O	O	O	O	-	O	O	O	O	-	-	-	-	-	-
DIF-200	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-
DIF-B100	O	O	O	O	O	O	O	-	O	O	O	O	-	-	-	-	-	-
DIF-B200	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-

	PS A80	PS G3 PS G5	ID 30	PS A300 PS A200 PS A100	ID 400	PS A70 PS A60	PS S50 PS S45 PS S40 PS S30	I D 320 I D 200a I D 200	I D 300a I D 300	PS A40 PS A30	PS G2	PS A20 PS A10	IXY DIGITAL	PS Pro 90 IS	PS G1	PS S10 PS S20	PS Pro70	PS A5 PS A5Z PS A50
<Case>																		
SC-PS100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-	O
SC-PS300	-	-	-	-	-	-	-	O(200a/200)	-	-	-	-	O	-	-	-	-	-
SC-PS400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-
SC-PS500	-	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-
SC-PS600	O	-	-	-	-	O	-	-	-	O	-	O	-	-	-	-	-	-
SC-PS700	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-
SHC-PS200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-
SHC-PS300	-	-	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-
SC-PS800	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-
SC-PS900	-	-	-	O	-	-	O	-	-	-	-	-	-	-	-	-	-	-
IXC-200A/B	-	-	-	-	O	-	-	O(320)	-	-	-	-	O	-	-	-	-	-
IXC-300A/B	-	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-
IXC-220A/B/S	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SC-DC10	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<All Weather Case / Water Proof Case>																		
AW-PS100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O(A5)
AW-PS110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O(A5Z/A50)
AW-PS200	-	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-	-
WP-DC100	-	-	-	-	-	-	-	-	O(300)	-	-	-	-	-	-	-	-	-
WP-DC200	-	-	-	-	-	-	-	-	-	-	-	O	-	-	-	-	-	-
WP-DC300	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-
WP-DC200s	-	-	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-
WP-DC400	-	-	-	O(A200/A100)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WP-DC500	-	-	-	-	-	-	-	-	O(300a)	-	-	-	-	-	-	-	-	-
WP-DC600	-	-	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-
WP-DC700	-	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-
WP-DC800	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-
WP-DC10	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WP-DC900	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

5-2 System Diagram



TECHNICAL DESCRIPTION

CONTENTS

1. Functions of each unit

1.1 MAIN PCB ASS'Y

1) Driving the CCD Sensor.
2) Conversion of the image signal from the analog signal to the digital signal.
3) Controlling the power supply and the system by CPU. (Refer to Sections 2.1 and 2.2.)
4) Image processing, and reading and writing the image signal to and from the CF card using DSP. (Refer to Section 2.2.2.)
5) Amplification of the video and audio output. (Refer to Section 2.2.3.)

1.2 DC/JACK UNIT

1) Power supply drive (DC/DC converter).
2) Backlight for LCD drive.

1.3 LCD UNIT

1) LCD panel drive and Backlight for LCD drive.

1.4 FLASH UNIT

1) Flash drive and charging circuit for the flash.

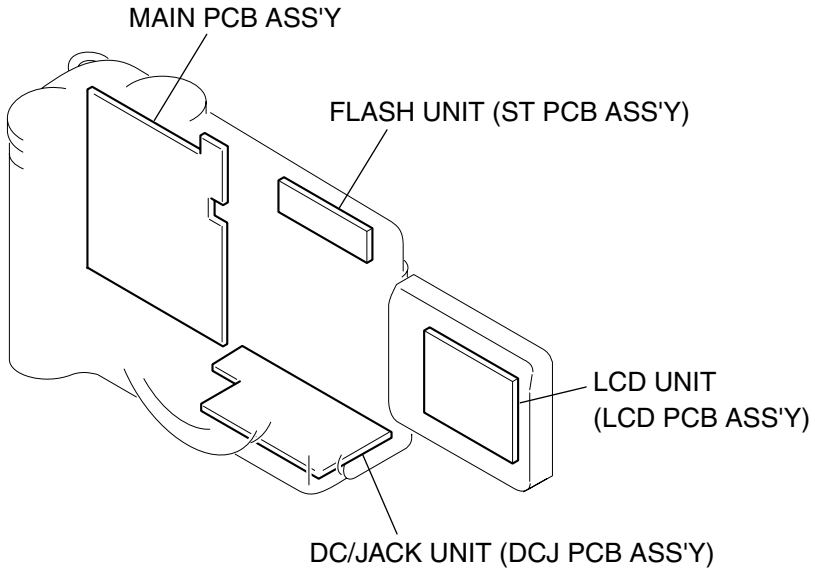


Fig. 1

2. Outline of Circuits

2.1 Power Supply Control

The power supply is controlled by the CPU mounted on the main PCB ass'y.

2.1.1 Power Supply Block Diagram

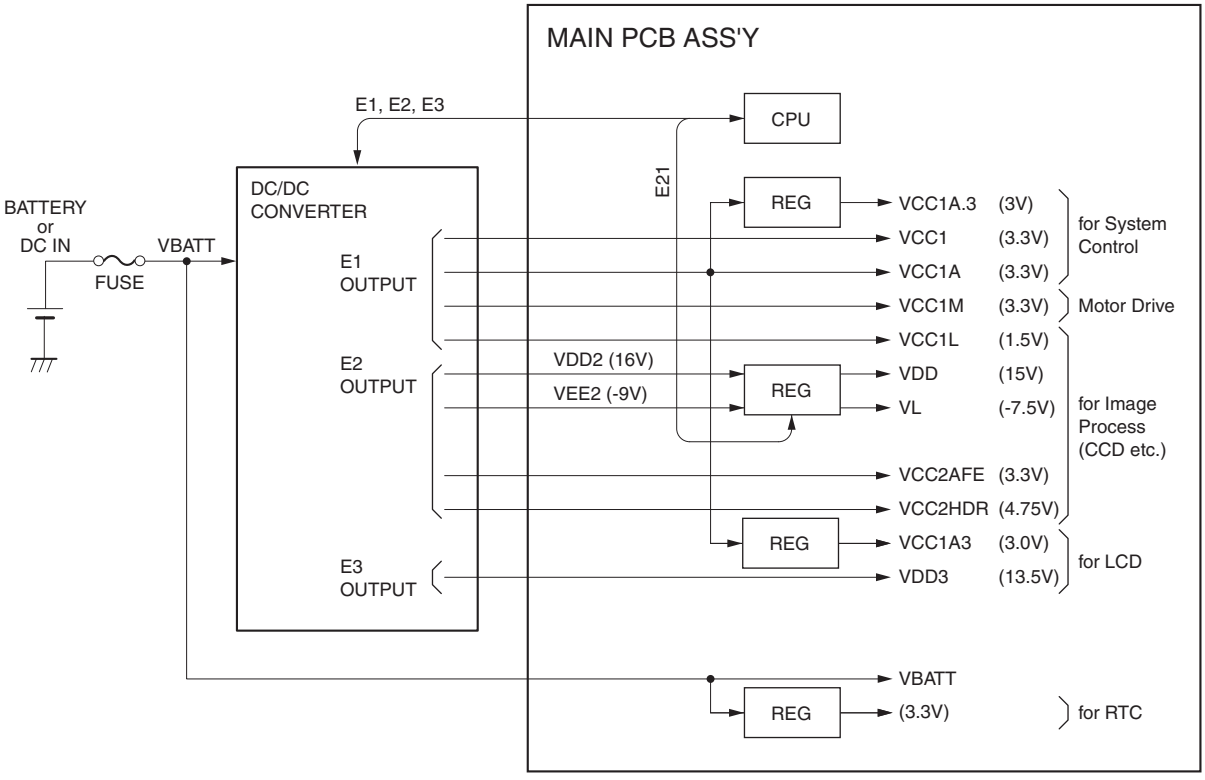
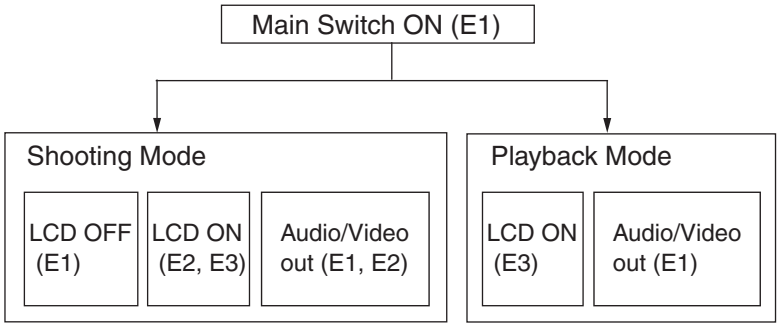


Fig. 2 Power System Block Diagram

2.1.2 Power Control Sequence



2.2 Signal Processing

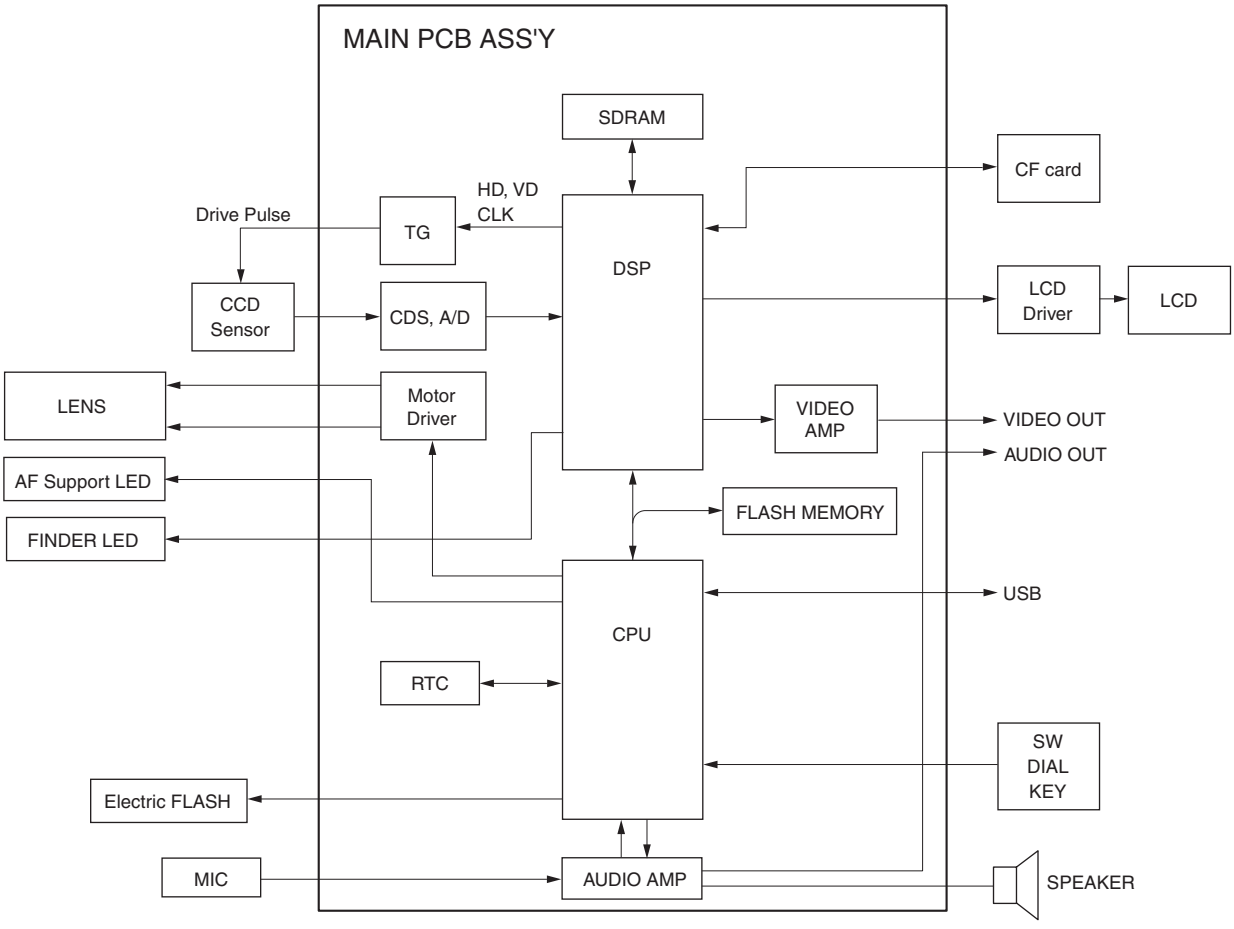


Fig. 3 Signal System Block Diagram

2.2.1 System Control

The CPU on the main PCB ass'y controls the lens (motor, shutter), operation switch receiver, USB communication and flowing circuits.

- TG: Creation of the CCD drive pulse
- CDS, A/D: CCD signal processing and conversion of the digital data
- LCD Driver: Driving the LCD
- FLASH MEMORY: Firmware memory
- DSP: Picture processing
- RTC: Clock count for watch
- AF Support LED: AF auxiliary, self-timer and red-eye protection also serves as a lamp
- Electric Flash: Flash and charging circuit

2.2.2 Picture Processing

1) The drive pulse of the CCD sensor is created by both clock from DSP and TG that is operated by sync. signal.
   The picture signal by the drive pulse is output from CCD sensor.
   The output signal of the CCD picture is converted to the signal processing and the digital data by the CDS and A/D converter, and is sent to the DSP.

2) The DSP circuit performs the following signal processing.
   - Processes the picture data (using the SDRAM).
   - Writes and reads the picture data to and from the CF card.
   - Outputs analog video signal to the LCD and VIDEO OUT.

3) The video signal that is supplied form the DSP is controlled by the LCD driver and is displayed on the LCD panel. The video amplifier is activated when the video jack is inserted to the AV jack and drives the video signal in 75 Ω.

2.2.3 Audio Processing (During record and playback)

1) During animation recording.
   - The microphone audio signal is converted to the digital data by CPU and is recorded.
2) During playback, the data is converted back to the analog audio signal and is output to the AV jack and speaker from AUDIO/SP anplifier.

3. Troubleshooting

3.1 When an Error Code is Displayed

[Remedy]

- Check for any abnormalities in the mounting of probable faulty parts or connector connections referring to the table below.
- Try replacing probable faulty parts referring to the below.

[NOTE]

- The error code is displayed on the LCD Monitor.
- Adjustments must be performed after the part has been replaced. For details, see the chapter of "Adjustments".

Error Code	Name	Occurrence Conditions	Cause and Probable Faulty Part
E02	AF TIME OUT	AF processing did not end within the specified time.	MAIN PCB ASS'Y
			OPTICAL UNIT
		The focus lens was not driven.	MAIN PCB ASS'Y
			OPTICAL UNIT
E03	EF TIME OUT	Auto Flash Control did not end within the specified time.	MAIN PCB ASS'Y
			OPTICAL UNIT
E04	AWB TIME OUT	AWB processing did not end within the specified time.	MAIN PCB ASS'Y
E09	JPEG DMA TIME OUT	JPEG processing did not end within the specified time.	MAIN PCB ASS'Y
E14	UNKOWN	When unkown error, cause of which is not known, occurs.	UNKOWN
E16	IMAGING TIME OUT	When communication between CPU and peripheral IC is not completed within the specified time during recording using EVF or after completion of recording.	MAIN PCB ASS'Y
E18	ZOOM LENS ERROR	Movement of the lens barrel did not end within the specified time.	MAIN PCB ASS'Y
			OPTICAL UNIT
E23	CF NO SPACE	When the CF becomes full during writing of photographed images to CF, writing is repeatedly performed with the JPEG compression ratio successively increased to reduce the size of the image file until it can be successfully written to CF. This error occurs when writing of the JPEG image file fails after 10 retries at increasingly higher compression ratios.	MAIN PCB ASS'Y
E24	POWER ON ERROR	The power of the imaging circuit on the MAIN PCB ASS'Y was not detected.	MAIN PCB ASS'Y
			DC/JACK UNIT
E25	FOCUS PI ERROR	Detection of the focus PI (photo-interrupter) failed.	OPTICAL UNIT
			MAIN PCB ASS'Y

Error Code	Name	Occurrence Conditions	Cause and Probable Faulty Part
E26	CAPTURE TIME OUT	Writing of the photograph image to SDRAM did not end within the specified time.	MAIN PCB ASS'Y
E27	CF WRITE TIME OVER	Free area could not be secured in the buffer for the photograph image within the specified time in the continuous shooting mode.	CF CARD
			MAIN PCB ASS'Y
E30	POWER OFF ERROR	The camera power was turned OFF while the image was being recorded to the CF Card. (The error code is displayed when the camera is next turned ON.) * This error may occur after E23.	The battery or DC plug was removed while the image was being recorded to the CF Card. → Remedy: Restart the camera.
E50	CF FORMAT ERROR	The CF Card could not be formatted properly.	CF CARD
E51	CF ACCESS ERROR	When image data cannot be read from CF normally.	CF CARD
E52	QUICK REVIEW ERROR	Review of the photograph image failed.	MAIN PCB ASS'Y

3.2 When a Problem Occurs

[Remedy]

- Check for any abnormalities in the mounting of probable faulty parts or connector connections referring to the table below.
- Try replacing probable faulty parts referring to the table below.

[NOTE]

- Adjustments must be performed after the part has been replaced. For details, see the chapter of "Adjustments".

Problem (when an error code is not displayed)	Cause and Probable Faulty Part
The camera does not work.	MAIN PCB ASS'Y
	DC/JACK UNIT
	BATTERY BOX UNIT
The image is not displayed on the LCD Monitor.	MAIN PCB ASS'Y
	LCD UNIT
The photograph image is abnormal.	OPTICAL UNIT
	MAIN PCB ASS'Y
The zoom does not function.	OPTICAL UNIT
	MAIN PCB ASS'Y
	TOP COVER UNIT
	OPERATION MODULE UNIT
The Built-in Flash does not fire.	FLASH UNIT
	DC/JACK UNIT
	MAIN PCB ASS'Y
Video output is strange.	DC/JACK UNIT
	MAIN PCB ASS'Y
Communications with the personal computer is not possible.	DC/JACK UNIT
	MAIN PCB ASS'Y
The CF card or Micro Drives is not recognized.	CF CARD
	CF UNIT
	MAIN PCB ASS'Y
Buttons/The Mode dial do not work.	TOP COVER UNIT
	OPERATION MODULE UNIT
	MAIN PCB ASS'Y
	REAR COVER UNIT

REPAIR INSTRUCTION

CONTENTS

1. Before Starting the Repair Work

Be sure to read the following precaution before starting the repair work.

1.1 Precaution on Flash High Tension Circuit

- After the REAR COVER UNIT is removed, be sure to discharge the main capacitor. (Discharging resistor : 1 kΩ, approx. 5 W.)
- First contact the GND ⊖ terminal of the main capacitor with the discharging resistor. Then contact the positive ⊕ terminal of the main capacitor.

CAUTION:
Be careful of electric shock because the circuit is the high tension circuit.

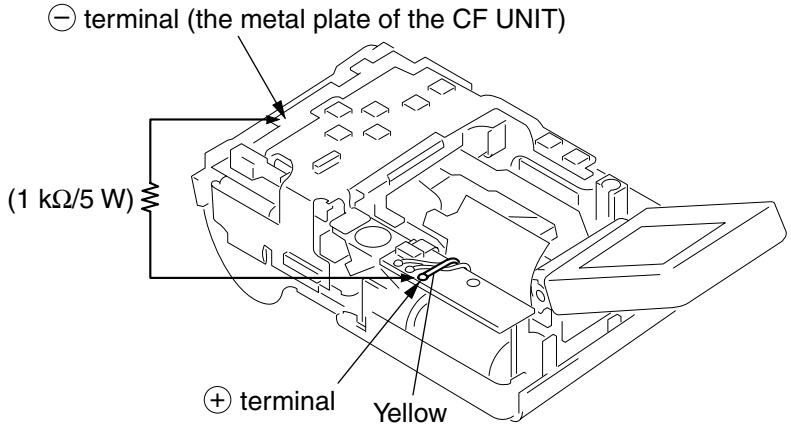


Fig. 1 Precaution on flash high tension circuit

1.2 List of Tools

The following tools are used for the re-assembling during service.

(1) List of tools

New	Name of tools	Part No.	Remarks
	Screwdriver (Local Purchase)		
	Tweezers (Local Purchase)		
	Soldering iron (Local Purchase)		

1.3 List of Supplies

The following supplies are used for the re-assembling during service.

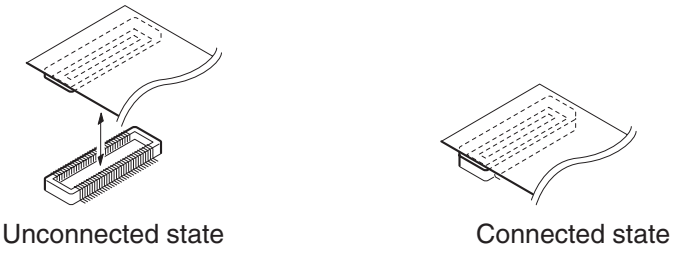
(1) List of supplies

New	Name of supplies	Part No.	Remarks
	ADHESIVE TAPE SONY T4000	CY4-6012-000	Double-sided Tape
	DIA BOND No.1663G	CY9-8129-000	
	LOGENEST RAMBDA A-74	CY9-8102-000	
	Solder (Local Purchase)		

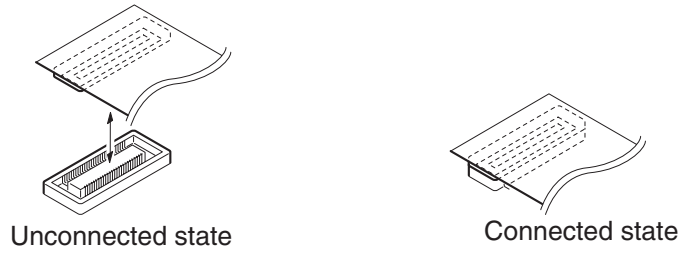
1.4 Flexible Connectors

This product uses the five types of the flexible connectors.

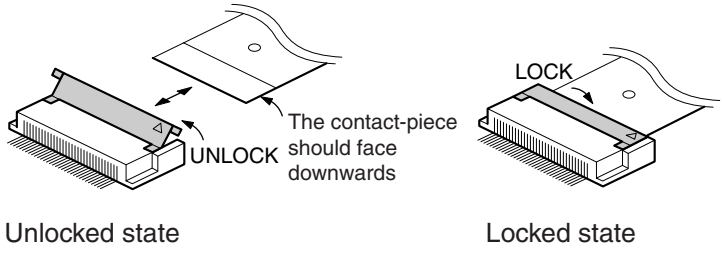
① Type A



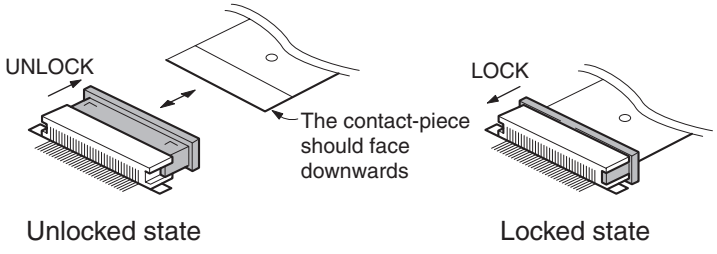
② Type B



③ Type C



④ Type D



⑤ Type E

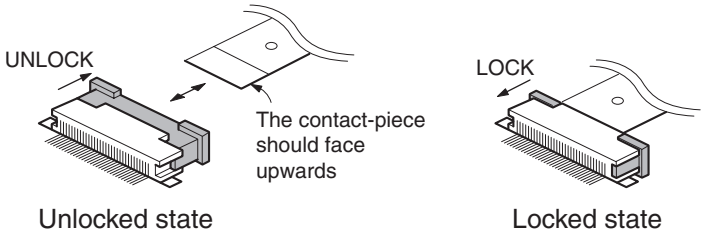


Fig. 2 Flexible connectors

CAUTIONS:

1. For the connectors of Type C, Type D and Type E, set them to the unlocked state before removing and inserting flexible card. After flexible card is inserted, set them to the locked state.
2. The flexible card is equipped with the holes as shown. Use them for removal and insertion by inserting the tweezers into them as required.

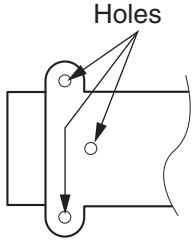
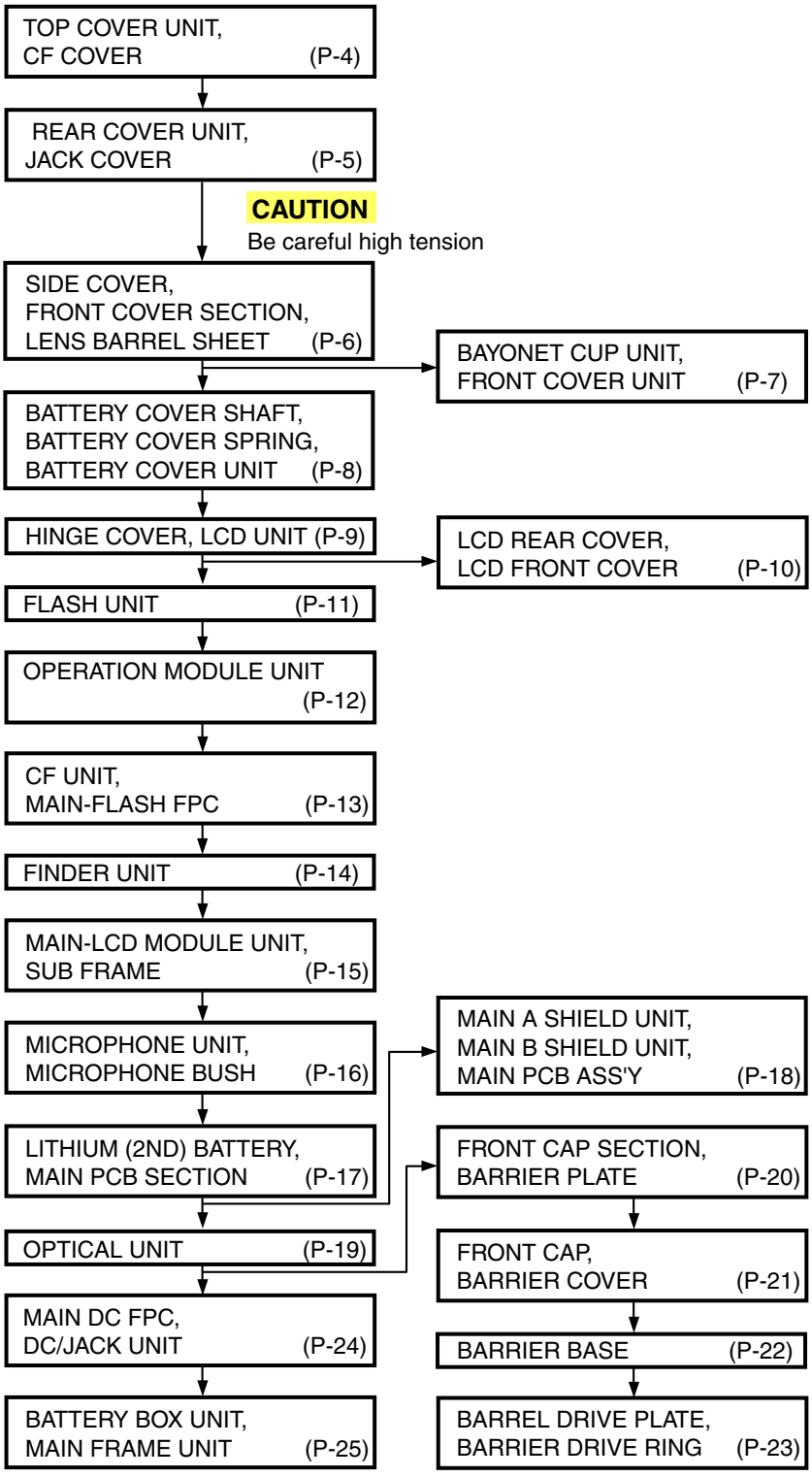


Fig. 3 Holes for removal

2. Disassembly/Assembly

2.1 Procedure

Disassembling procedure of PowerShot A80 is shown by the following flowchart.
Reverse the disassembling procedure to reassemble them. ∗ The pages to refer are shown in parenthesis ( ).



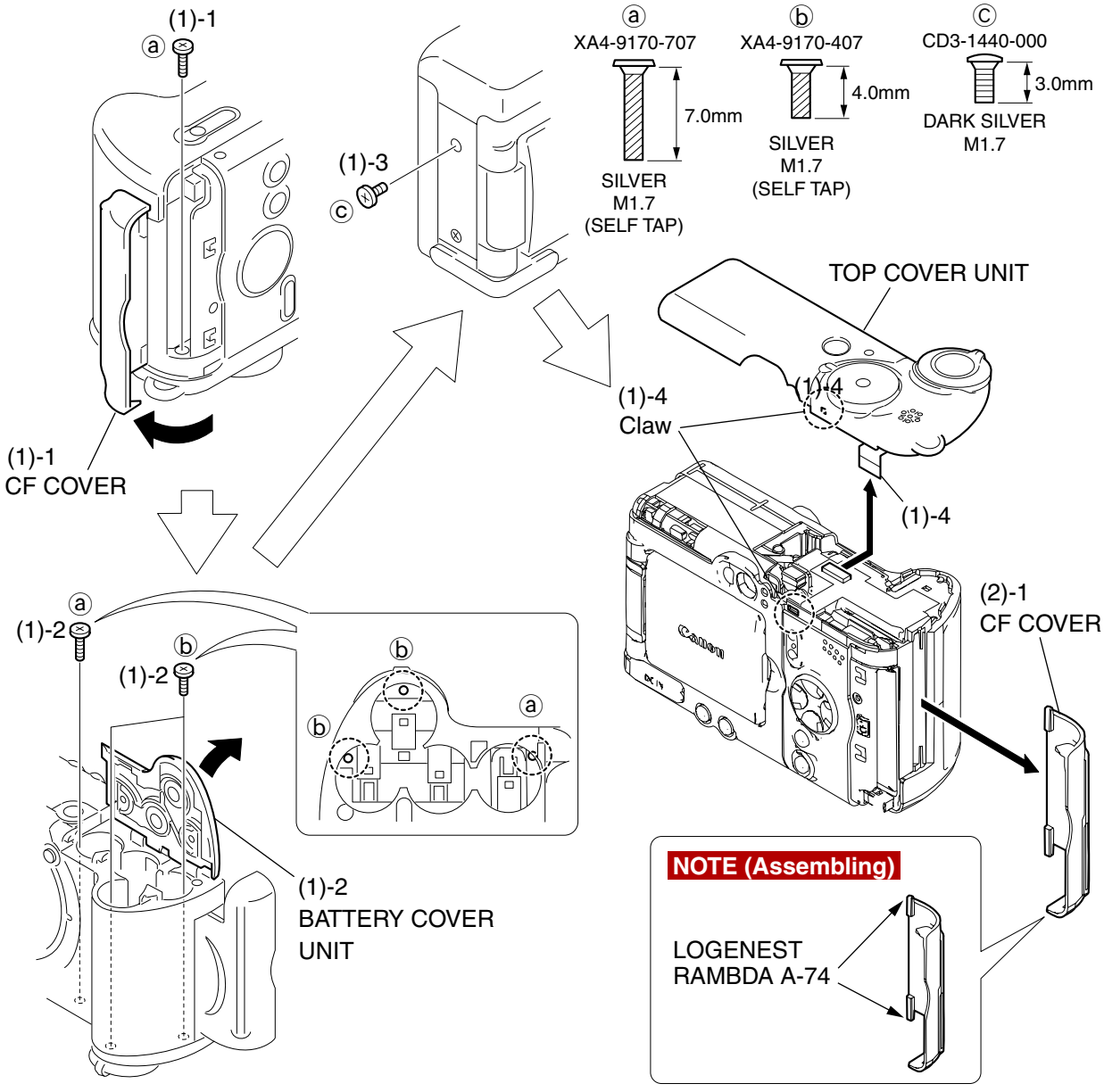


Fig. 4 TOP COVER UNIT, CF COVER

2.2 TOP COVER UNIT, CF COVER

(1) TOP COVER UNIT

1. Open the CF COVER and remove the screw of ⓐ.
2. Open the BATTERY COVER UNIT and remove the screw of ⓐ and the two screws of ⓑ.
3. Remove the screw of ⓒ.
4. Disengage the claw and remove the connector, then remove the TOP COVER UNIT.

(2) CF COVER

1. Remove the CF COVER.

NOTE (Assembling)

Apply the LOGENEST RAMBDA A-74 to the shafts.

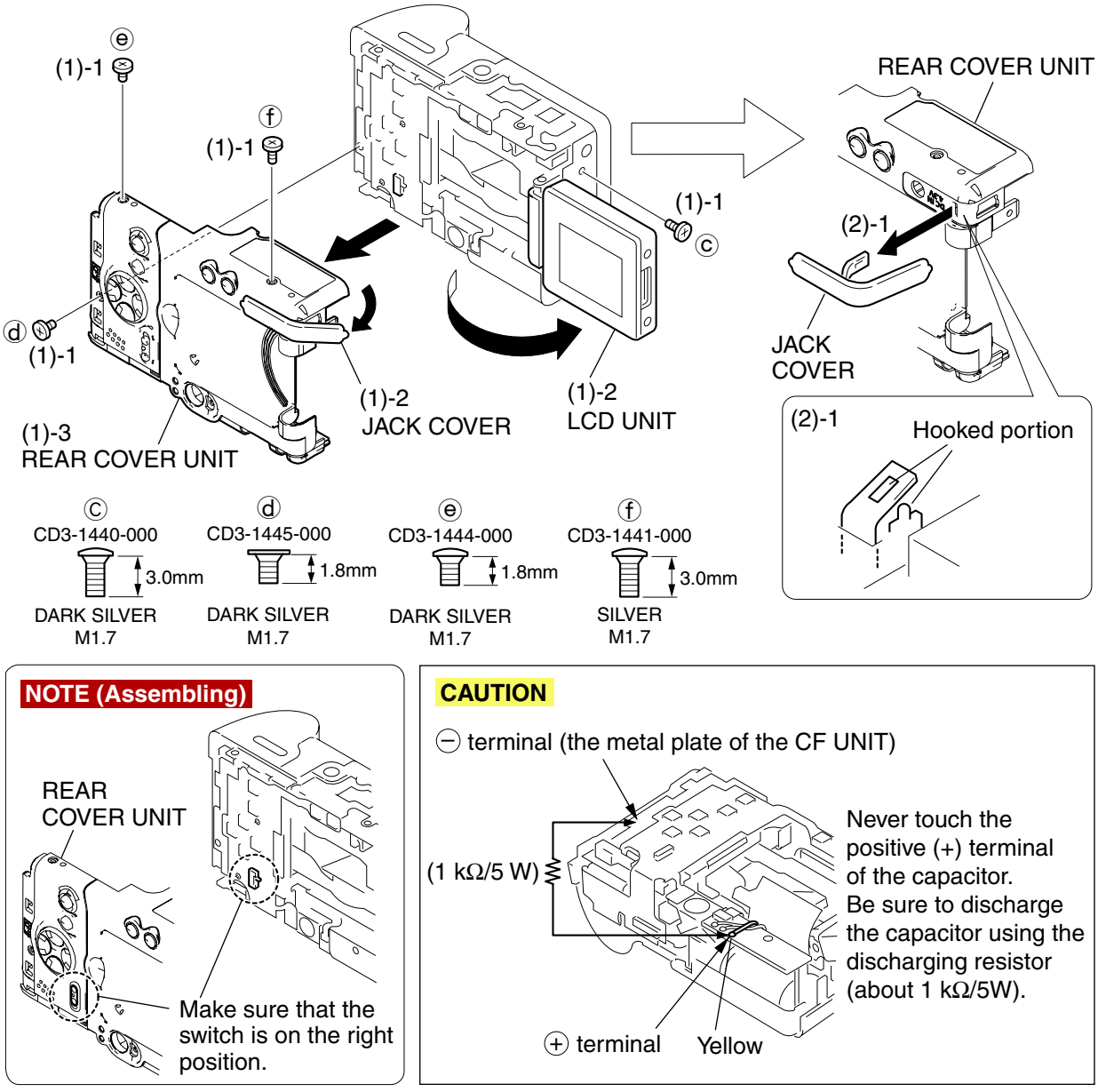


Fig. 5 REAR COVER UNIT, JACK COVER

2.3 REAR COVER UNIT, JACK COVER

(1) REAR COVER UNIT

1. Remove the screw of ⓒ, the screw of ⓓ, the screw of ⓔ and the screw of ⓕ.
2. Open the LCD UNIT and the JACK COVER.
3. Remove the REAR COVER UNIT.

CAUTION

Never touch the positive (+) terminal of the capacitor.
Be sure to discharge the capacitor using the discharging resistor (about 1kΩ/5W).

NOTE (Assembling)

When assembling, check the switch is in the correct position.

(2) JACK COVER

1. Disengage the hooked portion on the backside of the REAR COVER UNIT, and then the JACK COVER.

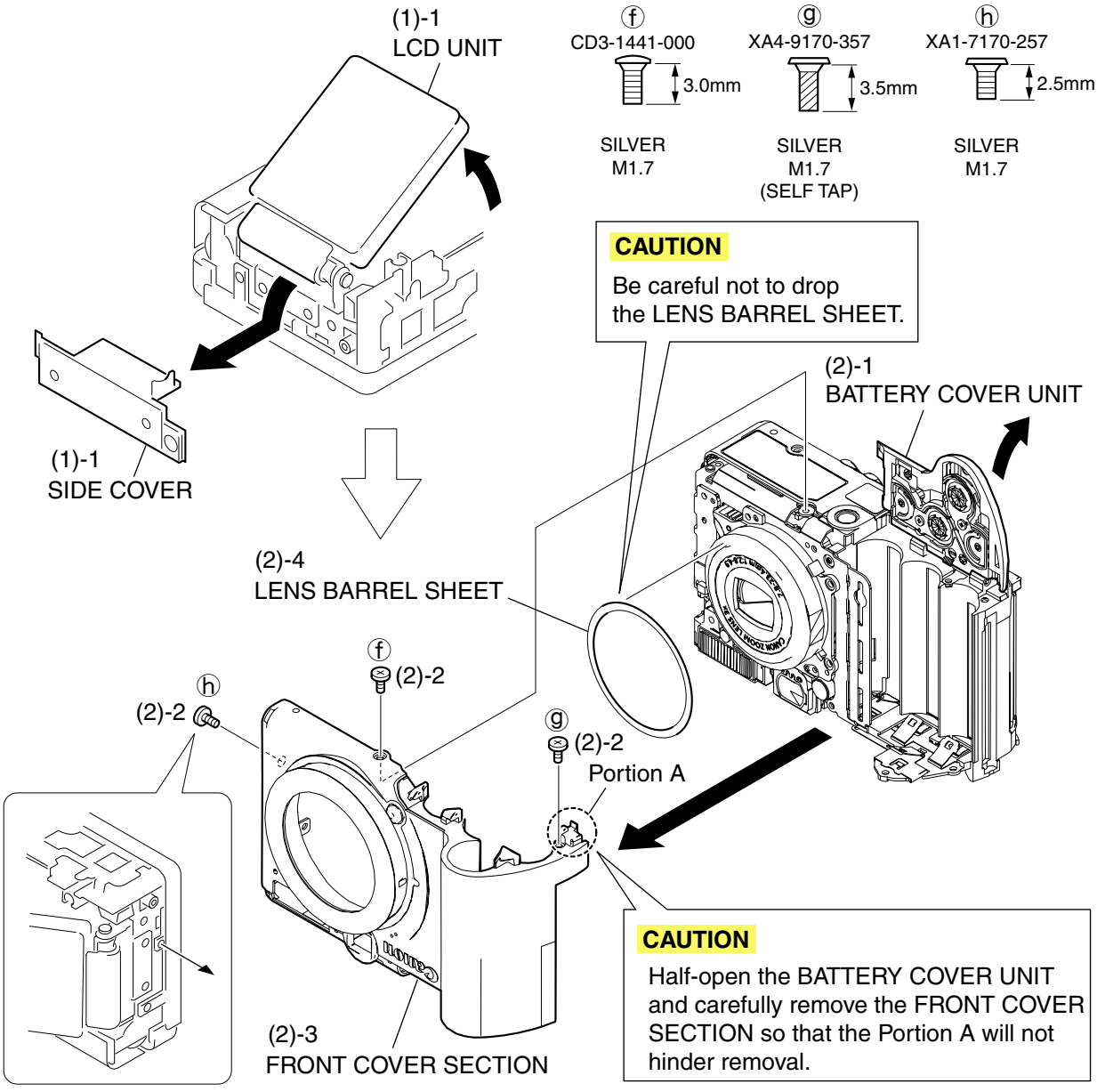


Fig. 6 SIDE COVER, FRONT COVER SECTION, LENS BARREL SHEET

2.4 SIDE COVER, FRONT COVER SECTION, LENS BARREL SHEET

(1) SIDE COVER

1. Open the LCD UNIT slightly and remove the SIDE COVER.

(2) FRONT COVER SECTION, LENS BARREL SHEET

1. Open the BATTERY COVER UNIT.
2. Remove the screw of ⓕ, the screw of ⓖ, and the screw of ⓗ .
3. Remove the FRONT COVER SECTION.

CAUTION

Half-open the BATTERY COVER UNIT and carefully remove the FRONT COVER SECTION so that the portion A will not hinder removal.
Be careful not to drop the LENS BARREL SHEET.

4. Remove the LENS BARREL SHEET.

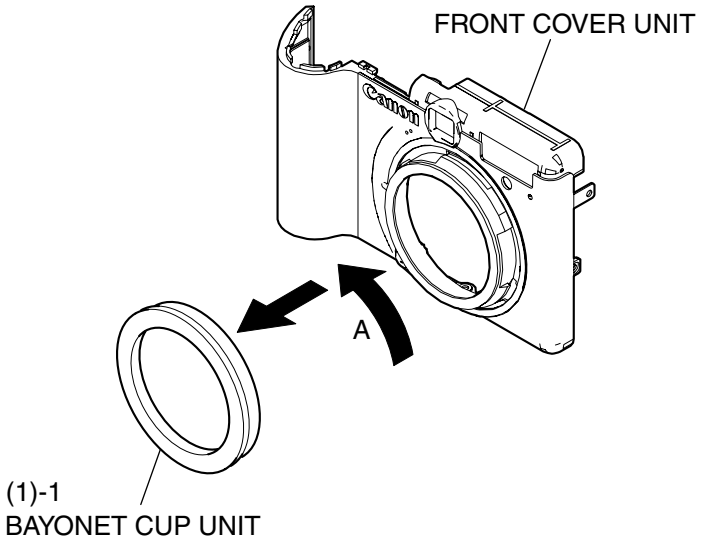


Fig. 7 BAYONET CUP UNIT, FRONT COVER UNIT

2.5 BAYONET CUP UNIT, FRONT COVER UNIT

(1) BAYONET CUP UNIT, FRONT COVER UNIT

1. Rotate the BAYONET CUP UNIT in the direction of the arrow A and separate the BAYONET CUP UNIT from the FRONT COVER UNIT.

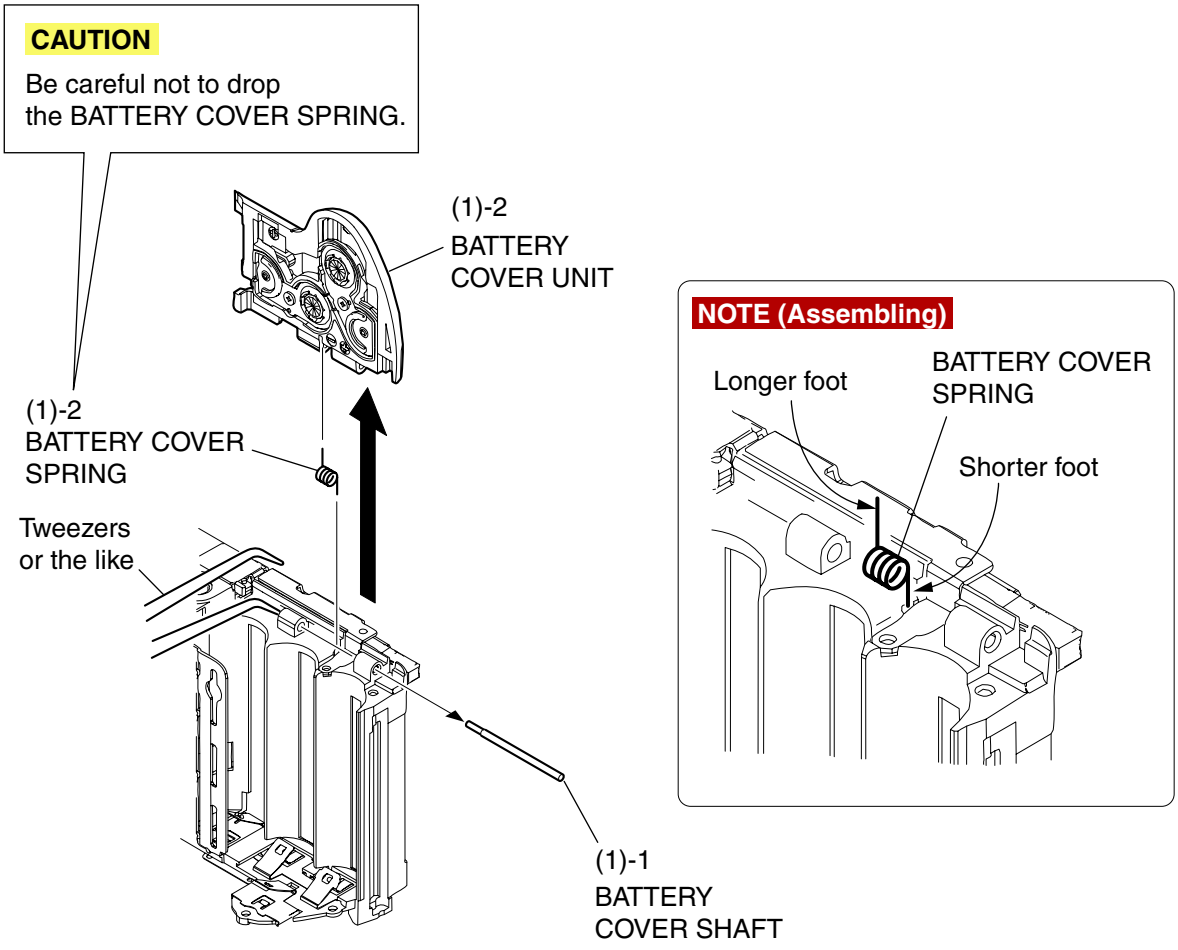


Fig. 8 BATTERY COVER SHAFT, BATTERY COVER SPRING, BATTERY COVER UNIT

2.6 BATTERY COVER SHAFT, BATTERY COVER SPRING, BATTERY COVER UNIT

(1) BATTERY COVER SHAFT, BATTERY COVER SPRING, BATTERY COVER UNIT

1. Remove the BATTERY COVER SHAFT by pushing the BATTERY COVER SHAFT with a tweezers or the like.

CAUTION

Be careful not to drop the BATTERY COVER SPRING.

2. Remove the BATTERY COVER UNIT and the BATTERY COVER SPRING.

NOTE (Assembling)

Mount the BATTERY COVER SPRING on the MAIN BODY with the longer foot up.
(The foot has a bent-processed part on the top as the mark.)

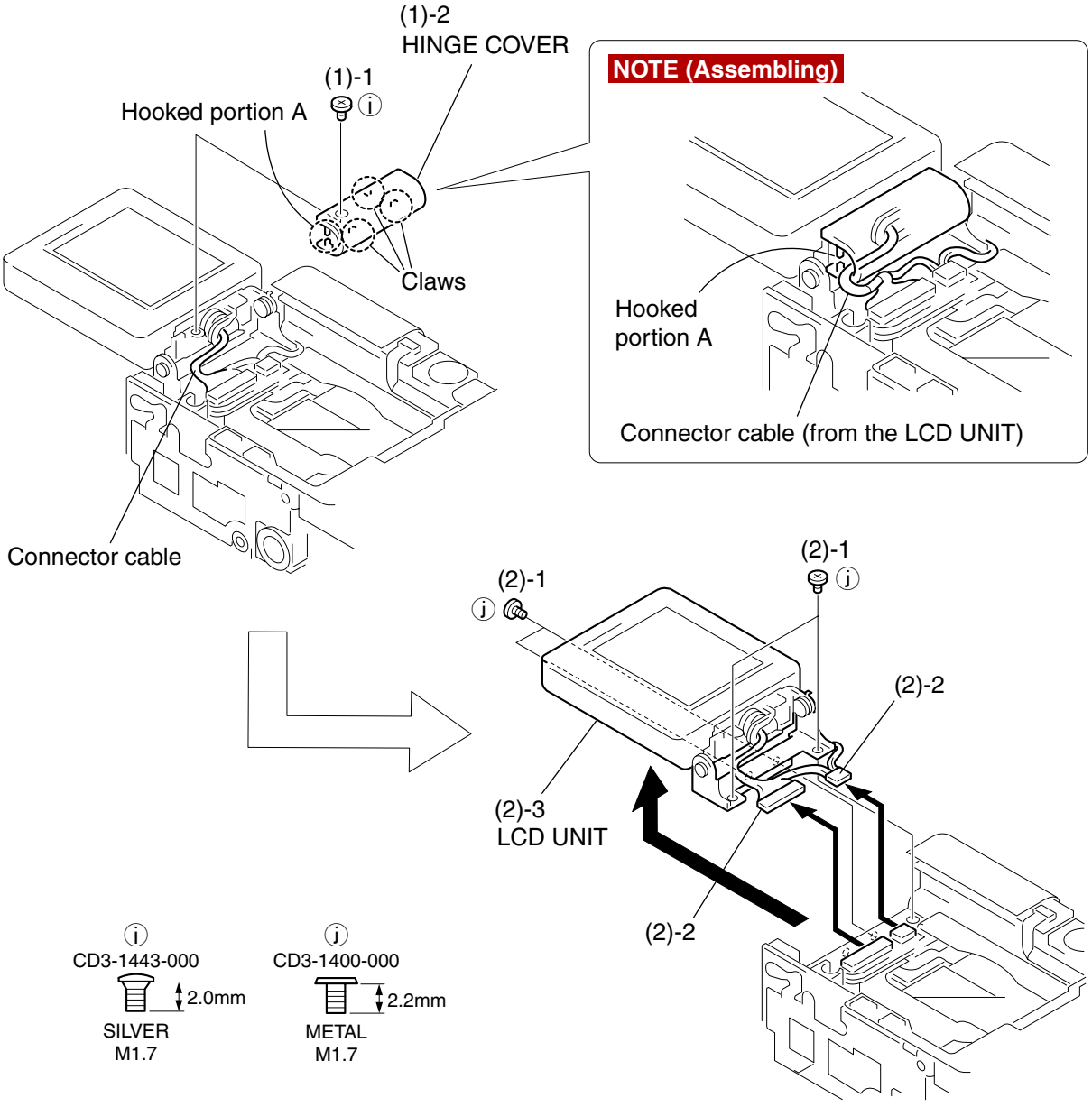


Fig. 9 HINGE COVER, LCD UNIT

2.7 HINGE COVER, LCD UNIT

(1) HINGE COVER

1. Remove the screw of ⓘ.
2. Disengage the three claws, then remove the connector cable from the hooked portion A and remove the HINGE COVER.

(2) LCD UNIT

1. Remove the four screws of ⓙ.
2. Remove the two connector cables.
3. Remove the LCD UNIT.

NOTE (Assembling)

Hitch the connector cable to the hooked portion A and route the cable as shown in the figure.

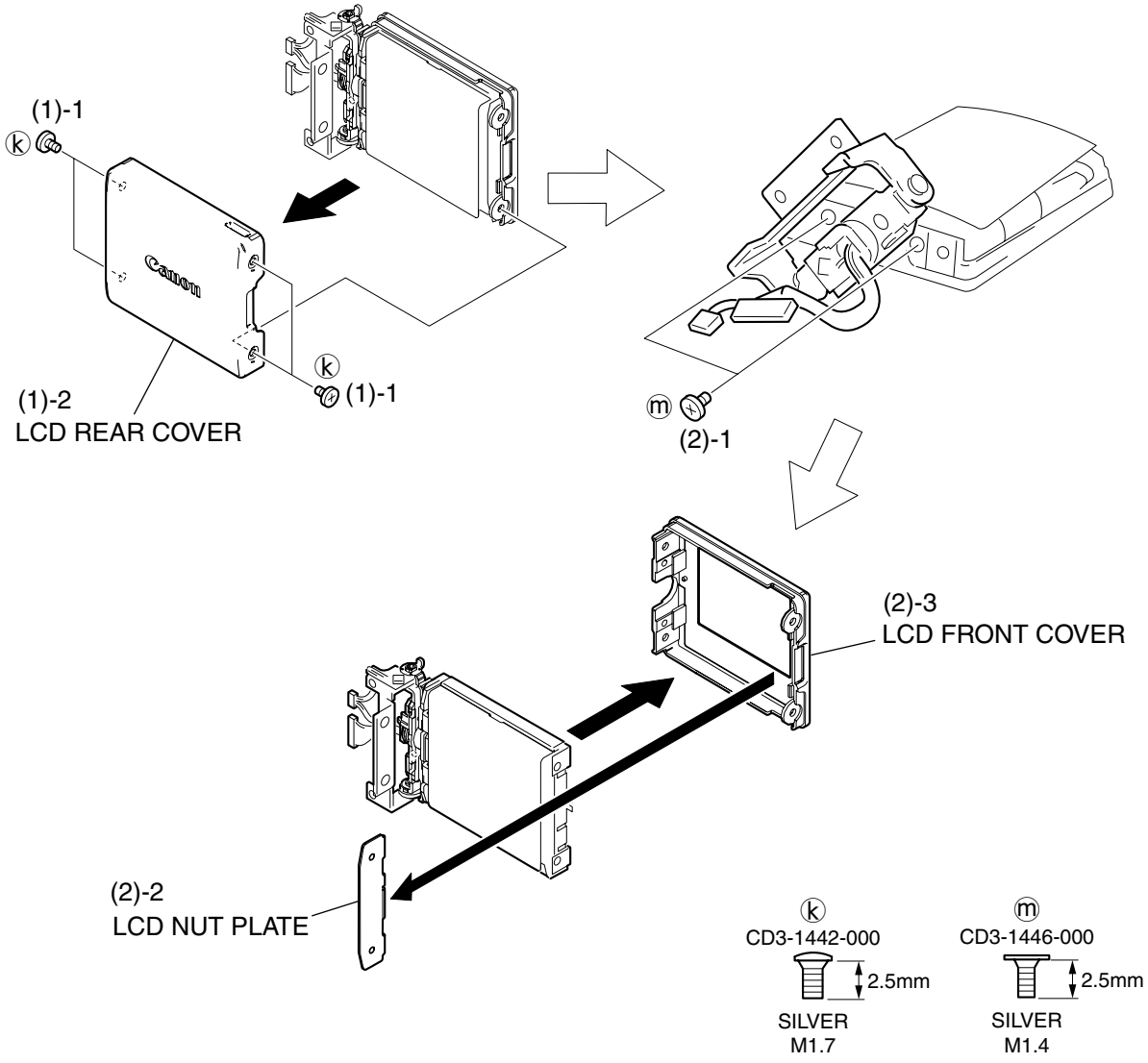


Fig. 10 LCD REAR COVER, LCD FRONT COVER

2.8 LCD REAR COVER, LCD FRONT COVER

(1) LCD REAR COVER

1. Remove the four screws of ⓚ.
2. Remove the LCD REAR COVER.

(2) LCD FRONT COVER

1. Rotate the HINGE as shown in the figure and remove the two screws of ⓜ.
2. Remove the LCD NUT PLATE.
3. Remove the LCD FRONT COVER.

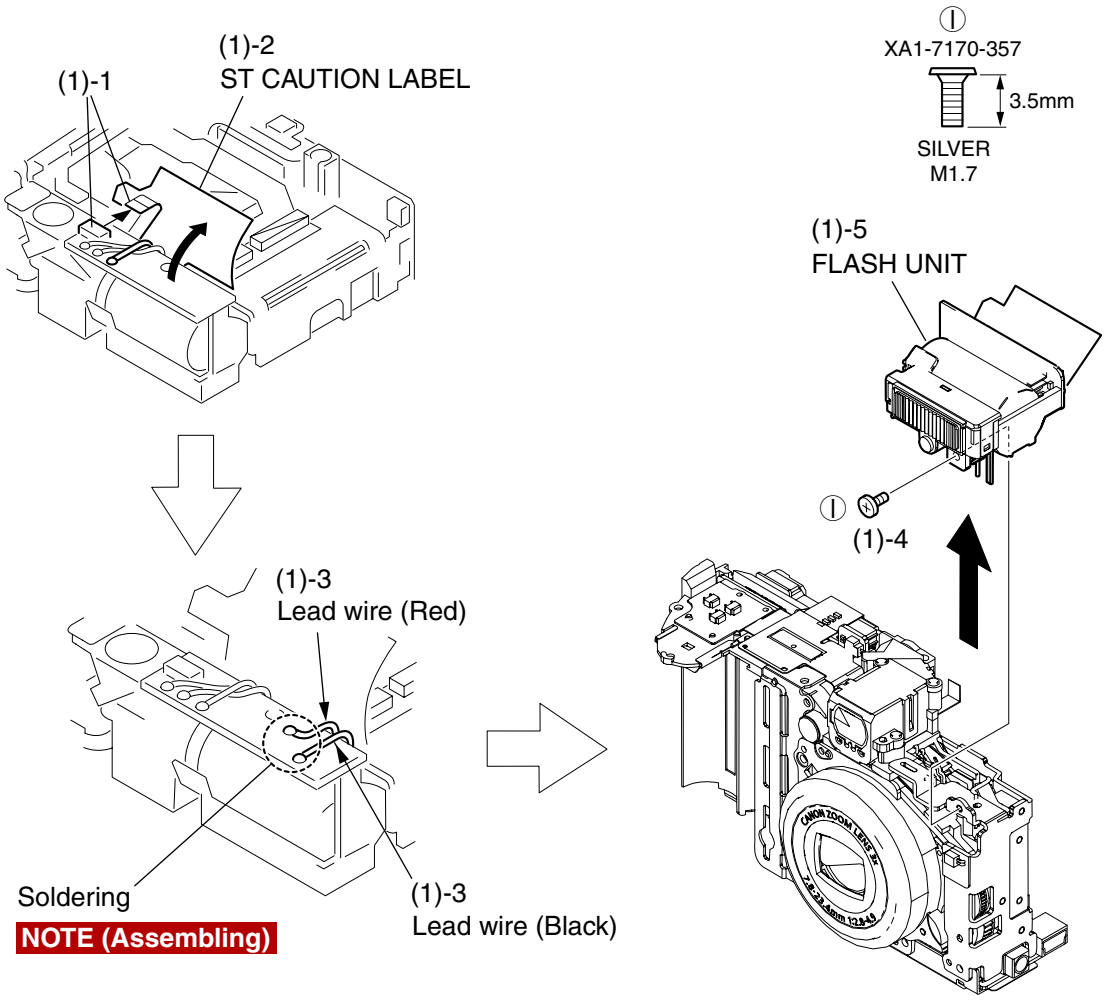


Fig. 11 FLASH UNIT

2.9 FLASH UNIT

(1) FLASH UNIT

1. Disconnect the connector.
2. Peel back the ST CAUTION LABEL.
3. Remove the soldering in two places, then remove the two lead wires (red and black).

NOTE (Assembling)

Apply the DIA BOND 1663G after soldering.

4. Remove the screw of Ⓘ.
5. Remove the FLASH UNIT.

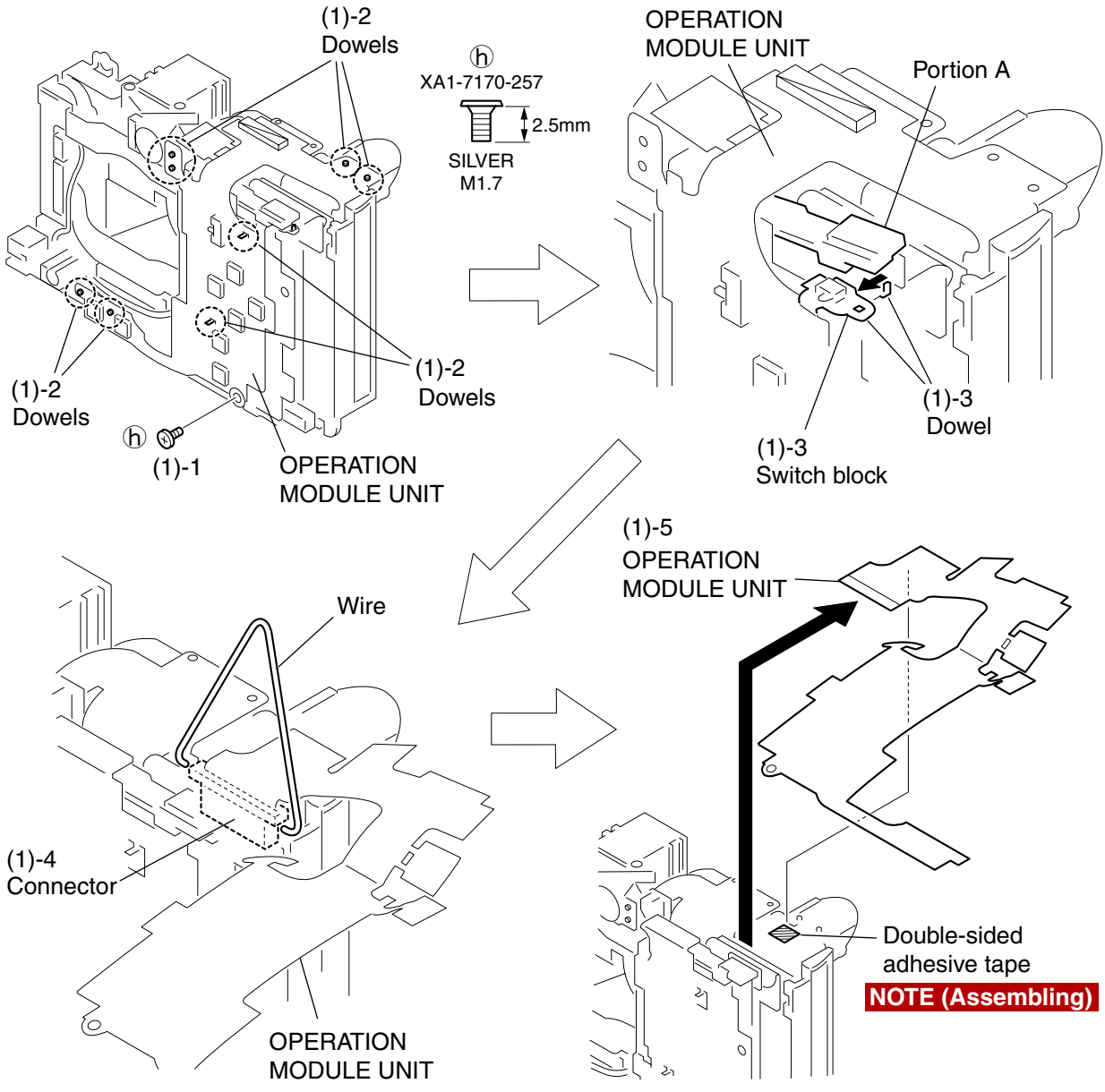


Fig. 12 OPERATION MODULE UNIT

2.10 OPERATION MODULE UNIT

(1) OPERATION MODULE UNIT

1. Remove the screw of ⓗ.
2. Disengage the eight dowels.
3. Slightly move the portion A upward and disengage the dowel, then pull the switch block out of the MAIN BODY.
4. Hook the bent wire to the both sides of the connector to release the lock as shown in the figure.
5. Remove the OPERAION MODULE UNIT.

NOTE (Assembling)

Secure the top portion with the double-sided adhesive tape (6mm x 6mm)

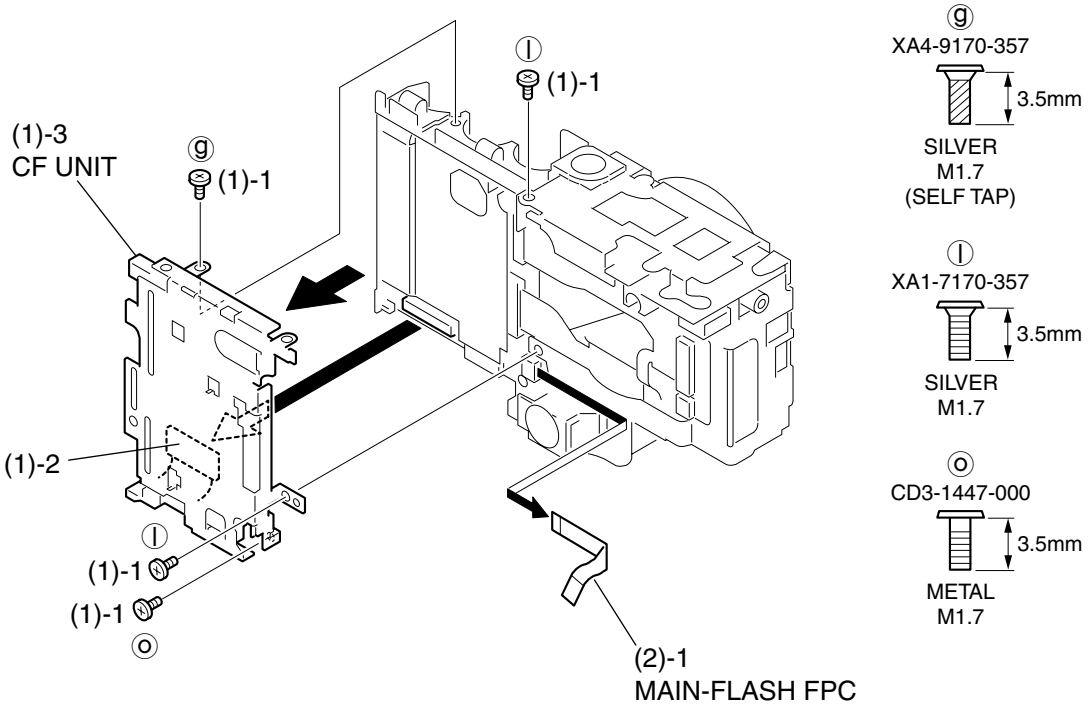


Fig. 13 CF UNIT, MAIN-FLASH FPC

2.11 CF UNIT, MAIN-FLASH FPC

(1) CF UNIT

1. Remove the screw of ⓖ, the two screws of ⓘ, and the screw of ⓞ .
2. Disconnect the connector.
3. Remove the CF UNIT.

(2) MAIN-FLASH FPC

1. Remove the MAIN FLASH FPC.

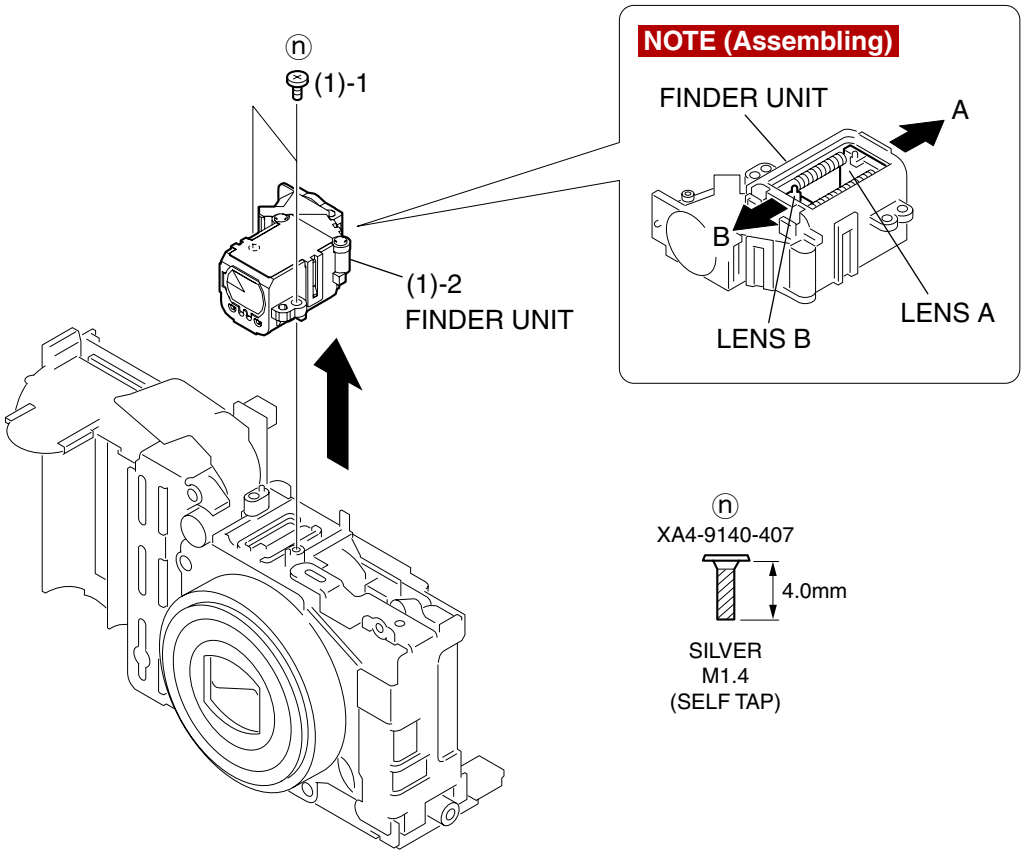


Fig. 14 FLASH UNIT

2.12 FLASH UNIT

(1) FINDER UNIT

1. Remove the two screws of ⓝ.
2. Remove the FINDER UNIT.

NOTE (Assembling)

Confirm that the LENS A is pushed in the very end of the direction A and LENS B is pushed in the very end of the direction B as shown in figure, and install the FINDER UNIT in the barrel that has been moved in the retracted position.

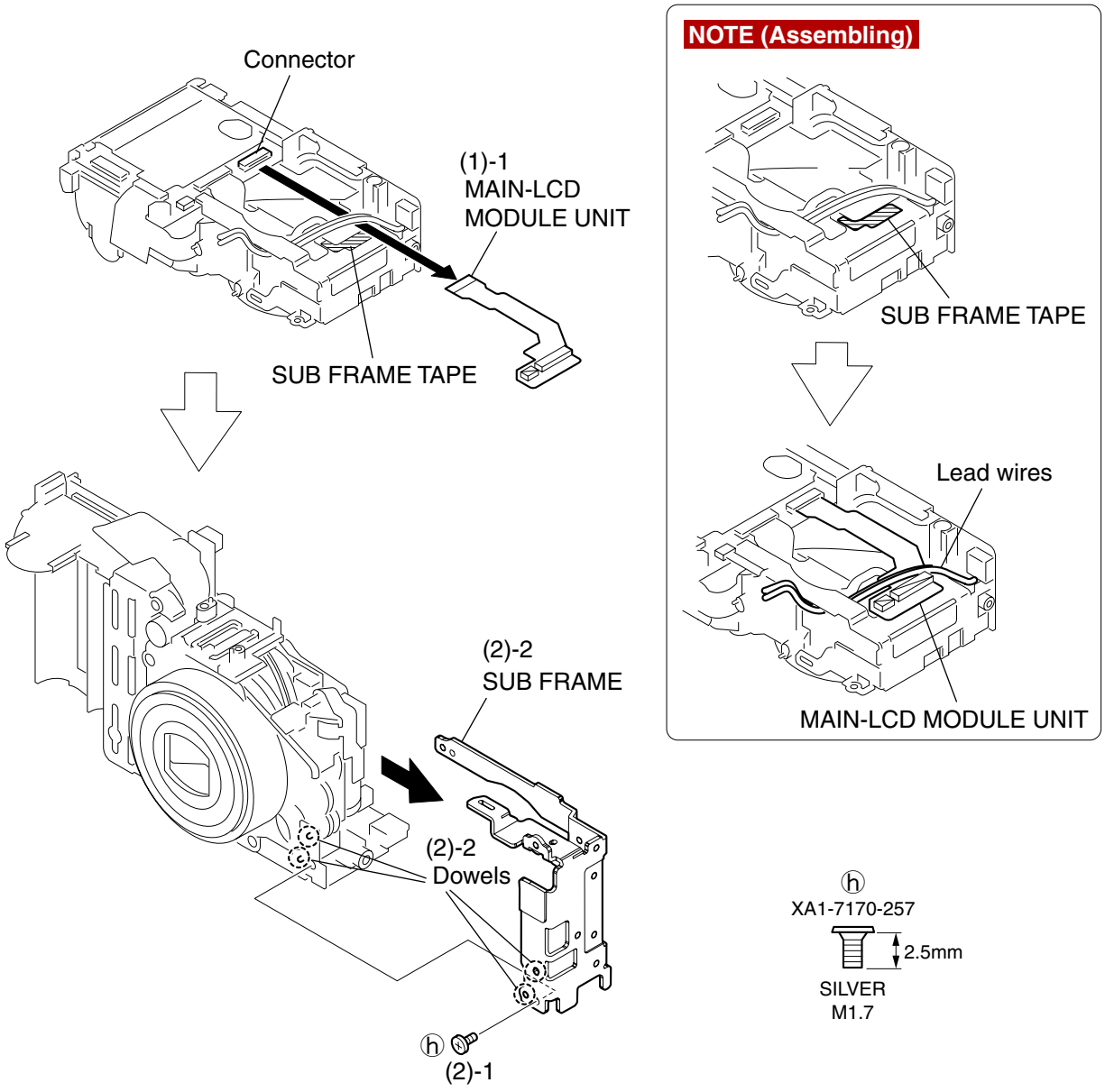


Fig. 15 MAIN-LCD MODULE UNIT, SUB FRAME

2.13 MAIN-LCD MODULE UNIT, SUB FRAME

(1) MAIN-LCD MODULE UNIT

1. Remove the MAIN-LCD MODULE UNIT by disconnecting the connector and by peeling off the adhesion part from the SUB FRAME TAPE.

NOTE (Assembling)

Attach the SUB FRAME TAPE to the position as shown in the figure, and install the MAIN-LCD MOUDULE UNIT by setting it under the two lead wires.

(2) SUB FRAME

1. Remove the screw of ⓗ.
2. Disengage the two dowels and remove the SUB FRAME.

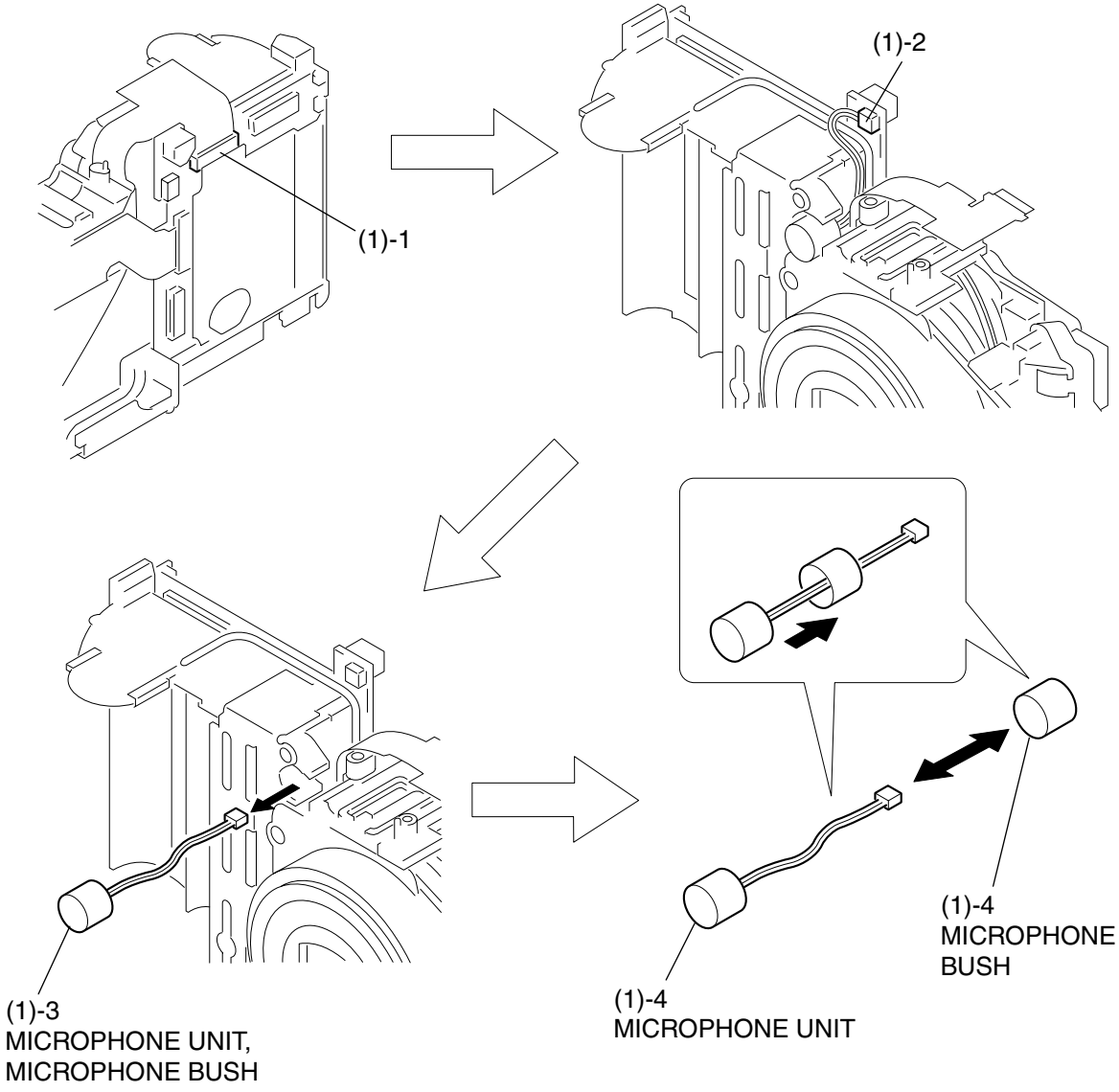


Fig. 16 MICRPHONE UNIT, MICROPHONE BUSH

2.14 MICRPHONE UNIT, MICROPHONE BUSH

(1) MICRPHONE UNIT, MICROPHONE BUSH

1. Disconnect the connector.
2. Disconnect the connector.
3. Remove the MICORPHONE UNIT and MICROPHONE BUSH together as an assembled unit.
4. Separate the MICROPHONE BUSH from the MICROPHONE UNIT.

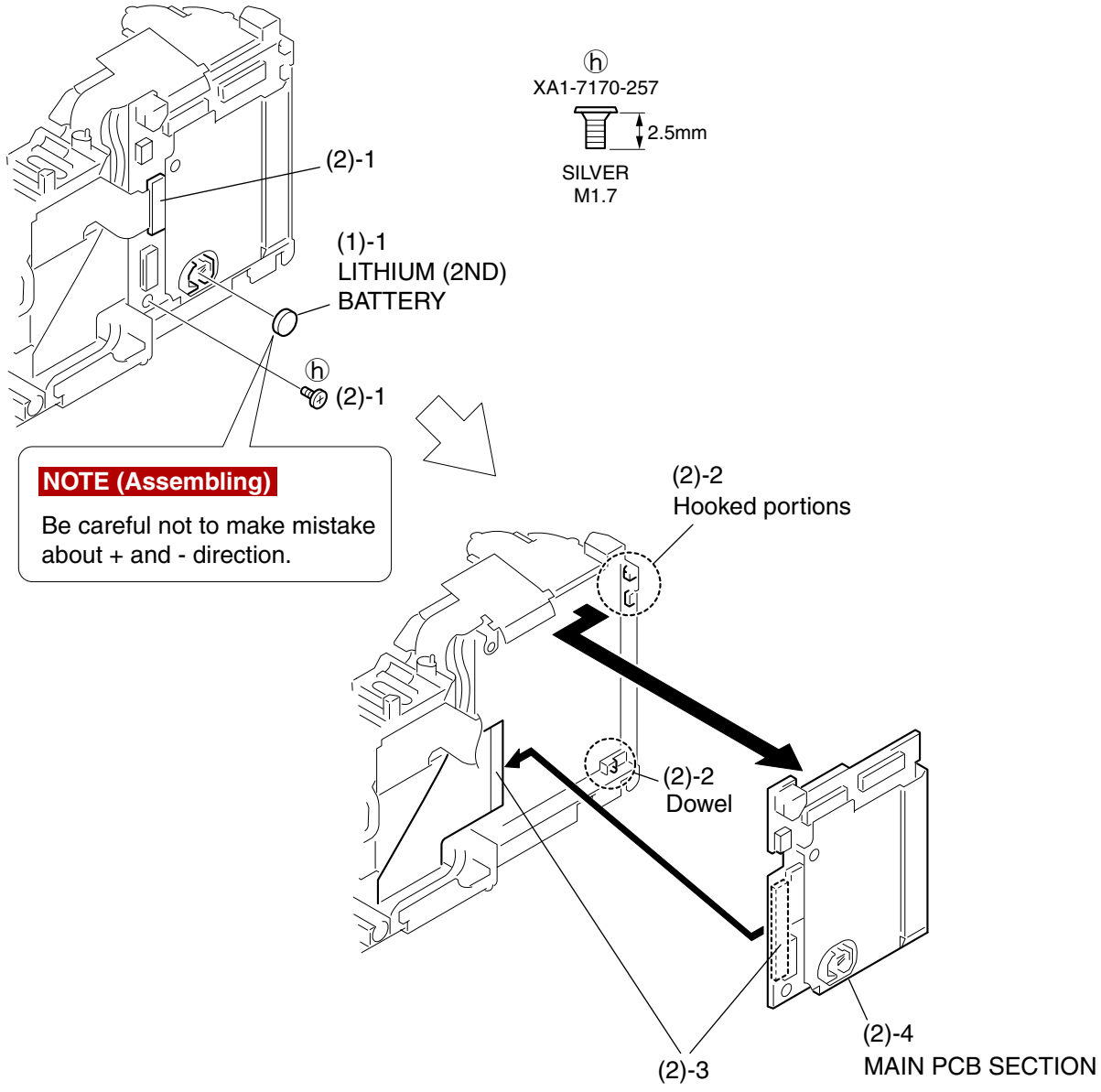


Fig. 17 LITHIUM (2ND) BATTERY, MAIN PCB SECTION

2.15 LITHIUM (2ND) BATTERY, MAIN PCB SECTION

(1) LITHIUM (2ND) BATTERY

1. Remove the LITHIUM (2ND) BATTERY.

NOTE (Assembling)

Be careful not to make mistake about + and - direction.

(2) MAIN PCB SECTION

1. Disconnect the connector and remove the screw of ⓗ.
2. Disengage the dowel and the two hooked portions.
3. Disconnect the connector.
4. Remove the MAIN PCB SECTION.

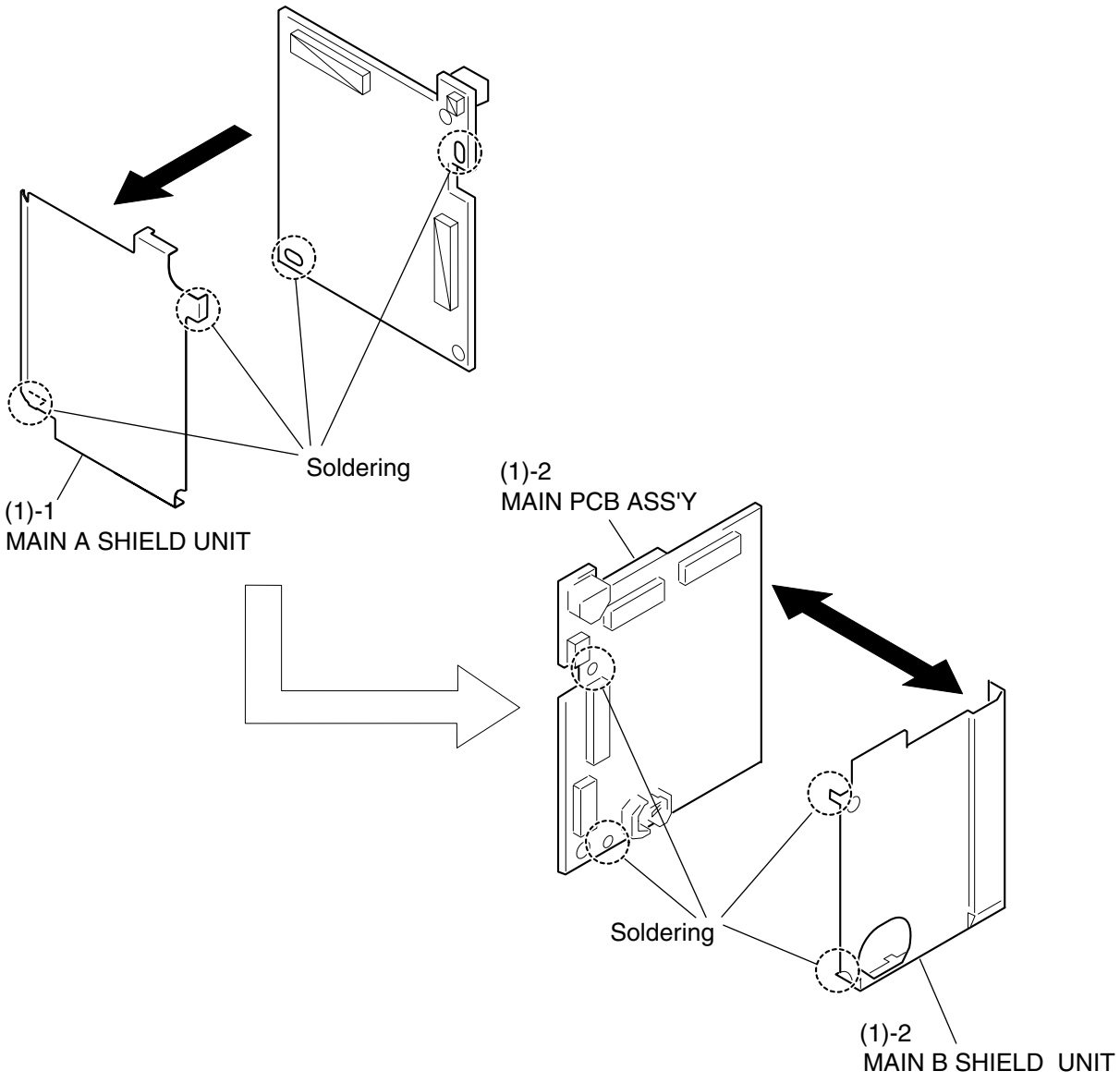


Fig. 18 MAIN A SHIELD UNIT, MAIN B SHIELD UNIT, MAIN PCB ASS'Y

2.16 MAIN A SHIELD UNIT, MAIN B SHIELD UNIT, MAIN PCB ASS'Y

(1) MAIN A SHIELD UNIT, MAIN B SHIELD UNIT, MAIN PCB ASS'Y

1. Remove the soldering in two places and remove the MAIN A SHIELD UNIT.
2. Remove the soldering in two places and separate the MAIN B SHIELD UNIT from the MAIN PCB ASS'Y.

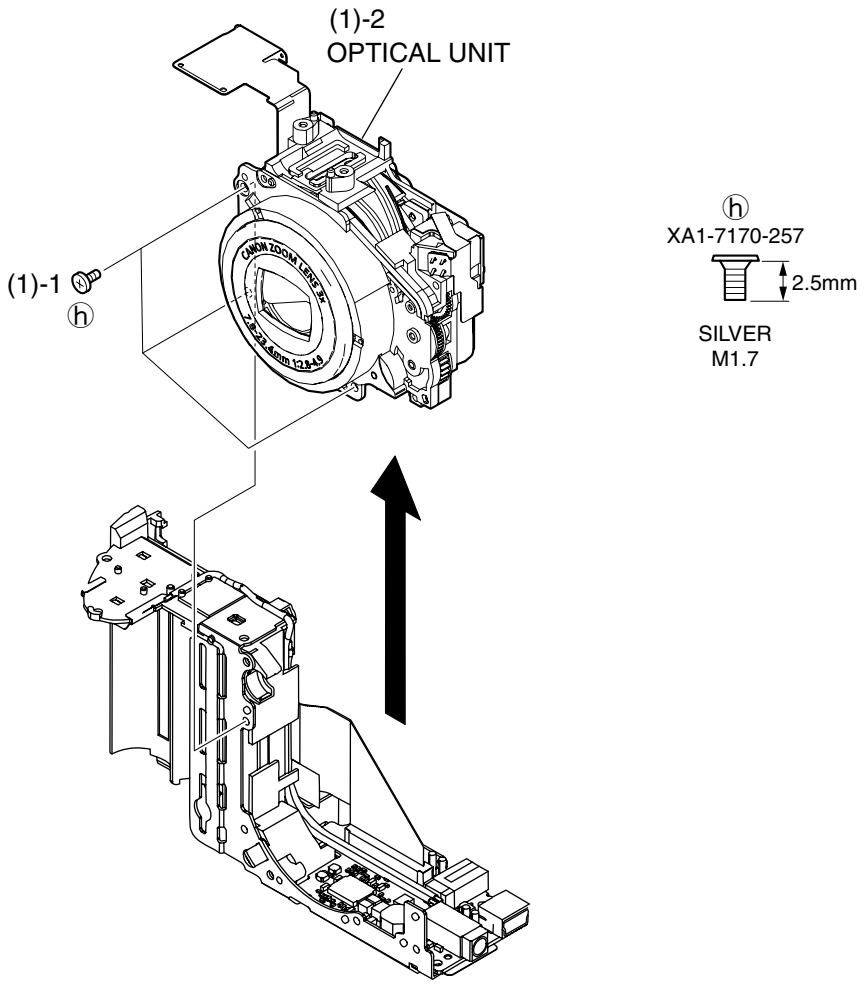


Fig. 19 OPTICAL UNIT

2.17 OPTICAL UNIT

(1) OPTICAL UNIT

1. Remove the three screws of ⓗ.
2. Remove the OPTICAL UNIT.

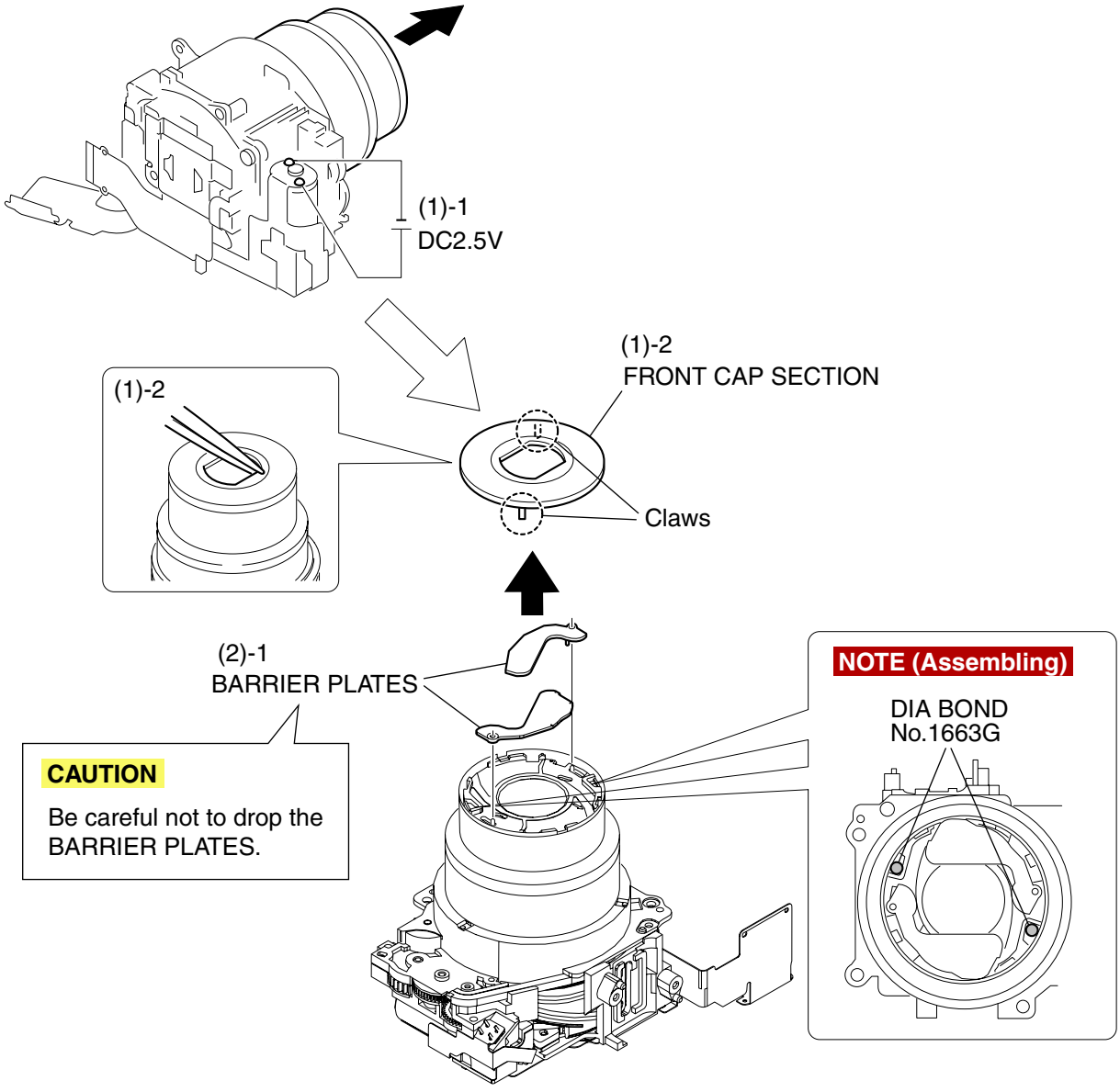


Fig. 20 FRONT CAP SECTION, BARRIER PLATE

2.18 FRONT CAP SECTION, BARRIER PLATE

(1) FRONT CAP SECTION

1. Apply the voltage (DC 2.5V) across the motor terminal to drive the motor until the motor stops and the barrel fully comes out.
2. Insert a tweezers inside of the FRONT CAP SECTION as shown in the figure to disengage the two claws and two portions adhered with DIA BOND and remove the FRONT CAP SECTION.

CAUTION

Be careful not to drop the BARRIER PLATES.

NOTE (Assembling)

Apply the DIA BOND No. 1663G to the positions as shown in the figure.

(2) BARRIER PLATE

1. Remove the two BARRIER PLATES.

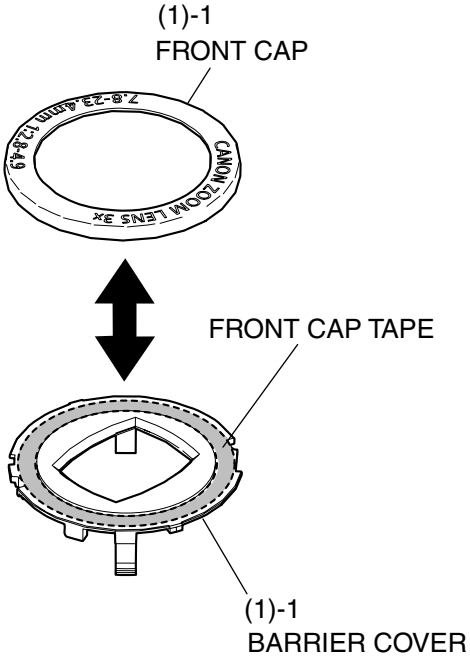


Fig. 21 FRONT CAP, BARRIER COVER

2.19 FRONT CAP, BARRIER COVER

(1) FRONT CAP, BARRIER COVER

1. Separate the FRONT CAP from the BARRIER COVER that are attached each other by the FRONT CAP TAPE.

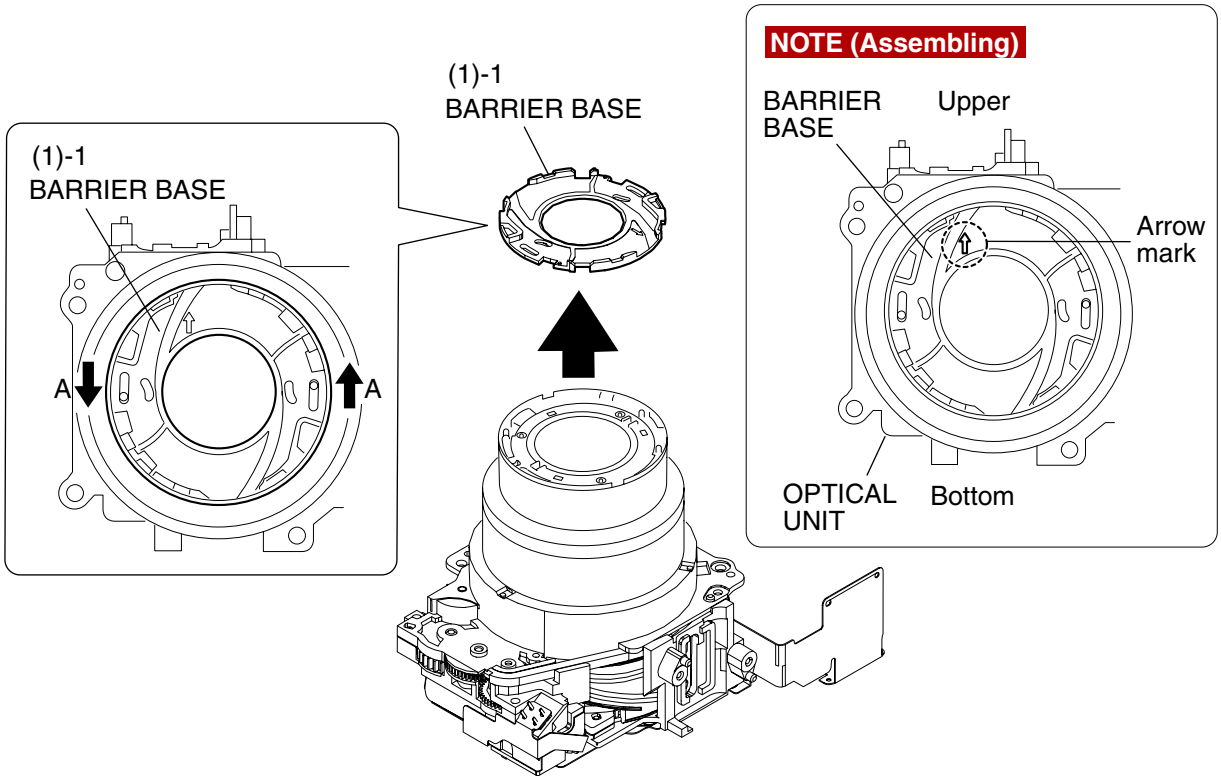


Fig. 22 BARRIER BASE

2.20 BARRIER BASE

(1) BARRIER BASE

1. Rotate the BARRIER BASE in the direction of the arrow A and remove it.

NOTE (Assembling)

Install the BARRIER BASE to the OPTICAL UNIT while aligning the arrow mark on the BARRIER BASE with the upper part of the OPTICAL UNIT.

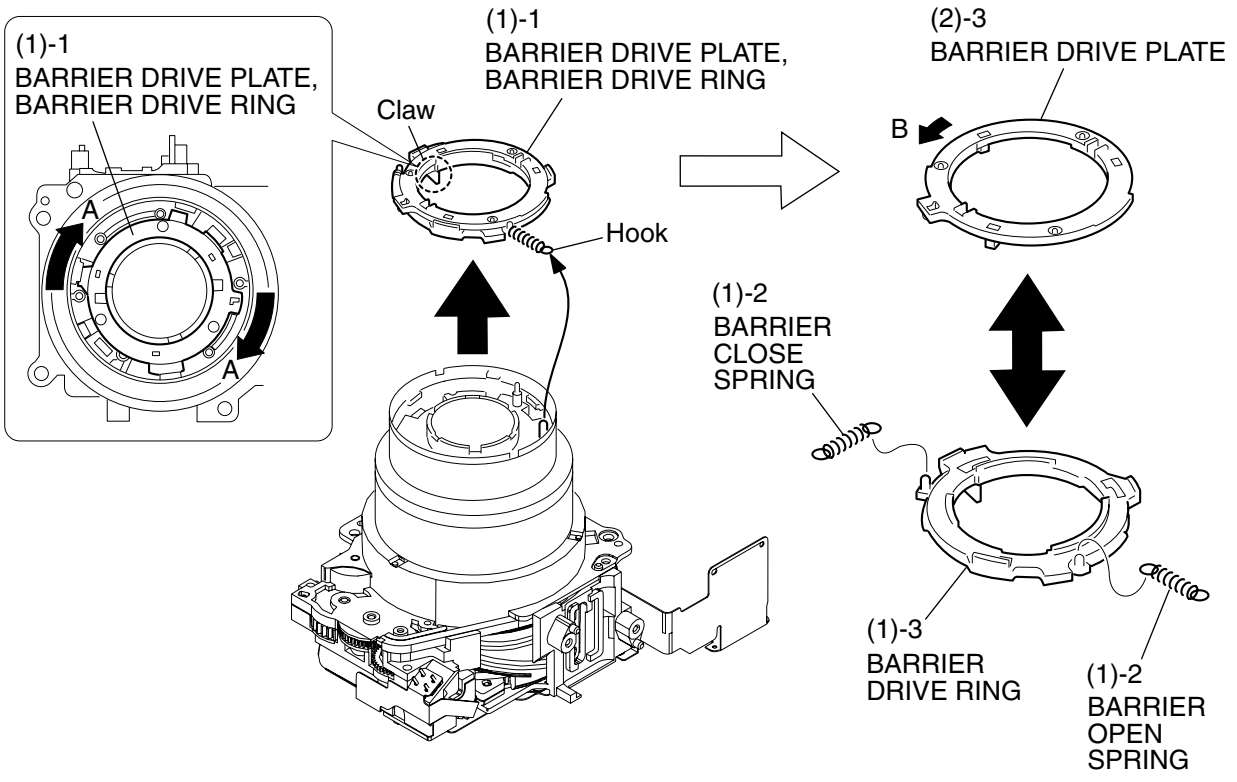


Fig. 23 BARRIER DRIVE PLATE, BARRIER DRIVE RING

2.21 BARRIER DRIVE PLATE, BARRIER DRIVE RING

(1) BARRIER DRIVE PLATE, BARRIER DRIVE RING

1. Remove the BARRIER DRIVE PLATE and the BARRIER DRIVE RING as an assembled unit by rotating them in the direction of the arrow A and by disengaging the hook and the claw.
2. Remove the BARRIER OPEN SPRING and the BARRIER CLOSE SPRING.
3. Rotate the BARRIER DRIVE PLATE in the direction of the arrow B, then separate it from the BARRIER DRIVE RING.

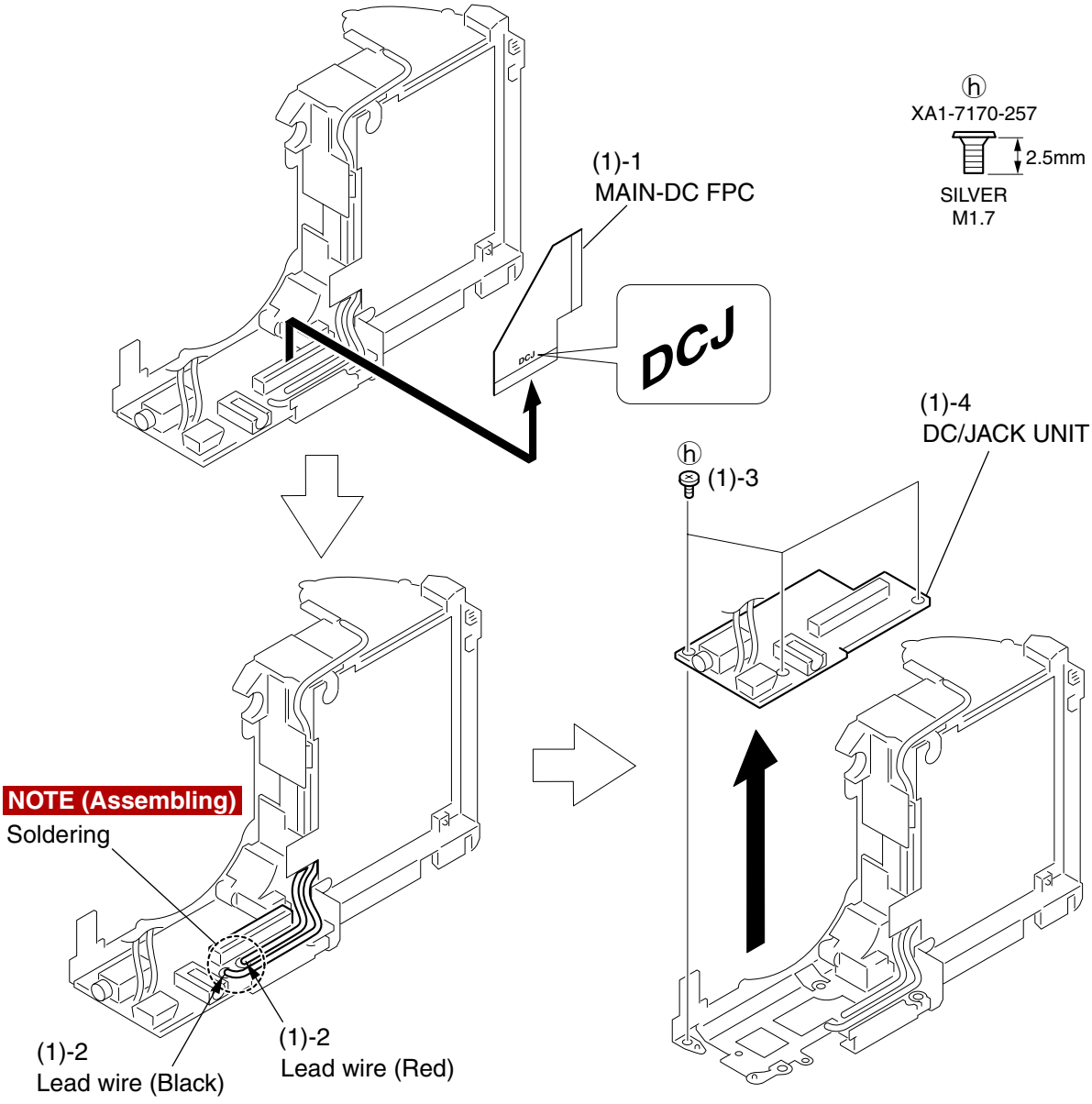


Fig. 24 MAIN-DC FPC, DC/JACK UNIT

2.22 MAIN-DC FPC, DC/JACK UNIT

(1) MAIN-DC FPC, DC/JACK UNIT

1. Remove the MAIN-DC FPC.
2. Remove the soldering in two places, and remove the two lead wires (red and black) that are from the BATTERY BOX UNIT.

NOTE (Assembling)

Apply the DIA BOND 1663G after soldering.

3. Remove the three screws of ⓗ.
4. Remove the DC/JACK UNIT.

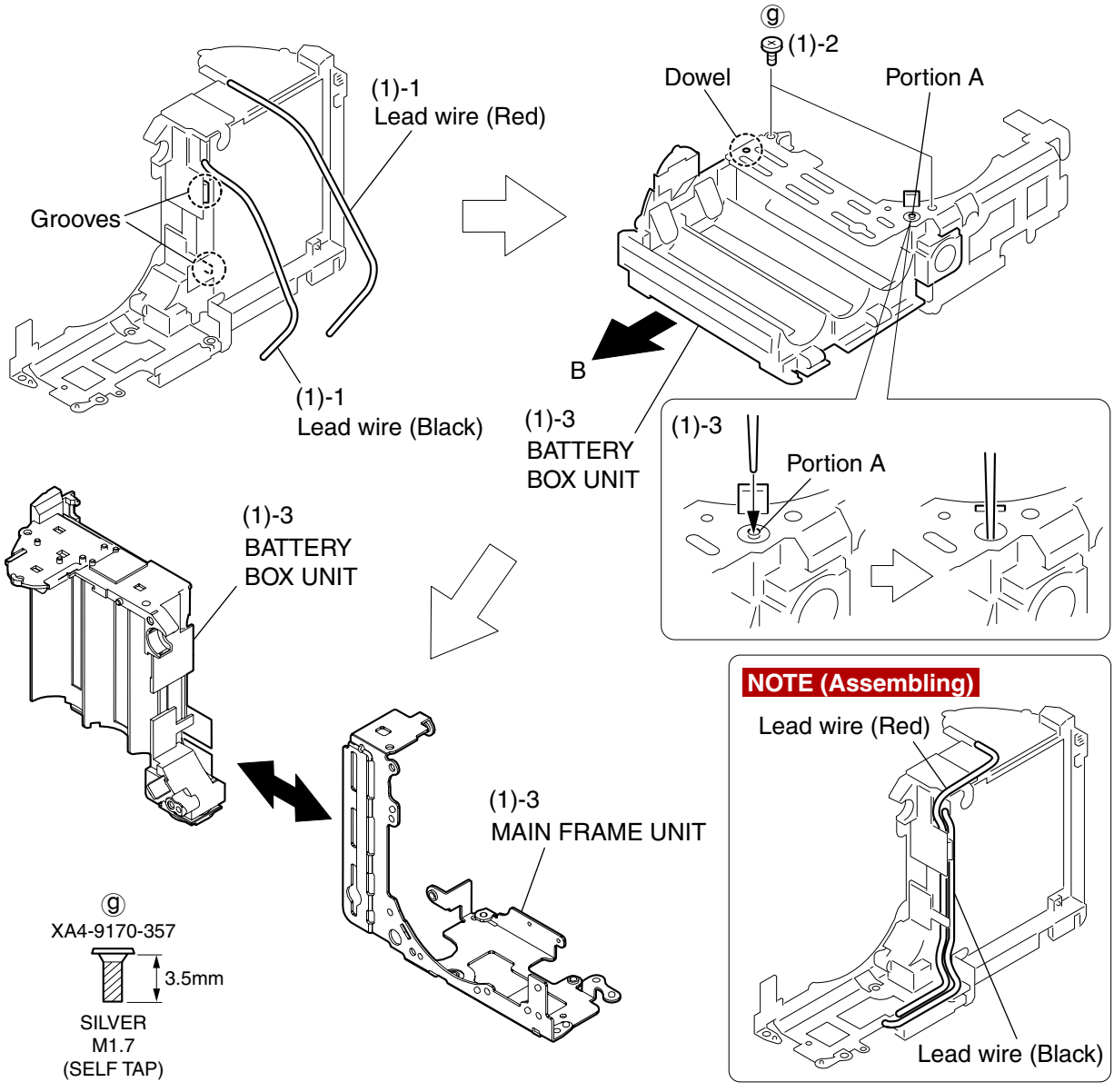


Fig. 25 BATTERY BOX UNIT, MAIN FRAME UNIT

2.23 BATTERY BOX UNIT, MAIN FRAME UNIT

(1) BATTERY BOX UNIT, MAIN FRAME UNIT

1. Remove the two lead wires (red and black) from the two grooves.

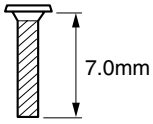
NOTE (Assembling)

Route the lead wires (red and black) as shown in the figure.

2. Remove the two screws of ⓖ.
3. Disengage the dowel, while pushing the portion A downward with a stick or the like. Then separate the MAIN FRAME UNIT by sliding the BATTERY BOX UNIT in the direction of the arrow B.

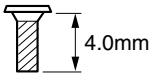
2.24 Screw List

ⓐ
XA4-9170-707



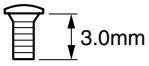
SILVER
M1.7
(SELF TAP)

ⓑ
XA4-9170-407



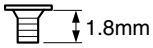
SILVER
M1.7
(SELF TAP)

ⓒ
CD3-1440-000



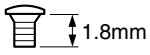
DARK SILVER
M1.7

ⓓ
CD3-1445-000



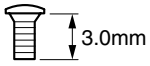
DARK SILVER
M1.7

ⓔ
CD3-1444-000



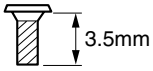
DARK SILVER
M1.7

ⓕ
CD3-1441-000



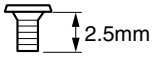
SILVER
M1.7

ⓖ
XA4-9170-357



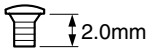
SILVER
M1.7
(SELF TAP)

ⓗ
XA1-7170-257



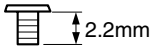
SILVER
M1.7

ⓘ
CD3-1443-000



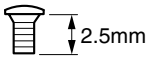
SILVER
M1.7

ⓙ
CD3-1400-000



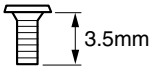
METAL
M1.7

ⓚ
CD3-1442-000



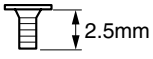
SILVER
M1.7

ⓛ
XA1-7170-357



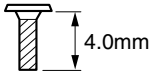
SILVER
M1.7

ⓜ
CD3-1446-000



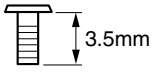
SILVER
M1.4

ⓝ
XA4-9140-407



SILVER
M1.4
(SELF TAP)

ⓞ
CD3-1447-000



METAL
M1.7

3. Adjustments

3.1 Replacement Parts and Adjustment Items

PowerShot A80 requires electrical adjustments when certain parts are replaced.
The table below indicates the adjustments required for the respective part replacements.
For all other parts not listed below, no electrical adjustments are necessary after replacement.

Adjustment Items / Replacement Part	CCD Adjustment	Optical Unit Adjustment	Imaging Process Adjustment	Color Adjustment	Pixel Dot Adjustment	LCD Adjustment	Flash Adjustment
BATTERY BOX UNIT							
DC/JACK UNIT							
OPTICAL UNIT	● #1	● #2	● #3	● #4	● #5		● #6
FLASH UNIT							●
MAIN PCB ASS'Y	○	○	○	○	○	○	○
LCD UNIT						●	

● : Adjustment is necessary after replacement.
○ : Adjustment is necessary after replacement.
(Adjustment is not necessary, only if the adjustment data has been saved and then transferred after the part is replaced.)
Blank : Adjustment is unnecessary.

*OPTICAL UNIT is replaced, adjust certainly at the procedure as below.

#1. CCD Adjustment

#2. Optical Unit Adjustment

#3. Imaging Process Adjustment

#4. Color Adjustment

#5. Pixel Dot Adjustment

#6. Flash Adjustment

3.2 Adjustment Tools

The following tools are required for electrical adjustment.

DESCRIPTION	PARTS NO.	REMARKS
PC/AT-Compatible Machine (Windows2000 or 98 pre-installed Model, USB port)	—	Local purchase
SERVICE MANUAL (CD-ROM)	CY8-4388-031	
ADJUSTMENT SOFTWARE	—	Download
Compact Power Adapter CA-PS500	—	Enclosed in “AC Adapter Kit ACK600”
AC Cable	—	Enclosed in “AC Adapter Kit ACK600”
INTERFACE CABLE IFC-300PCU	—	(or Local purchase)
Brightness Box (light source A)	—	(Verified with EF-5000)
Color Viewer (5600° K)	DY9-2039-100	
Color Bar Chart	DY9-2002-000	
18% Gray Chart	CY4-6016-000	
Auto Focus Chart	—	Attached to “SERVICE MANUAL (CD-ROM)” 2 types *2
W-10 Filter *1	CY9-1556-000	
C-12 Filter	CY9-1555-000	
FL-W Filter	CY9-1557-000	
ND-2 Filter	CY9-1552-000	
ND-4 Filter	CY9-1553-000	
ND-8 Filter	CY9-1554-000	
Light-Shielding Cloth (500 × 500 or larger)	—	Local purchase
Tripod	—	Local purchase
Reference Camera	—	Merchandise
DIGITAL CAMERA SolutionDisk	—	Enclosed in Merchandise

*1 2pcs. required.
*2 The file containing “How to print out” and Chart for print-out is in the Service Manual APPENDIX.

3.3 Before Starting Electrical Adjustments

3.3.1 TWAIN Driver Installation

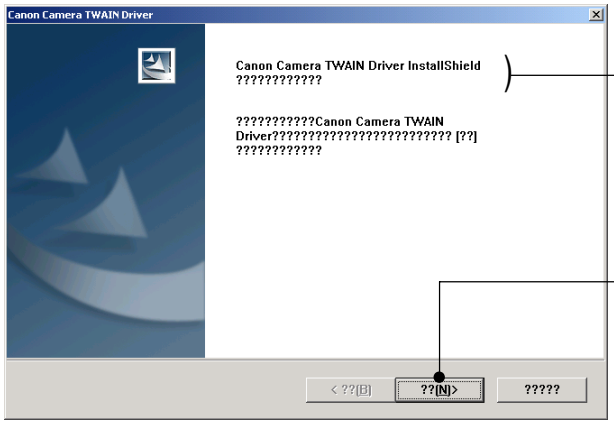
Install the USB Driver for Adjustment in the CD-ROM to PC.
(“This Adjustment Software” is impossible when the RS-232C TWAIN driver is used.)

3.3.2 Factory Mode Driver Installation

After downloading and extracting Factory Mode Driver, double-click Setup.exe
(\Factory Mode Driver\Win 2000_98\Setup.exe) to install it.

If InstallShield Wizard appears as shown in the first picture below, install the TWAIN (Factory Mode) Driver by following the instructions.

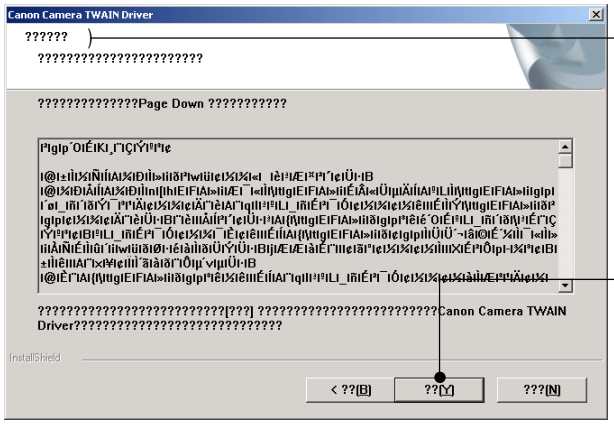
1



The InstallShield Wizard will install TWAIN Driver on your computer.

Click the “??[N]>” button.

2

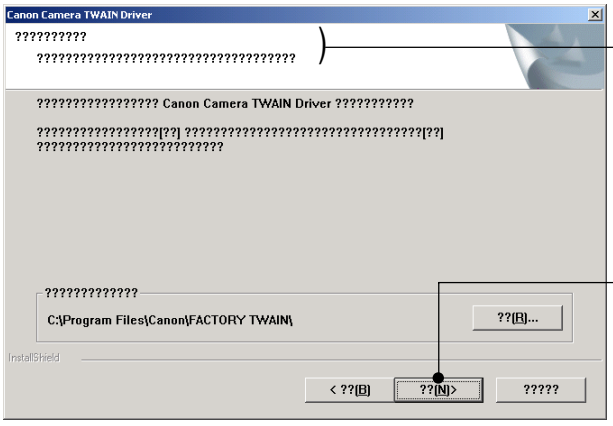


License Agreement

See the file “Service Manual/English/Ch6/License.pdf” for the contents of the License.

Click the “??[Y]” button.

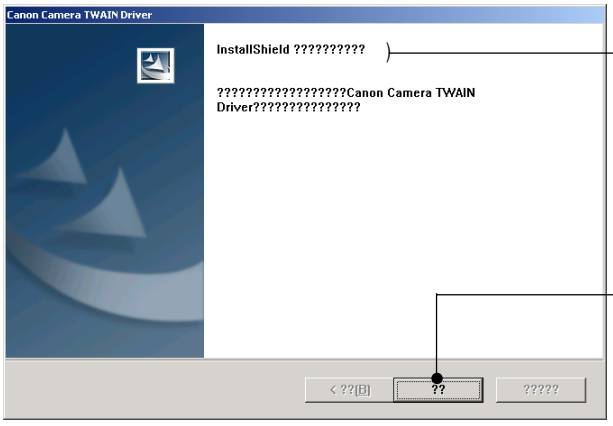
3



Choose Destination Location
Select folder where Setup will install files.

Click the "??[N]>" button.

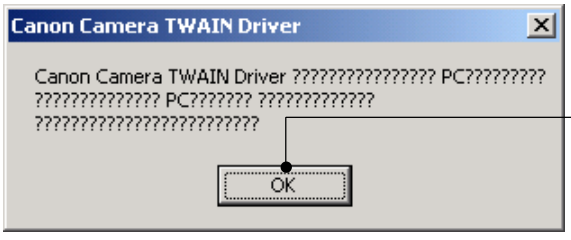
4



InstallShield Wizard Complete

Click the "??" button.

5



Click the "OK" button.

Installing TWAIN (Factory Mode) Driver is completed.

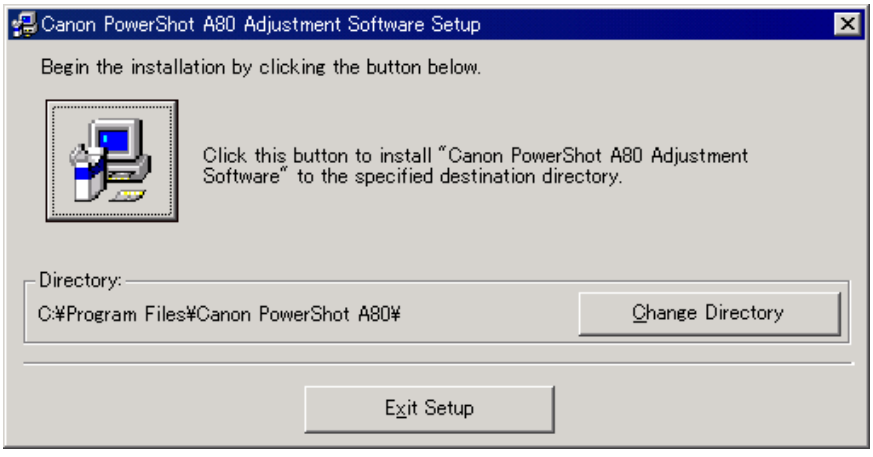
If you cannot install Factory Mode Driver in above procedure, install it in the following procedure.

1. Change the camera to Factory mode.
2. Install Wizard of new hardware starts up.
3. Select the option that directly chooses the driver's place.
4. Choose CAP_FACT.INF
   (Factory Mode Driver\Win2000_98\Win_2k98\CAP_FACT.INF).
5. Installment starts. When the Wizard finishes, the installment finishes.

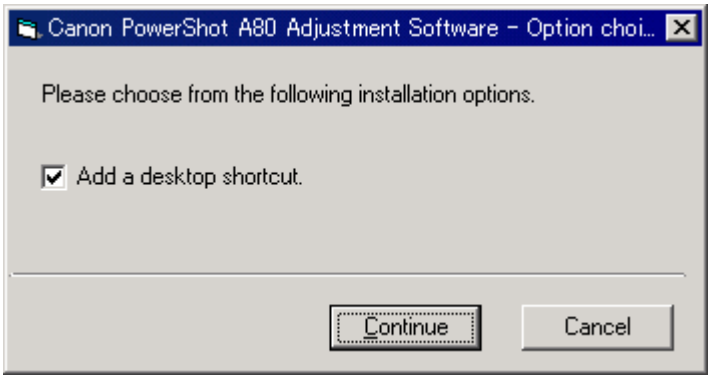
3.3.3 Adjustment Software Installation

1. After downloading and extracting Adjustment Software, double-click Setup.exe to install it.
   (Adjustment Softwares are different according to the model of camera that you are going to adjust.)
2. When the dialog box below appears, click the “OK” button.

3. When the dialog box below appears, click the  button. (Software installation will then begin.)



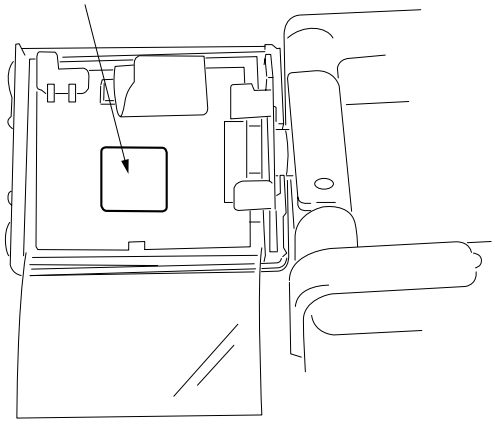
4. When the dialog box below appears, click the “Continue” button.
   (In the case that you do not add a shortcut on desktop, remove clicking from the check box.)



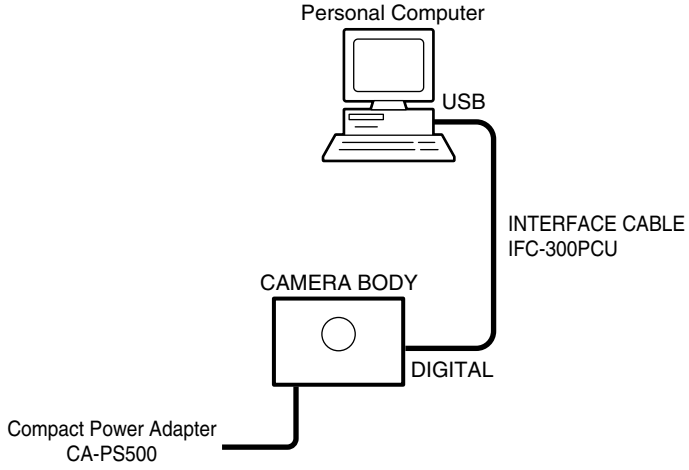
3.3.4 Preparation

Before starting up the Adjustment Software, follow the preparatory steps below:

1. Obtain all the tools necessary for the adjustment.
2. For the LCD Adjustment, jot down the data written on the PCB ASS'Y inside the LCD Unit. You will need it later.



3 Connect the Camera to the Power Source with the Compact Power Adapter CA-PS500 and AC Cable.
4. Set the Replay Mode on the camera and turn on.



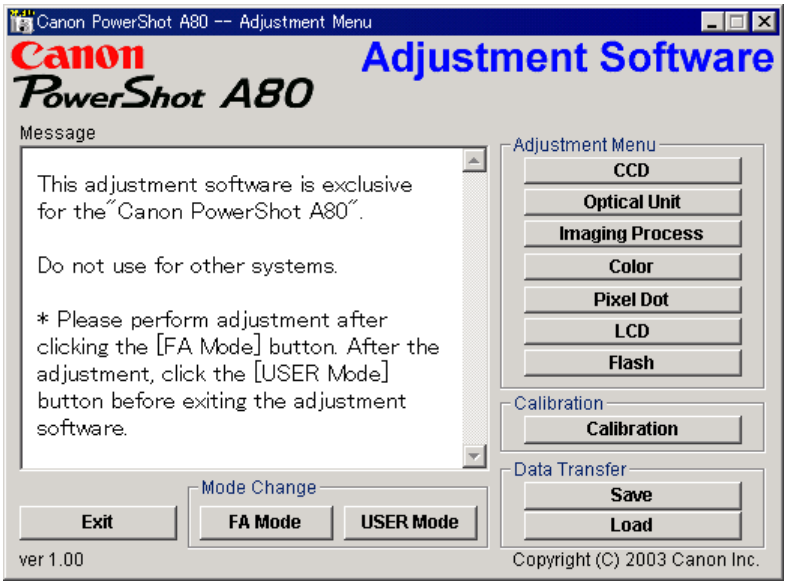
5. Connect the Camera's Digital terminal to the PC's USB Port with INTERFACE CABLE IFC-300 PCU.
   Note: Perform the preparation in the following order otherwise the camera won't work properly.

3.3.5 Starting up the Adjustment Software

After completing the preparatory steps, click Start and move the cursor to Program; then select Canon Digital Camera and click PowerShot A80 Adjustment.

3.3.6 Menu Window

When the Adjustment Software starts up, the Menu Window below will appear.



3.3.7 How to Use the Adjustment Software

■ Mode change

This camera uses normally PTP for communication with PC. Because calibration and adjustment become impossible depending on the condition of PTP, select the TWAIN mode of the PTP before starting calibration and adjustment.

- "FA Mode" button: This button is used to change the mode from the USER mode to the FA mode. (PTP to TWAIN)

* Before starting calibration and adjustment, be sure to set the FA mode.

- "USER Mode" button: This button is used to change the mode from the FA mode to the USER mode. (TWAIN to PTP)

* When calibration and adjustment are completed, be sure to change the mode to the USER mode before quitting the software.

■ Calibration/Adjustment

For starting, click the button related with calibration/adjustment.

* Whenever you use your light source for the adjustment for the first time, be sure to click the "Calibration" Button.

■ Quitting the Adjustment Software

Click the "Exit" button.

■ Saving or Loading data

- "Save" button : This button saves all adjustment data stored on the camera in text format.
- "Load" button : This button loads all adjustment data saved in text format to the camera.

■ Notes

- If the adjustment fails, a message indicating the failure will appear on each product. If this happens, do the adjustment again.
- The Adjustment Software is dedicated only to Canon Digital Camera PowerShot A80. Never use it for any other camera.
- The Windows2000 or 98 must be pre-installed on the computer that is equipped with the USB terminal.

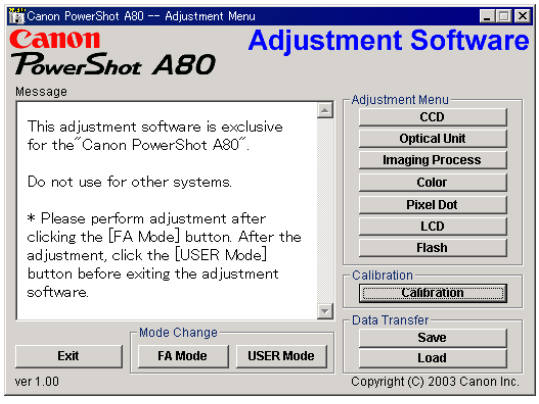
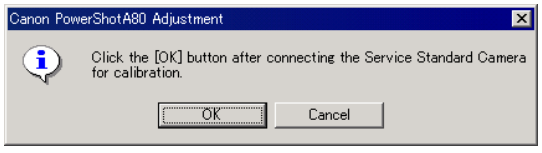
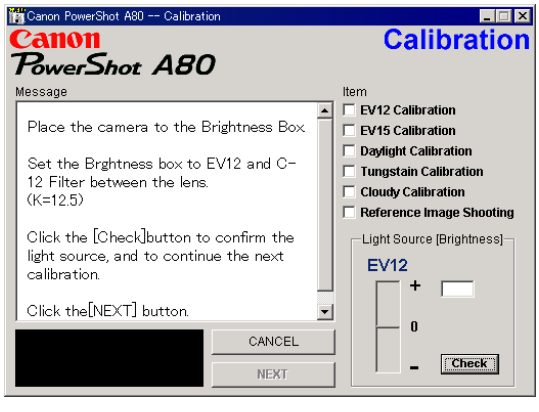
* Operations on the other Operating Systems such as Windows95, Windows XP and others are not guaranteed. (Because Windows95 does not support USB.)

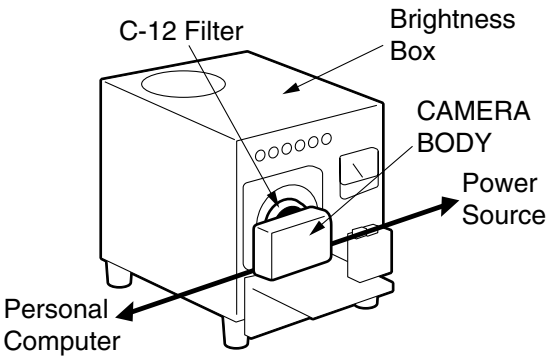
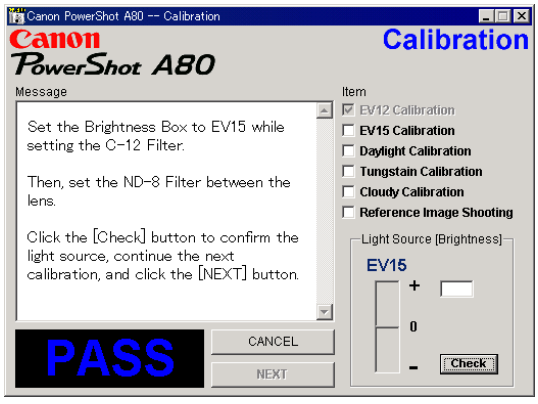
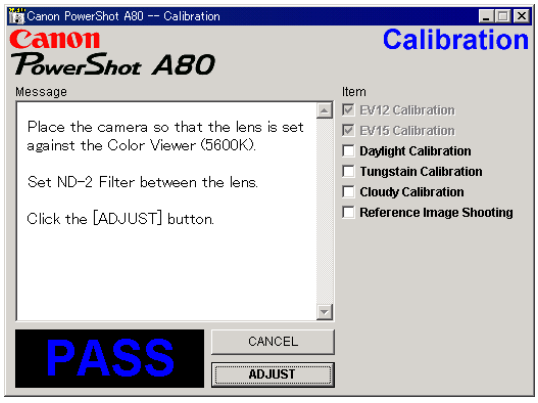
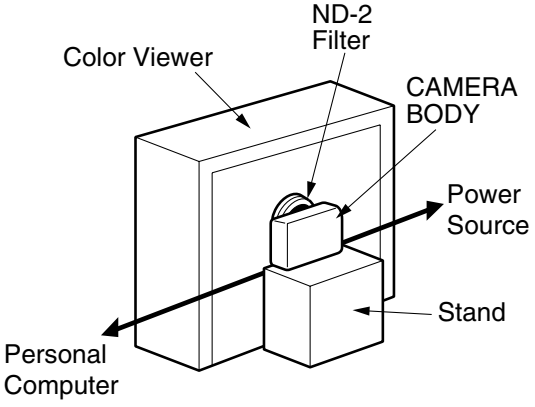
3.4 Calibration

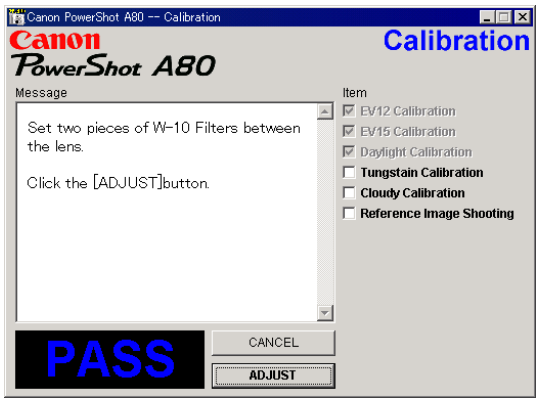
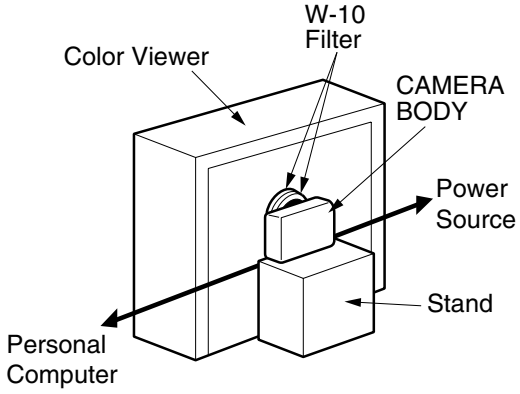
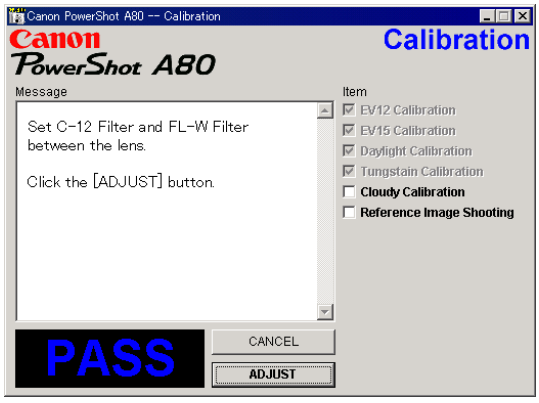
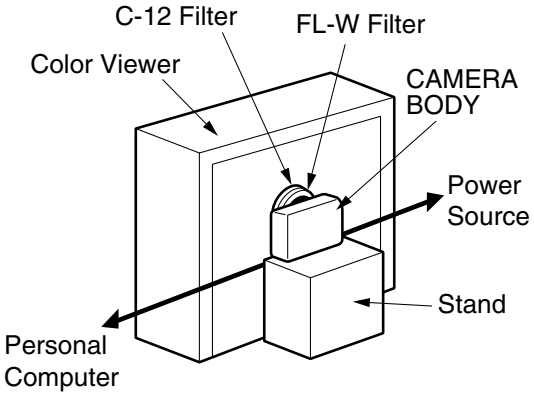
3.4.1 Calibration

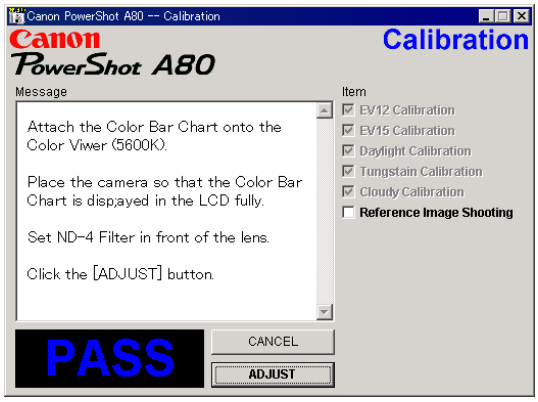
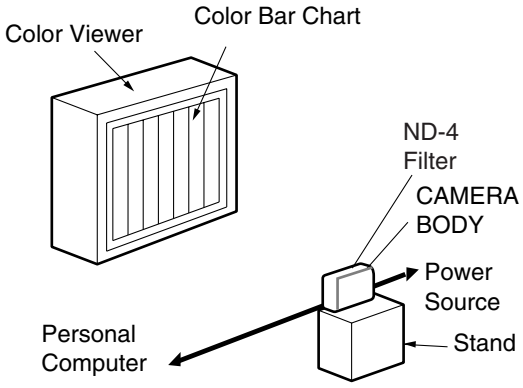
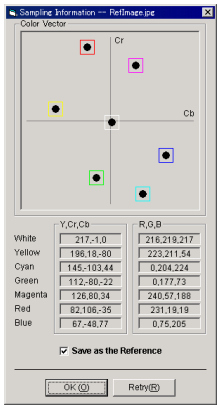
■ Tools Used

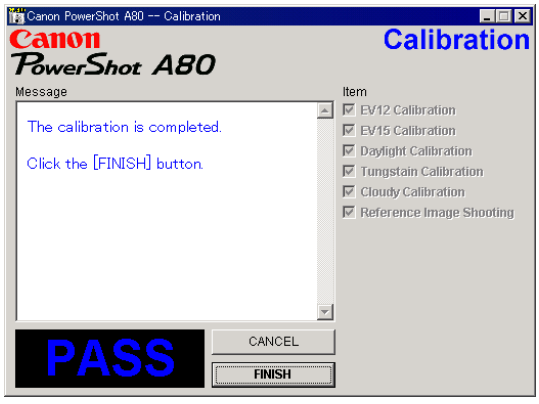
- Personal Computer
- SERVICE MANUAL (CD-ROM)
- ADJUSTMENT SOFTWARE
- Compact Power Adapter CA-PS500
- AC Cable
- INTERFACE CABLE IFC-300PCU
- Brightness Box (light source A)
- Color Viewer (5600° K)
- Color Bar Chart
- W-10 Filter (2pcs.)
- C-12 Filter
- FL-W Filter
- ND-2 Filter
- ND-4 Filter
- ND-8 Filter
- Reference Camera (Merchandise)
- DIGITAL CAMERA Solution Disk

1	Click the “Calibration” button.	
2	1. When the message on the right appears, check that the reference camera (Merchandise) is connected to the computer. 2. Click the “OK” button.	
3	When the message on the right appears, go to 4.	

4	1. Place the camera so that lens is set against the light source surface of the Brightness Box via the C-12 Filter. 2. Set the Brightness Box to EV12. 3. Click the “Check” button. 4. Check the Brightness level if it is within 0 ± 5. * If not, calibrate the Brightness Box until it becomes within 0 ± 5. 5. Click the “NEXT” button.	
5	1. When the message on the right appears, Set the Brightness Box to EV15 and attach the ND-8 Filter while setting the C-12 Filter between the lens. 2. Click the “Check” button. 3. Check the Brightness level if it is within 0 ± 5. * If not, calibrate the Brightness Box until it becomes within 0 ± 5. 4. Click the “NEXT” button.	
6	When the message on the right appears go to 7.	
7	1. Attach the ND-2 Filters between the Lens and the Color Viewer. 2. Place the camera so that the lens is set against the center part of the Color Viewer. 3. Click the “ADJUST” button.	

8	When the message on the right appears go to 9.	
9	1. Remove the ND-2 Filter. 2. Attach the two W-10 Filters between the Lens and the Color Viewer. Place the camera so that the lens is set against the center part of the Color Viewer. 3. Click the “ADJUST” button.	
10	When the message on the right appears go to 11.	
11	1. Remove the two W-10 Filters. 2. Attach the C-12 and FL-W Filter between the Lens and the Color Viewer. Place the camera so that the lens is set against the center part of the Color Viewer. 3. Click the “ADJUST” button.	

12	When the message on the right appears go to 13.	
13	1. Attach the Color Bar Chart to the Color Viewer. 2. Place the camera so that the Viewing image of the color bar chart is the full of LCD with the ND-4 Filter attached. 3. Click the “ADJUST” button.	
14	1. Shift a frame on the displayed screen with a mouse to choose a color of color bar. 2. Click the “Sampling” button.	
15	Check “Save as the Reference”, and click the “OK” button to store the data.	

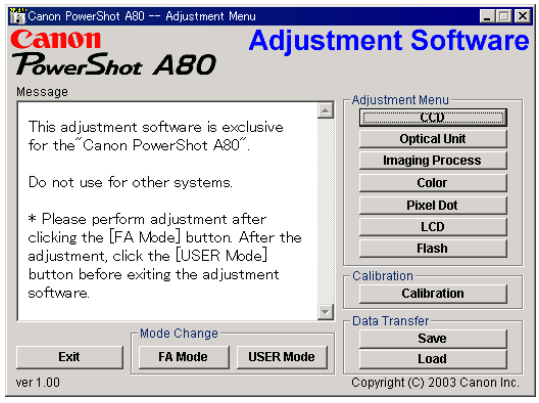
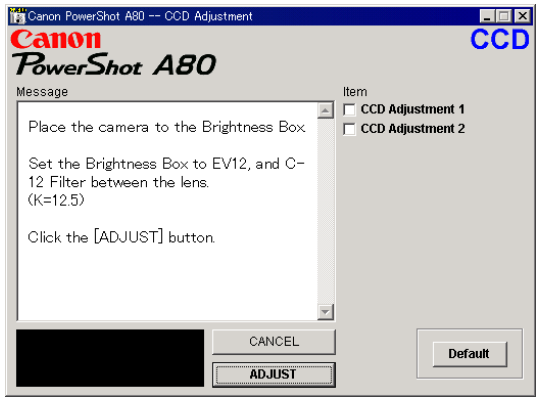
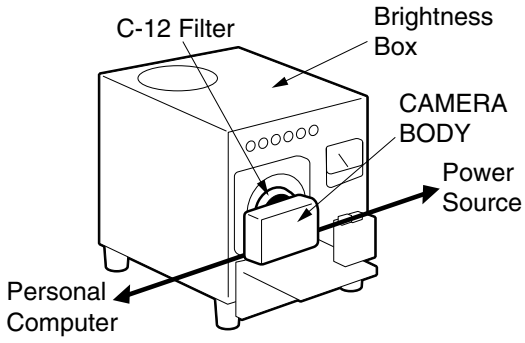
16	When the message on the right appears, click the “FINISH” button. (This ends the “Calibration”.)	

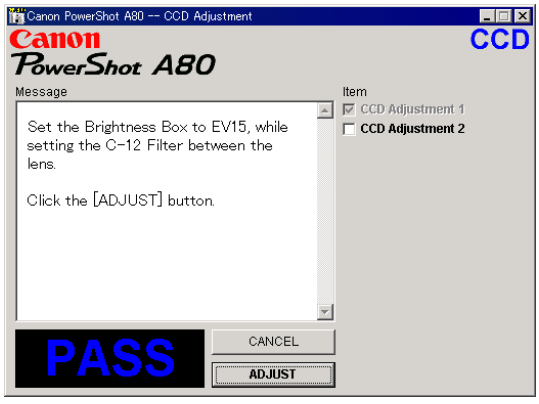
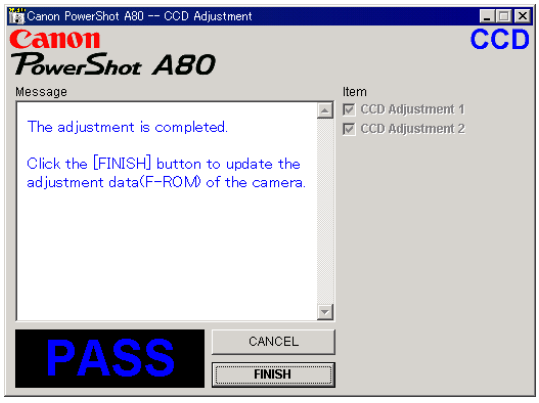
3.5 Adjustment Procedure

3.5.1 CCD Adjustment

■ Tools Used

- Personal Computer
- SERVICE MANUAL (CD-ROM)
- ADJUSTMENT SOFTWARE
- Compact Power Adapter CA-PS500
- AC Cable
- INTERFACE CABLE IFC-300PCU
- Brightness Box (light source A)
- C-12 Filter
- DIGITAL CAMERA Solution Disk

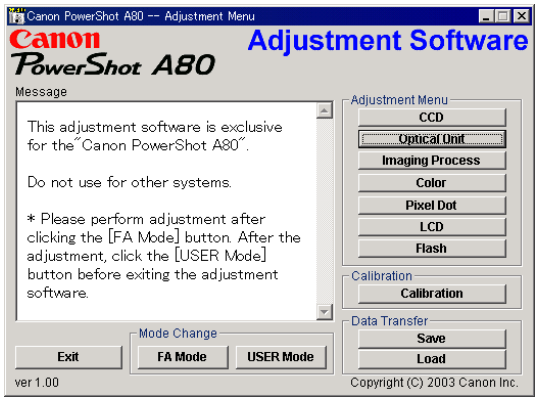
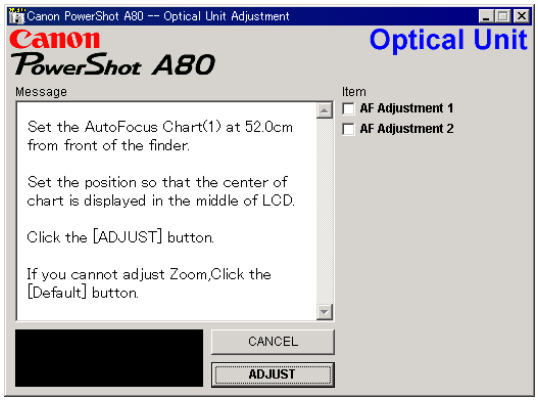
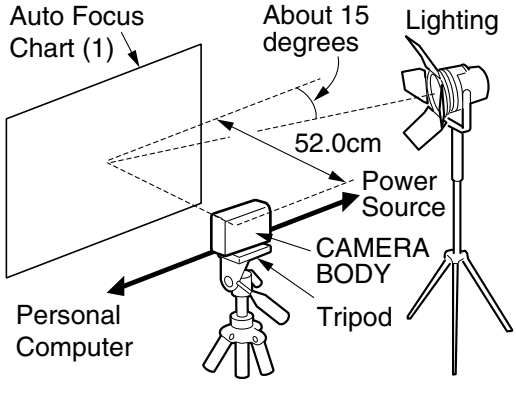
1	Click the “CCD” button.	
2	When the message on the right appears, go to 3.	
3	1. Place the camera so that lens is set against the light source surface of the Brightness Box via the C-12 Filter. 2. Set the Brightness Box to EV12. 3. Click the “ADJUST” button. * When the adjustment does not work, click the “Default” button.	

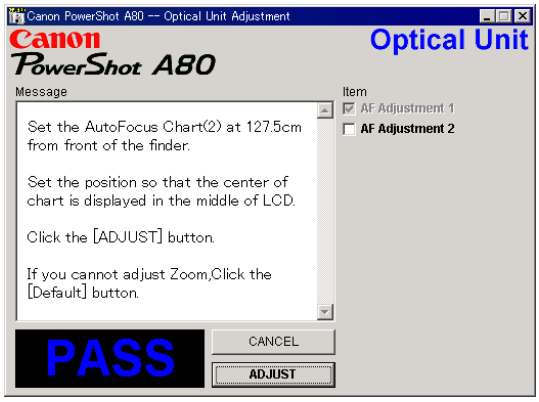
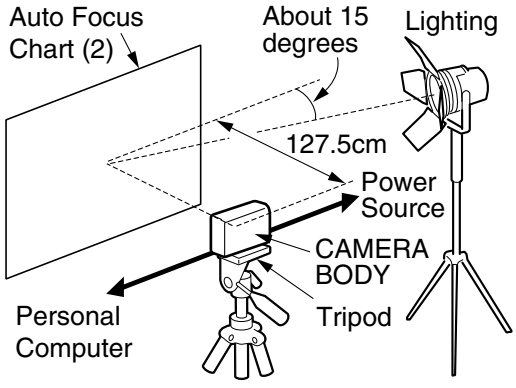
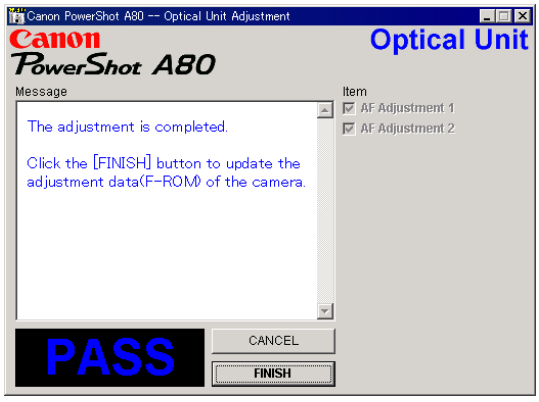
4	When the message on the right appears, Set the Brightness Box to EV15 while setting the C-12 Filter between the lens. Click the “ADJUST” button.	
5	When the message on the right appears, click the “FINISH” button. (This ends the “CCD” Adjustment.)	

3.5.2 Optical Unit Adjustment

■ Tools Used

- Personal Computer
- SERVICE MANUAL (CD-ROM)
- ADJUSTMENT SOFTWARE
- Compact Power Adapter CA-PS500
- AC Cable
- INTERFACE CABLE IFC-300PCU
- Auto Focus Chart (2 types)
- Tripod
- DIGITAL CAMERA Solution Disk

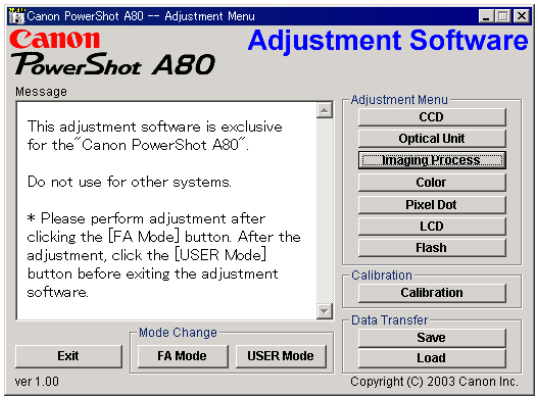
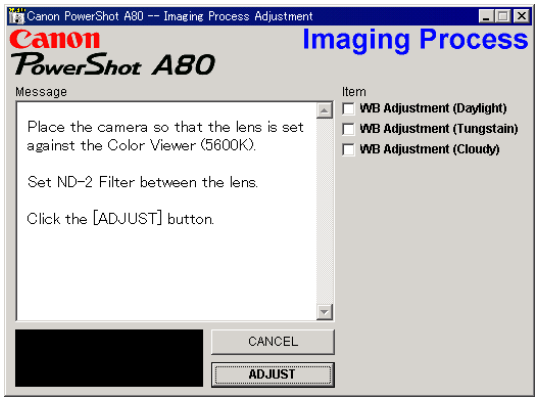
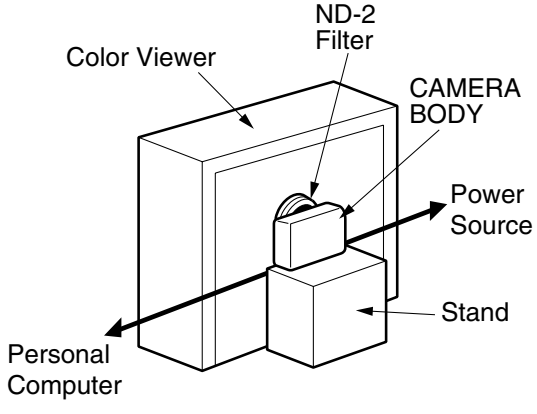
1	Click the “Optical Unit” button.	
2	When the message on the right appears, go to 3.	
3	1. Place the Auto Focus Chart (1) at 52.0cm away from the front of the camera finder. * Place the Auto Foucs Chart (1) on a plain color wall or equivalent. * Adjust the light so that the brightness of the chart will be about EV9.0. The ray of the light should come in at a narrow angle as seen from the chart. 2. Adjust the position of the camera finely so that the center of the Auto Focus Chart is aligned with the center of the LCD. 3. Click the “ADJUST” button.	

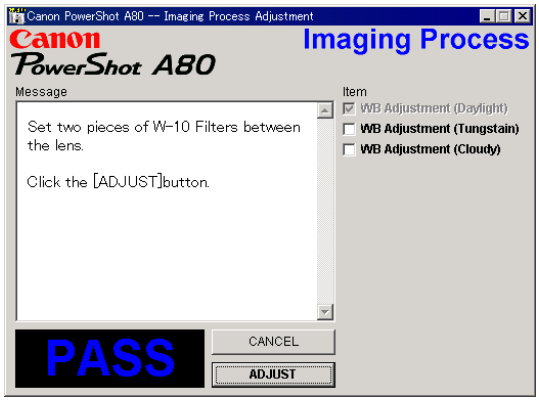
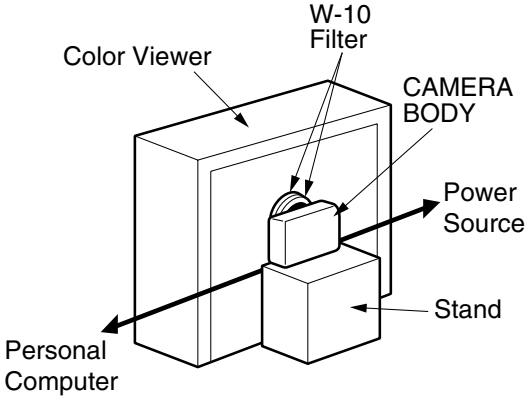
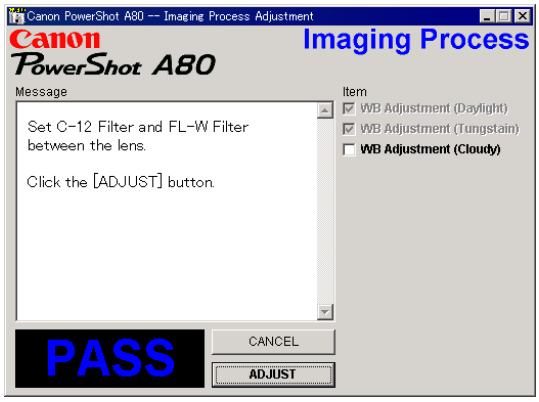
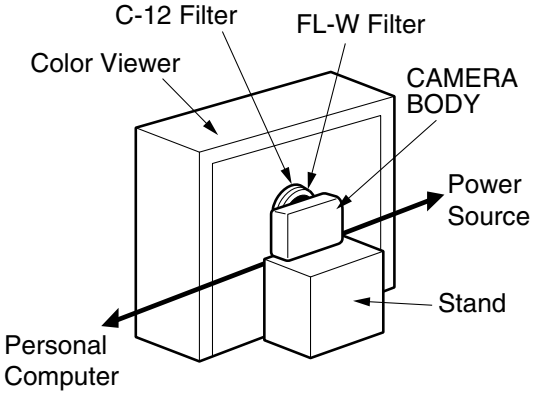
4	When the message on the right appears, go to 5.	
5	1. Place the Auto Focus Chart (2) at 127.5cm away from the front of the camera finder. * Place the Auto Focus Chart on a plain color wall or equivalent. * Adjust the light so that the brightness of the chart will be about EV9.0. The ray of the light should come in at a narrow angle as seen from the chart. 2. Adjust the position of the camera finely so that the center of the Auto Focus Chart is aligned with the center of the LCD. 3. Click the “ADJUST” button.	
6	When the message on the right appears, click the “FINISH” button. (This ends the “Optical Unit” Adjustment.)	

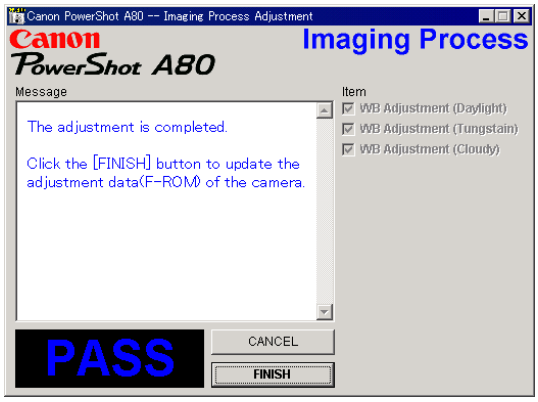
3.5.3 Imaging Process Adjustment

■ Tools Used

- Personal Computer
- SERVICE MANUAL (CD-ROM)
- ADJUSTMENT SOFTWARE
- Compact Power Adapter CA-PS500
- AC Cable
- INTERFACE CABLE IFC-300PCU
- Color Viewer (5600° K)
- W-10 Filter (2 pcs.)
- C-12 Filter
- FL-W Filter
- ND-2 Filter
- DIGITAL CAMERA Solution Disk

1	Click the “Imaging Process” button.	
2	When the message on the right appears, go to 3.	
3	1. Attach the ND-2 Filters between the Lens and the Color Viewer. 2. Place the camera so that the lens is set against the center part of the Color Viewer. 3. Click the “ADJUST” button.	

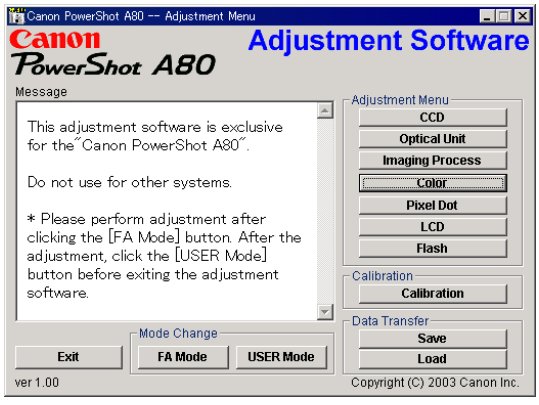
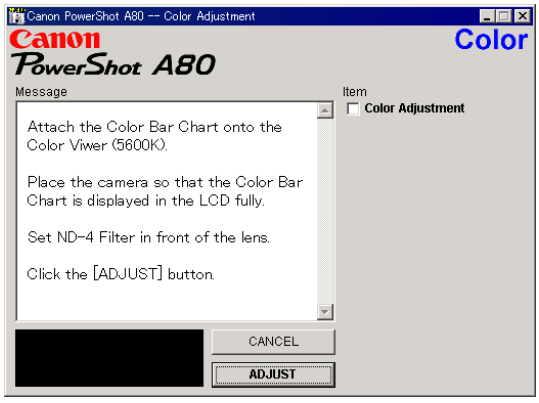
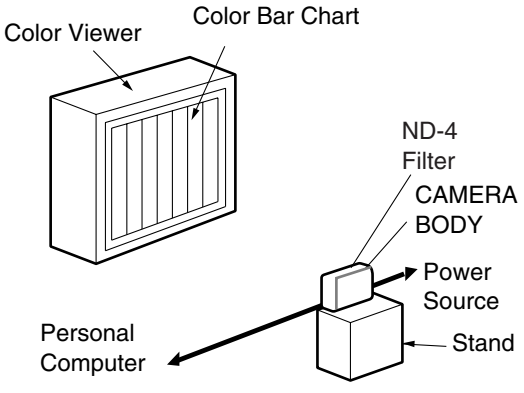
4	When the message on the right appears, go to 5.	
5	1. Remove the ND-2 Filter. 2. Attach the two W-10 Filters between the Lens and the Color Viewer. Place the camera so that the lens is set against the center part of the Color Viewer. 3. Click the “ADJUST” button.	
6	When the message on the right appears, go to 7.	
7	1. Remove the W-10 Filters. 2. Attach the C-12 and FL-W Filter between the Lens and the Color Viewer. Place the camera so that the lens is set against the center part of the Color Viewer. 3. Click the “ADJUST” button.	

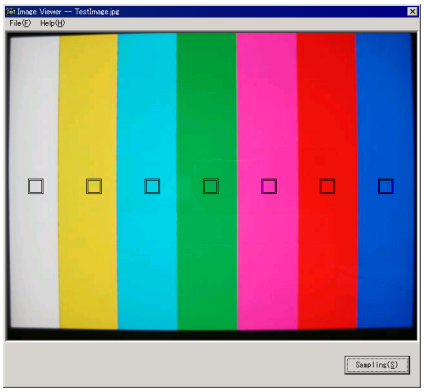
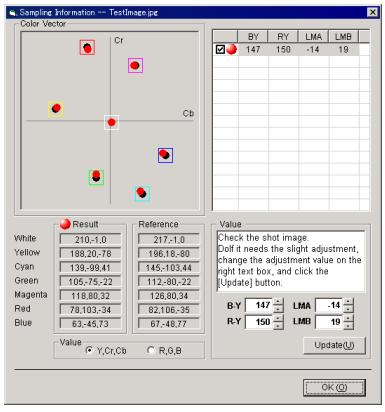
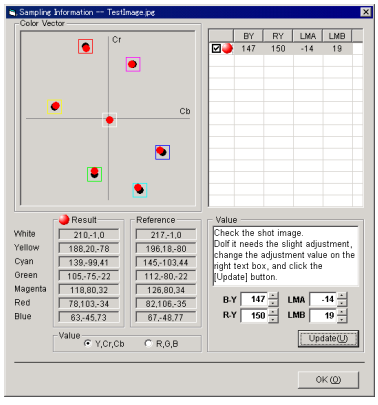
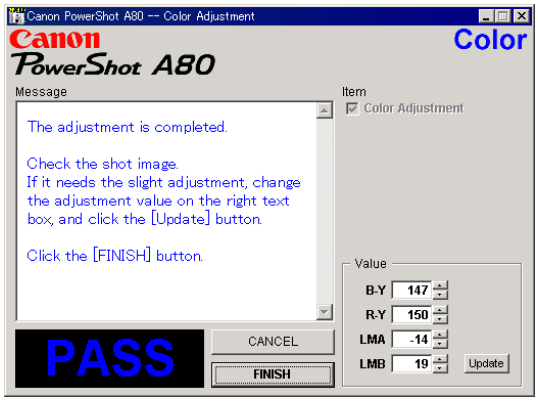
8	When the message on the right appears, click the “FINISH” button. (This ends the “Imaging Process” Adjustment.)	

3.5.4 Color Adjustment

■ Tools Used

- Personal Computer
- SERVICE MANUAL (CD-ROM)
- ADJUSTMENT SOFTWARE
- Compact Power Adapter CA-PS500
- AC Cable
- INTERFACE CABLE IFC-300PCU
- Color Viewer (5600° K)
- Color Bar Chart
- ND-4 Filter
- DIGITAL CAMERA Solution Disk

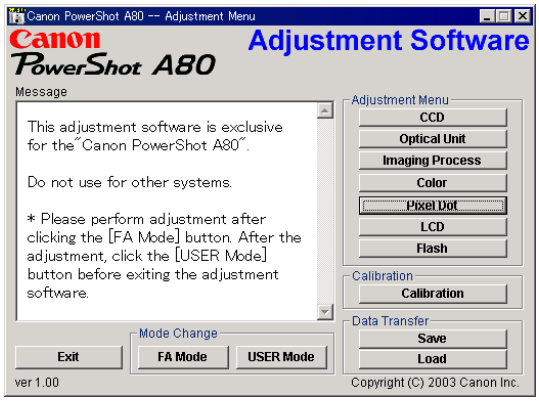
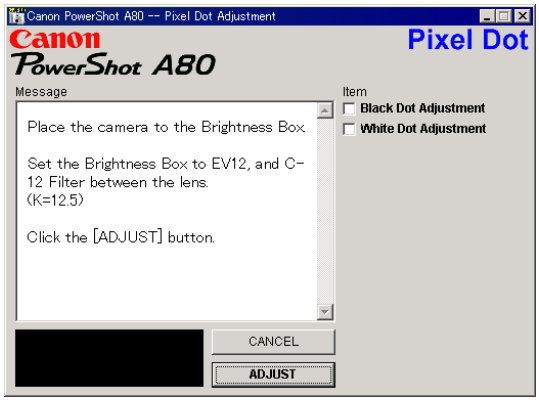
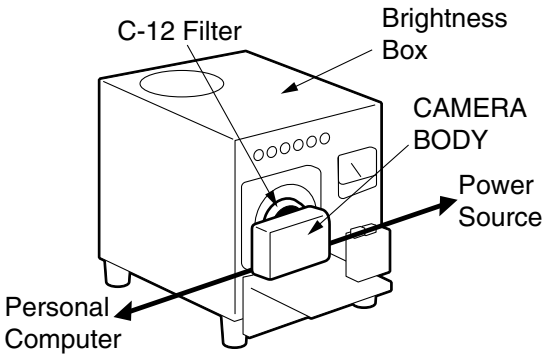
1	Click the “Color” button.	
2	When the message on the right appears, go to 3.	
3	1. Attach the Color Bar Chart to the Color Viewer. 2. Place the camera so that the Viewing image of the color bar chart is the full of LCD with the ND-4 Filter attached. 3. Click the “ADJUST” button.	

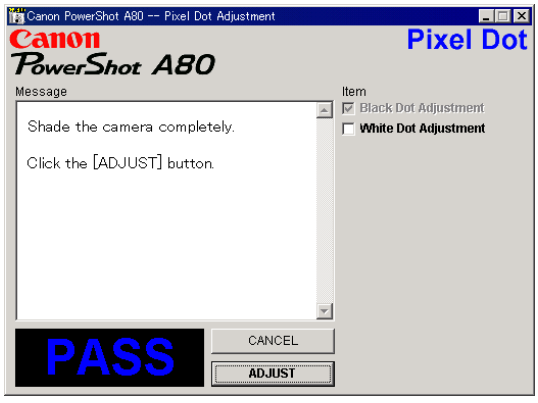
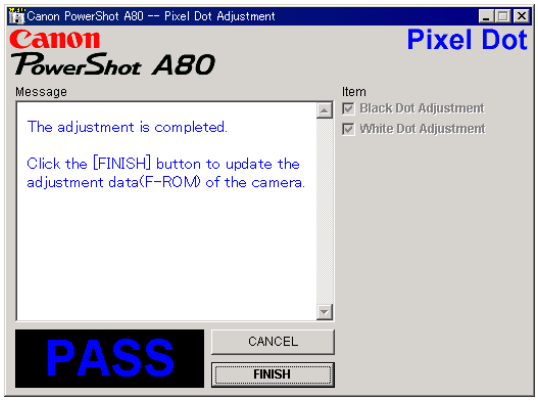
4	1. Shift a frame on the displayed screen with a mouse to choose a color of color bar. 2. Click the “Sampling” button.	
5	Check “Yellow and Red”, and click the “OK” button. If these data are within specifications, go to 7. * Specification Ave_Cr = Reference Camera ± 10 Ave_Cb = Reference Camera ± 10	
6	1. Confirm to see that the image on the PC monitor satisfies the specifications. 2. If the image on the PC monitor does not satisfy the specifications, change the data using UP, DOWN button or change the data directly by typing the data in the text box. Then click the “UPDATE” button.	
7	When the adjustment is completed, click the “FINISH” button. (This ends the “Color” Adjustment.)	

3.5.5 Pixel Dot Adjustment

■ Tools Used

- Personal Computer
- SERVICE MANUAL (CD-ROM)
- ADJUSTMENT SOFTWARE
- Compact Power Adapter CA-PS500
- AC Cable
- INTERFACE CABLE IFC-300PCU
- Brightness Box (Light source A)
- C-12 Filter
- Light-Shielding Cloth (500 × 500 mm or larger)
- DIGITAL CAMERA Solution Disk

1	Click the “Pixel Dot” button.	
2	When the message on the right appears, go to 3.	
3	1. Place the camera so that lens is set against the light source surface of the Brightness Box via the C-12 Filter. 2. Set the Brightness Box to EV12. 3. Click the “ADJUST” button.	

4	1. When the message on the right appears, cover the camera with the Light-Shielding Cloth so that the no light reasons the CCD. 2. Click the “ADJUST” button.	
5	When the message on the right appears, click the “FINISH” button. (This ends the “Pixel Dot” Adjustment.)	

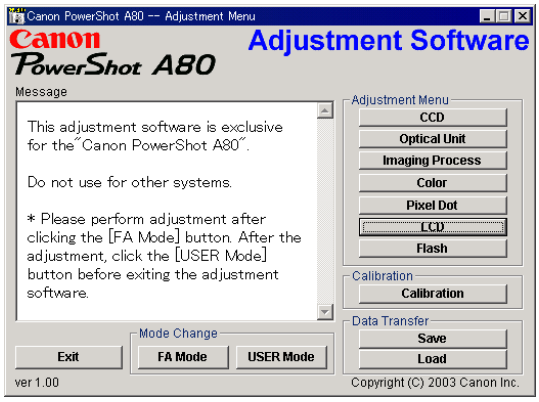
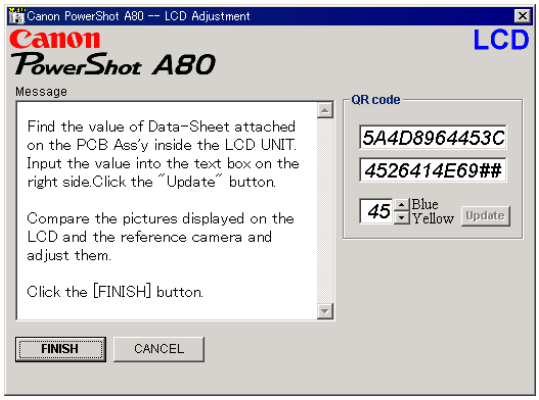
3.5.6 LCD Adjustment

■ Tools Used

- Personal Computer
- SERVICE MANUAL (CD-ROM)
- ADJUSTMENT SOFTWARE
- Compact Power Adapter CA-PS500
- AC Cable
- INTERFACE CABLE IFC-300PCU
- Reference Camera (Merchandise)
- DIGITAL CAMERA SolutionDisk

■ Preparation

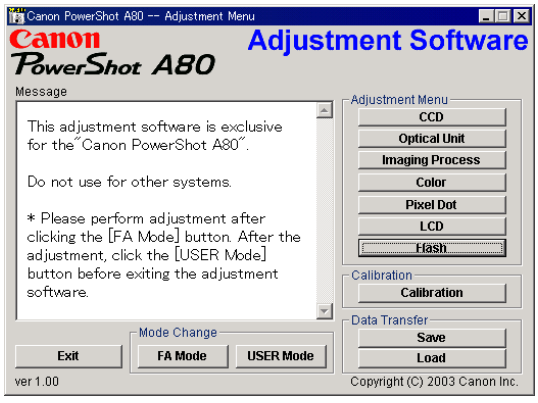
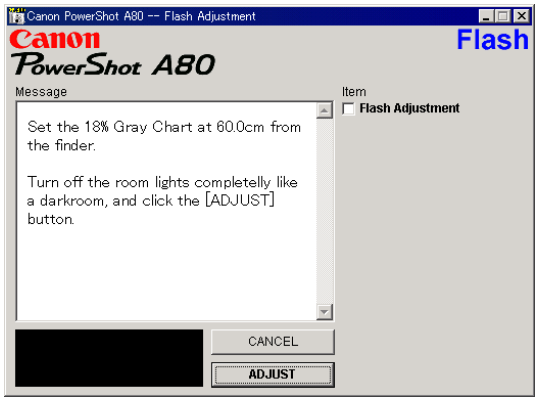
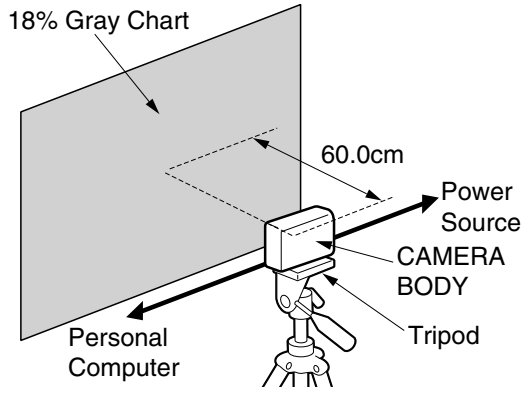
1. Insert the blank CF Card into the reference camera.
2. Connect the reference camera with the PC.
3. Add the “Gray.jpeg” image to the CF card of the refernce camera using Zoom Browser EX. (Gray.jpg is in the folder of Adjustment Software downloaded.)
4. Finish the ZoomBrowser EX.
5. Disconnect the reference camera from the PC, and display the “Gray.jpg” image in PLAY mode.

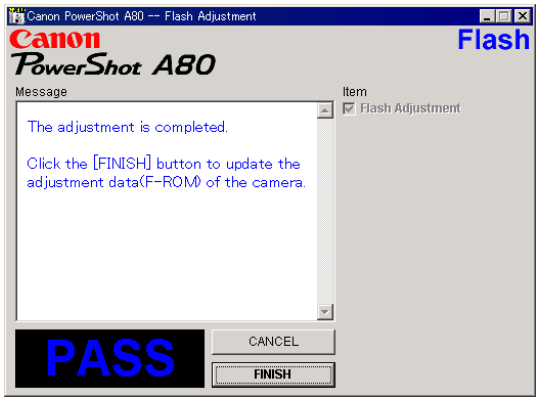
1	Click the “LCD” button.	
2	1. When the message on the right appears, enter in the text boxes the data written on the data-sheet attached on the PCB ASS’Y inside the LCD UNIT. Click the “Update” button. 2. Compare the image with that of the reference camera. If it has a different color tint. adjust it by repeating clicking the Yellow/Blue button and the “Update” button alternately. 3. Click the “FINISH” button. (This ends the “LCD” Adjustment.)	

3.5.7 Flash Adjustment

■ Tools Used

- Personal Computer
- SERVICE MANUAL (CD-ROM)
- ADJUSTMENT SOFTWARE
- Compact Power Adapter CA-PS500
- AC Cable
- INTERFACE CABLE IFC-300PCU
- 18% Gray Chart
- Tripod
- DIGITAL CAMERA Solution Disk

1	Click the “Flash” button.	
2	When the message on the right appears, go to 3.	
3	1. Set 18% Gray Chart 60.0cm from the Finder front. 2. Make the room as dark as a darkroom. 3. Click the “ADJUST” button.	

4	When the message on the right appears, click the “FINISH” button. (This ends the “Flash” Adjustment.)	

3.5.8 Checking of sound recording/output

It is not required to adjust the recording/output (volume, etc.) of sound.
Check the camera if the sound is recorded/play-backed properly.

PARTS CATALOG

CONTENTS

CLASS凡例

A: 使用頻度　高
B: 使用頻度　中
C: 使用頻度　低
D: 安全規格部品
E: 消耗部品
F: 標準ネジ、ワッシャー
S: 供給制限品
Y: サービス工具

Category of CLASS

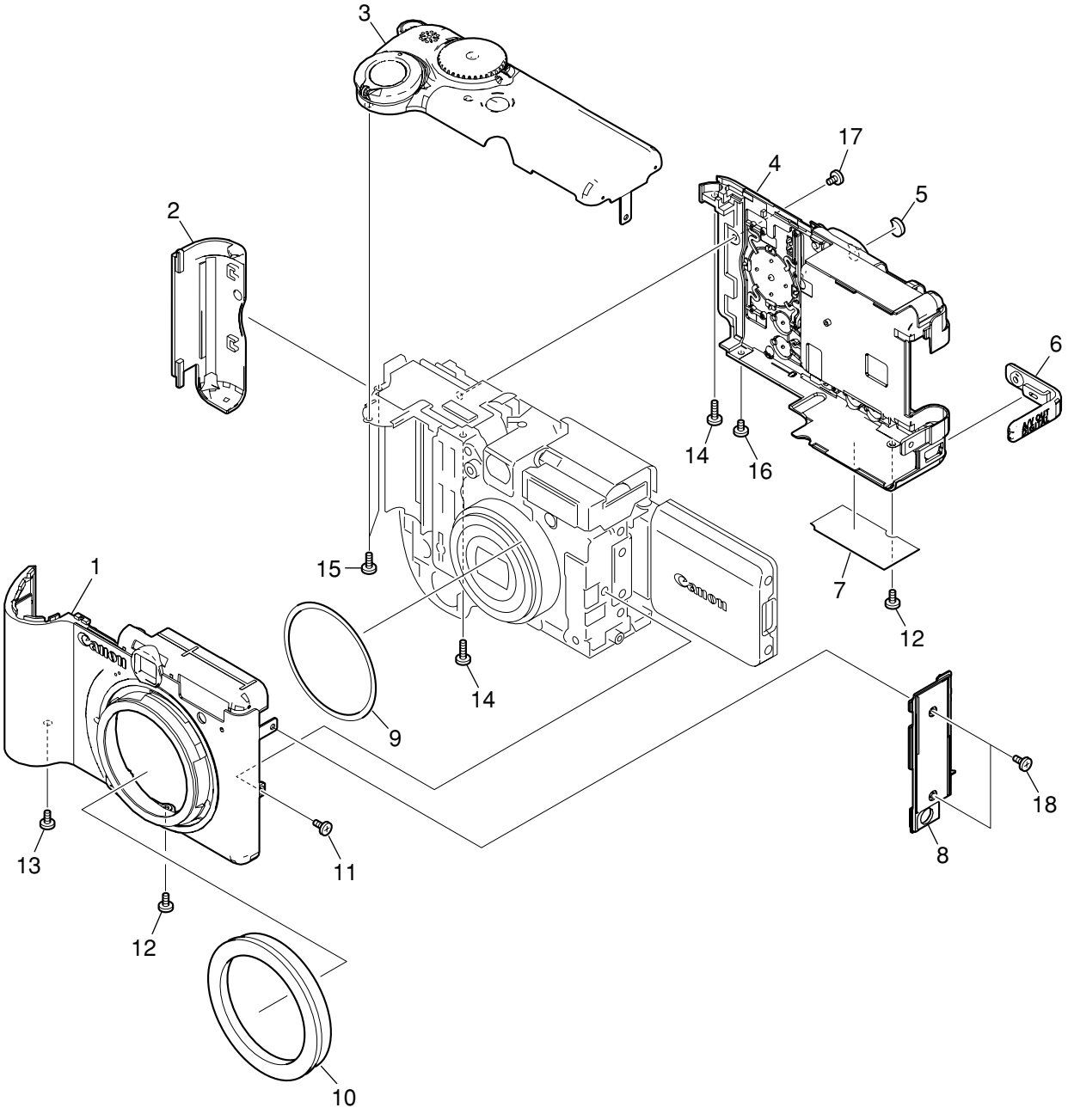
A: Frequency of use: High
B: Frequency of use: Middle
C: Frequency of use: Low
D: Safety-related critical parts
E: Consumable parts
F: Standard screws and washers
S: Supply of the parts is limited
Y: Service Tools

CAUTION

⚠ がついている部品は安全上重要な部品です。交換時は、必ず指定の部品を使用してください。
Especially critical parts in the power circuit block should not be replaced with other marks.
Critical parts are marked with ⚠ in this parts list

Pg1

Casing Parts

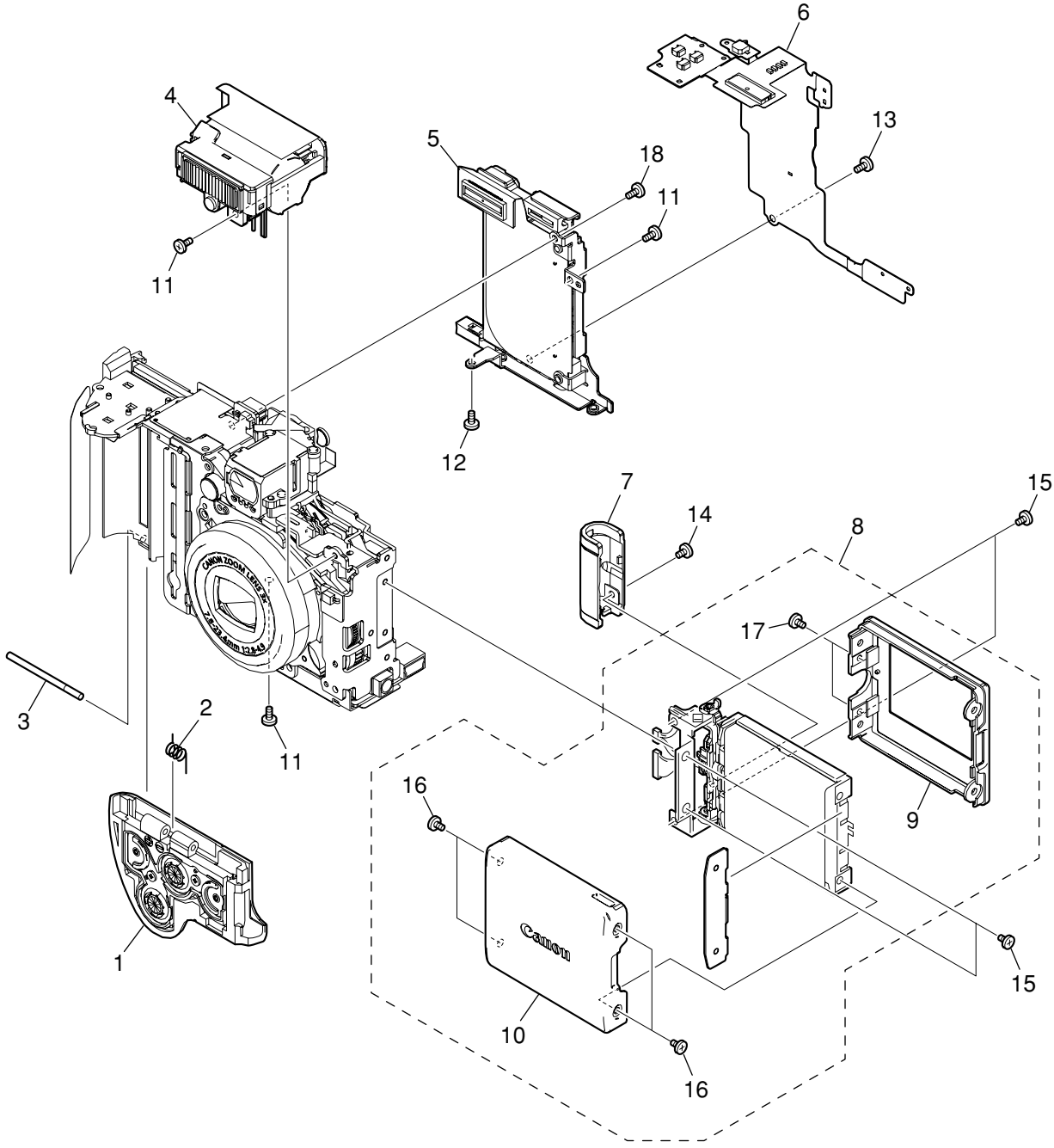


PARTS LIST

SYMBOL	PARTS NO.	CLASS	QTY	DESCRIPTION	REMARKS
1	CM1-2215-000	B	1	FRONT COVER UNIT	
2	CD3-1424-000	B	1	COVER, CF	
3	CM1-2217-000	B	1	TOP COVER UNIT	
4	CM1-2216-000	B	1	REAR COVER UNIT	
5	CD3-1425-000	B	1	COVER, HOLE	
6	CD3-1304-000	B	1	COVER, JACK	
7	CY1-6297-000	B	1	PLATE, BODY NUMBER (J)	#13111xxxxx
	CY1-6298-000	B	1	PLATE, BODY NUMBER (N)	#13211xxxxx
	CY1-6299-000	B	1	PLATE, BODY NUMBER (E)	#13311xxxxx
	CY1-6310-000	B	1	PLATE, BODY NUMBER (J), CHINA	#13161xxxxx
	CY1-6311-000	B	1	PLATE, BODY NUMBER (N), CHINA	#13261xxxxx
	CY1-6312-000	B	1	PLATE, BODY NUMBER (E), CHINA	#13361xxxxx
8	CD3-1423-000	B	1	COVER, SIDE	
9	CD3-1204-000	C	1	SHEET, LENS BARREL	
10	CM1-2299-000	B	1	BAYONET CUP UNIT	
11	XA1-7170-257	F	1	SCREW	
12	CD3-1441-000	B	2	SCREW	
13	XA4-9170-357	F	1	SCREW	
14	XA4-9170-707	F	2	SCREW	
15	XA4-9170-407	F	2	SCREW	
16	CD3-1444-000	B	1	SCREW	
17	CD3-1445-000	B	1	SCREW	
18	CD3-1440-000	B	2	SCREW	

Pg2

Internal Parts-1

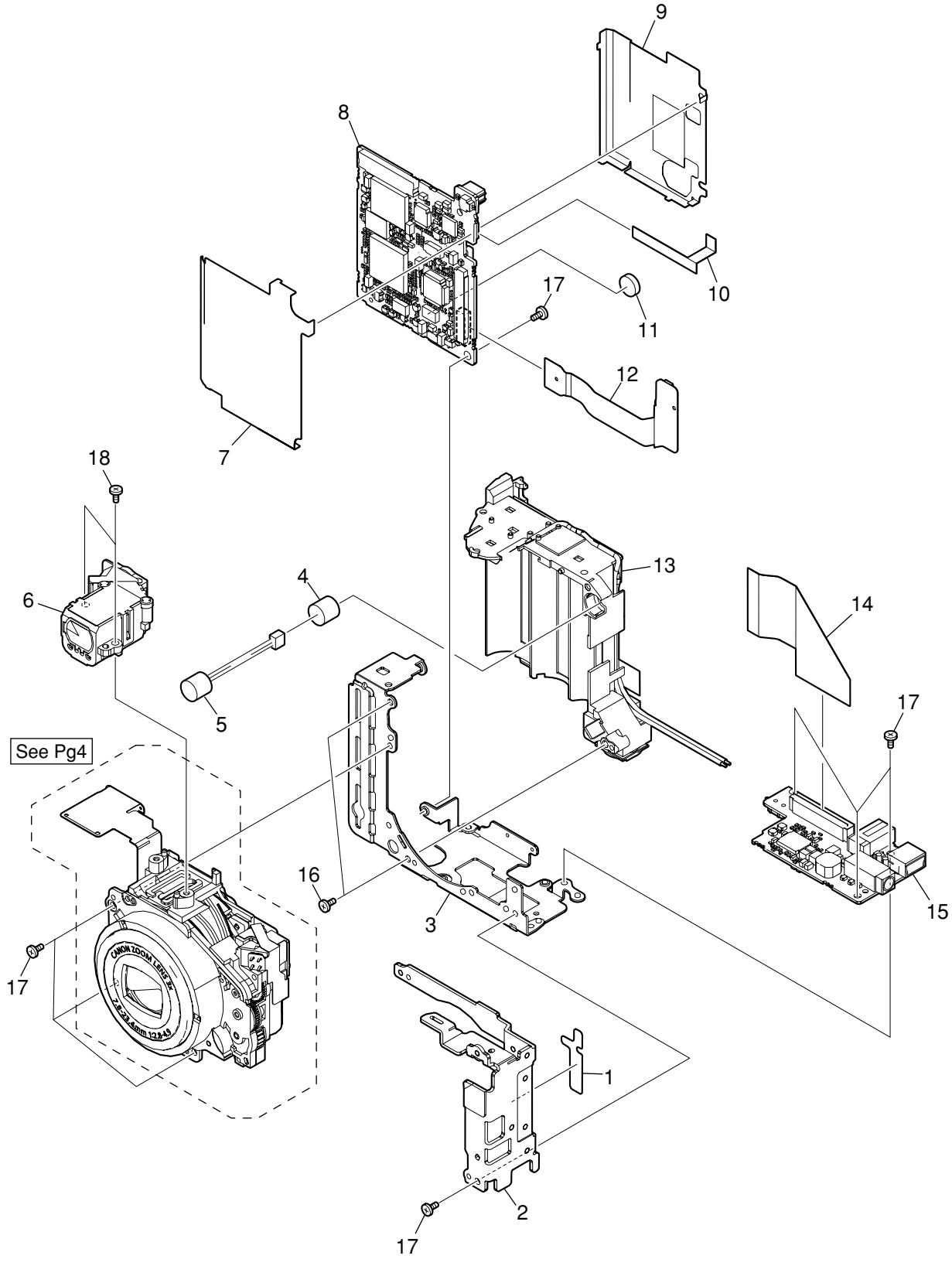


PARTS LIST

SYMBOL	PARTS NO.	CLASS	QTY	DESCRIPTION	REMARKS
1	CM1-2218-000	B	1	BATTERY COVER UNIT	
2	CD3-1347-000	C	1	SPRING, BATTERY COVER	
3	CD3-1348-000	C	1	SHAFT, BATTERY COVER	
4	CM1-2214-000	B	1	FLASH UNIT	
5	CM1-2220-000	C	1	CF UNIT	
6	CM1-2201-000	C	1	OPERATION MODULE UNIT	
7	CD3-1399-000	B	1	COVER, HINGE	
8	CM1-2222-000	B	1	LCD UNIT	
	CM1-2222-001	B	1	LCD UNIT (SELECTION)	
9	CD3-1380-000	B	1	COVER, LCD FRONT	
10	CD3-1381-000	B	1	COVER, LCD REAR	
11	XA1-7170-357	F	3	SCREW	
12	XA4-9170-357	F	1	SCREW	
13	XA1-7170-257	F	1	SCREW	
14	CD3-1443-000	B	1	SCREW	
15	CD3-1400-000	C	4	SCREW	
16	CD3-1442-000	B	4	SCREW	
17	CD3-1446-000	C	2	SCREW	
18	CD3-1447-000	C	1	SCREW	

Pg3

Internal Parts-2

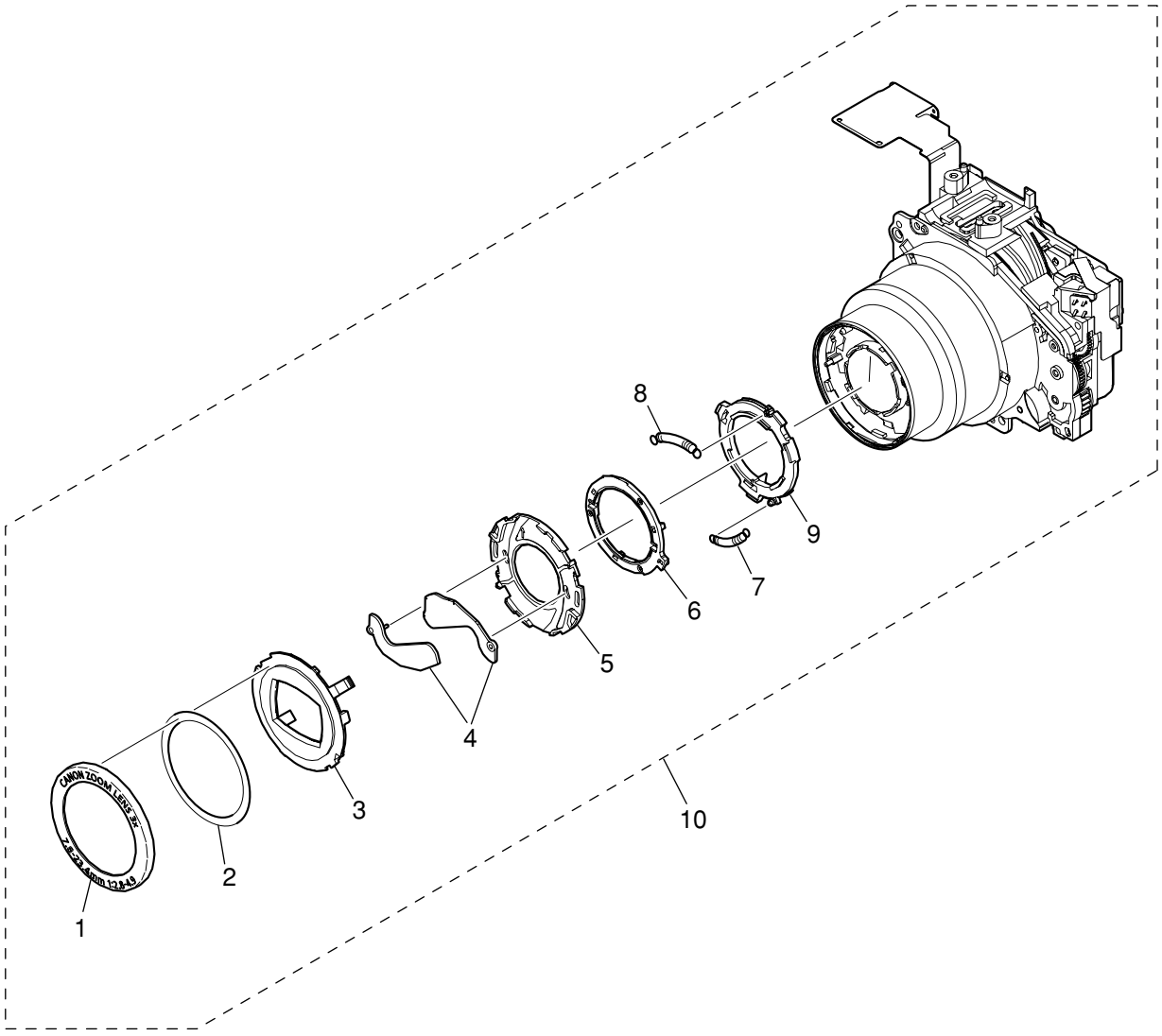


PARTS LIST

SYMBOL	PARTS NO.	CLASS	QTY	DESCRIPTION	REMARKS
1	CD3-1430-000	C	1	TAPE, SUB FRAME	
2	CD3-1422-000	C	1	FRAME, SUB	
3	CM1-2298-000	C	1	MAIN FRAME UNIT	
4	CD3-1377-000	C	1	BUSH, MICROPHONE	
5	CM1-2213-000	C	1	MICROPHONE UNIT	
6	CM1-2120-000	C	1	FINDER UNIT	
7	CM1-2228-000	C	1	SHIELD UNIT, MAIN A	
8	CM1-2194-000	C	1	PCB ASS'Y, MAIN	
9	CM1-2229-000	C	1	SHIELD UNIT, MAIN B	
10	CK2-2081-000	C	1	FPC, MAIN-FLASH	
11	WK1-5140-000	C	1	BATTERY, LITHIUM (2ND)	
12	CM1-2204-000	C	1	MAIN-LCD MODULE UNIT	
13	CM1-2219-000	C	1	BATTERY BOX UNIT	
14	CK1-1062-000	C	1	FPC, MAIN-DC	
15	CM1-2196-000	C	1	DC/JACK UNIT	
16	XA4-9170-357	F	2	SCREW	
17	XA1-7170-257	F	8	SCREW	
18	XA4-9140-407	F	2	SCREW	

Pg4

Optical Unit

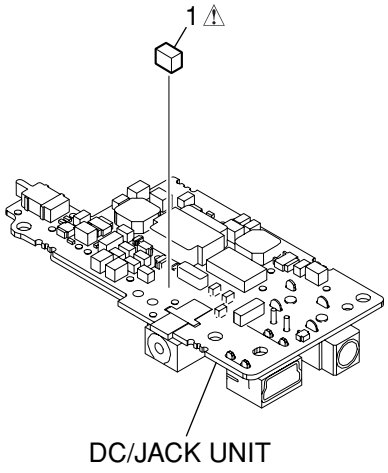


P A R T S L I S T

SYMBOL	PARTS NO.	CLASS	QTY	D E S C R I P T I O N	R E M A R K S
1	CD3-1198-000	B	1	CAP, FRONT	
2	CD3-1214-000	C	1	TAPE, FRONT CAP	SIZE(015)
3	CD3-1180-000	B	1	COVER, BARRIER	
4	CD3-1179-000	B	2	PLATE, BARRIER	
5	CD3-1178-000	C	1	BASE, BARRIER	
6	CD3-1177-000	C	1	PLATE, BARRIER DRIVE	
7	CD3-1206-000	C	1	SPRING, BARRIER CLOSE	
8	CD3-1205-000	C	1	SPRING, BARRIER OPEN	
9	CD3-1176-000	C	1	RING, BARRIER DRIVE	
10	CM1-2119-000	C	1	OPTICAL UNIT	

Pg5

Fuse



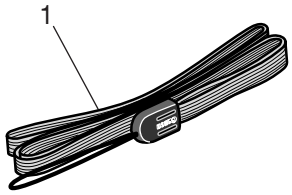
P A R T S L I S T

SYMBOL	PARTS NO.	CLASS	QTY	D E S C R I P T I O N	R E M A R K S
⚠ 1	CY4-6076-000	D	1	FUSE, MATSU.DENKI UNHS205	

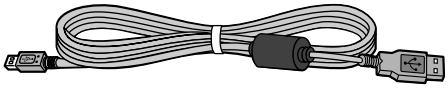
Pg6

Accessories-1

Wrist Strap WS-200

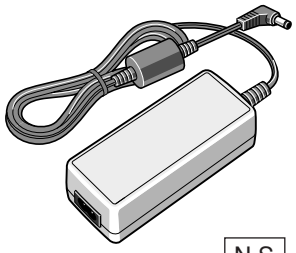


USB Interface Cable IFC-300PCU



N.S

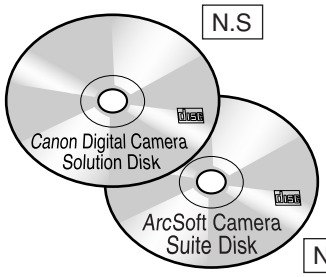
Compact Power Adapter CA-PS500



N.S

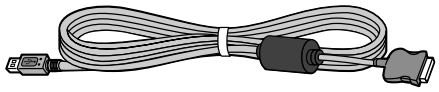
Canon Digital Camera Solution Disk, ArcSoft Camera Suite Disk

N.S



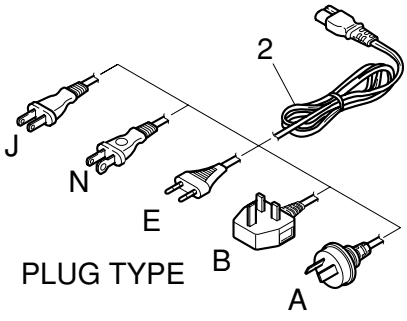
N.S

Direct Interface Cable DIF-100



N.S

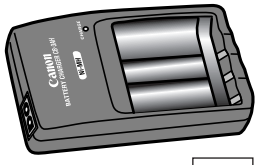
AC Cable



CF Card FC-32M

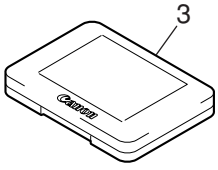
N.S

Battery Charger CB-3AH

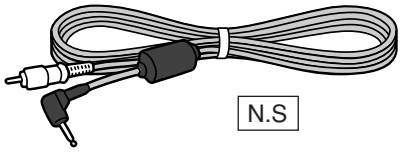


N.S

CF CASE



Video Cable AVC-100



N.S

NiMH Battery NB4-100

N.S

N.S : N.S Stand for No Stock (Product available)

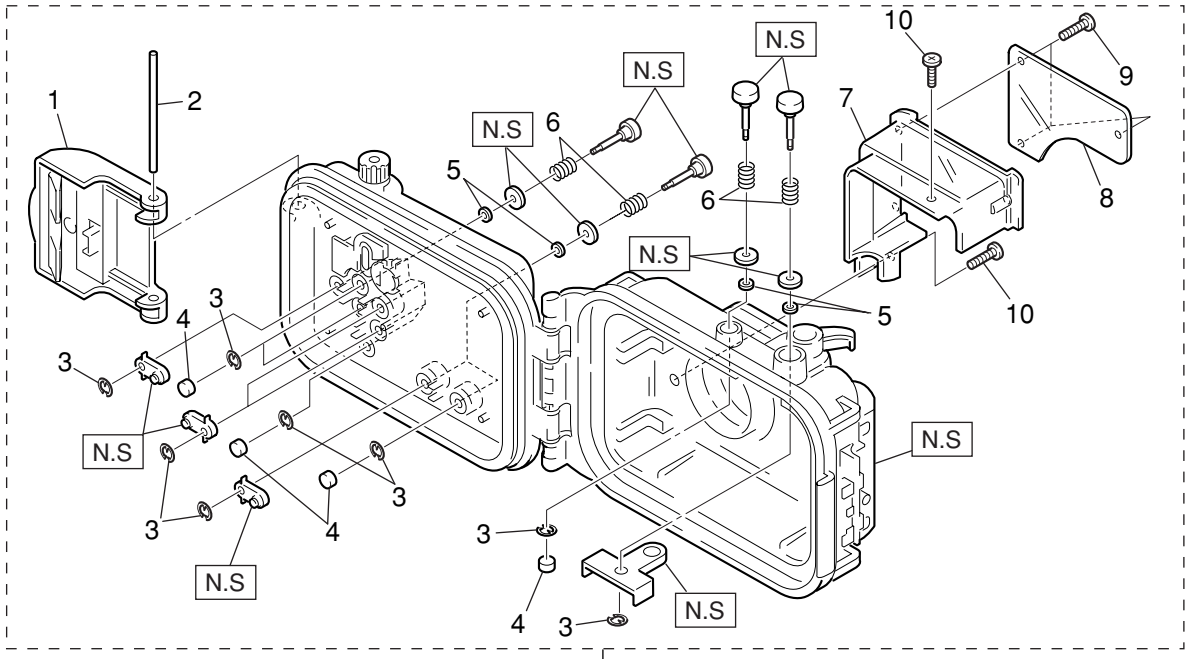
PARTS LIST

SYMBOL	PARTS NO.	CLASS	QTY	DESCRIPTION	REMARKS
1	C84-1060-000	B	1	WRIST STRAP WS-200	
2	D82-0641-000	C	1	AC CABLE (J)	FOR JAPAN
	WT3-5063-000	C	1	AC CABLE (N)	FOR USA/CANADA
	D82-0643-000	C	1	AC CABLE (E)	FOR EUROPE/ASIA
	D82-0644-000	C	1	AC CABLE (B)	FOR ASIA
	D82-0645-000	C	1	AC CABLE (A)	FOR AUSTRALIA
3	FC2-9610-000	B	1	CASE, CF	

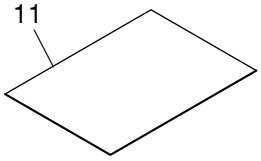
Pg7

Accessories-2

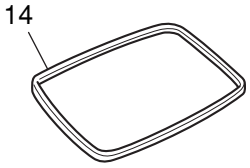
Waterproof Case WP-DC900 N.S



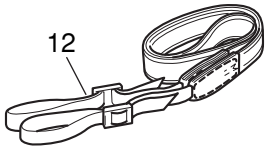
Sheet



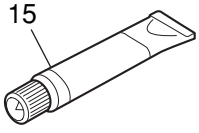
Waterproof Seal



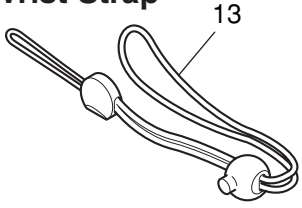
Neck Strap



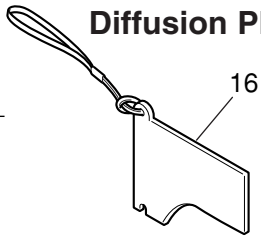
Silicone Grease



Wrist Strap



Diffusion Plate Unit



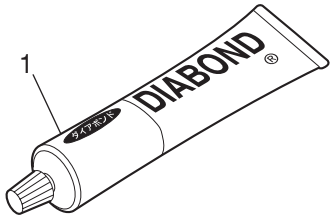
N.S : N.S Stand for No Stock (Product available)

PARTS LIST

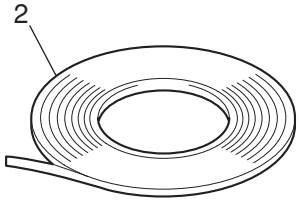
SYMBOL	PARTS NO.	CLASS	QTY	DESCRIPTION	REMARKS
1	CY1-6171-000	C	1	BUCKLE ASS'Y	
2	CY1-6203-000	C	1	SHAFT, BUCKLE	
3	CY1-6168-000	C	10	E RING	
4	CY1-6169-000	C	5	CAP, BUTTON	
5	CY1-6252-000	C	10	O RING	
6	CY1-6167-000	C	10	SPRING, COIL	
7	CY1-6303-000	C	1	HOLDER, DEFUSION PLATE	
8	CY1-6304-000	C	1	PROTECTOR, DEFUSION PLATE	
9	CY6-3210-000	C	3	SCREW	
10	CY6-3211-000	C	2	SCREW	
11	CY1-6300-000	C	1	SHEET	FOR JAPAN
12	CY1-6099-000	B	1	STRAP, NECK	
13	CY1-6174-000	B	1	STRAP, WRIST	
14	CY1-6272-000	B	1	PACKING, RUBBER	
15	DY9-3029-000	C	1	GREASE PACKING	
16	CY1-6302-000	B	1	DIFFUSION PLATE UNIT	

Service Tools-1

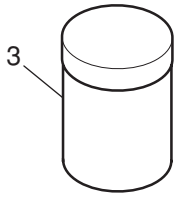
DIA Bond NO.1663G Black



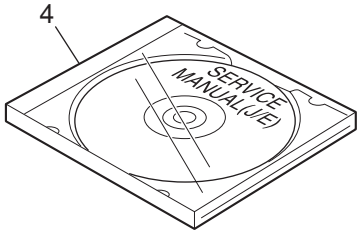
Adhesive Tape SONY T4000



Logenest Rambda A-74



Service Manual CD-ROM

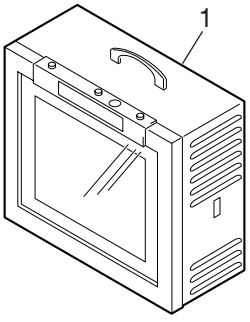


P A R T S L I S T

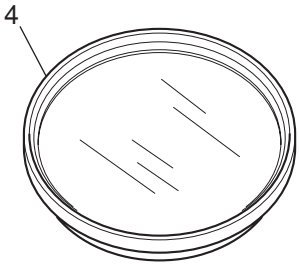
SYMBOL	PARTS NO.	CLASS	QTY	D E S C R I P T I O N	R E M A R K S
1	CY9-8129-000	Y	1	BOND, DIA BOND NO.1663G BLACK	
2	CY4-6012-000	Y	1	ADHESIVE TAPE, SONY T4000	6mm × 50m roll
3	CY9-8102-000	Y	1	LUBE, LOGENEST RAMBDA A-74	80g
4	CY8-4388-031	Y	1	CD-ROM, SERVICE MANUAL (J/E)	

Service Tools-2

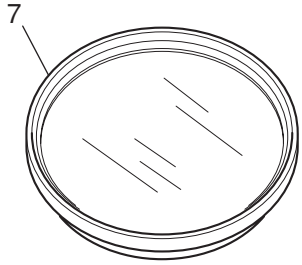
Color Viewer (5600° K)



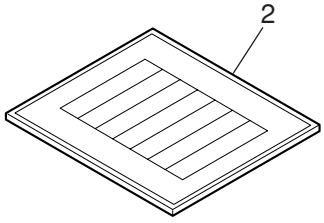
C-12 Filter



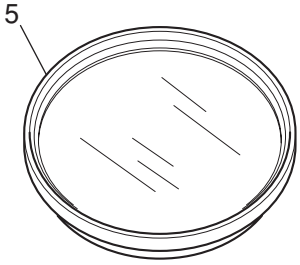
ND-2 Filter



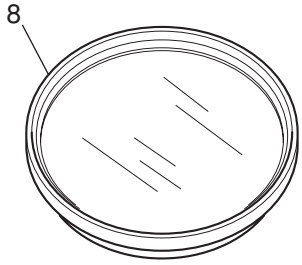
Standard Color Bar Chart



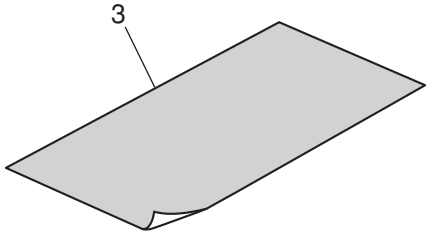
W-10 Filter



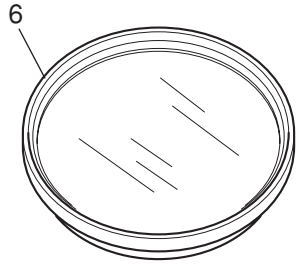
ND-4 Filter



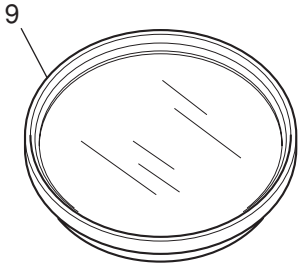
18% Gray Chart



FL-W Filter



ND-8 Filter



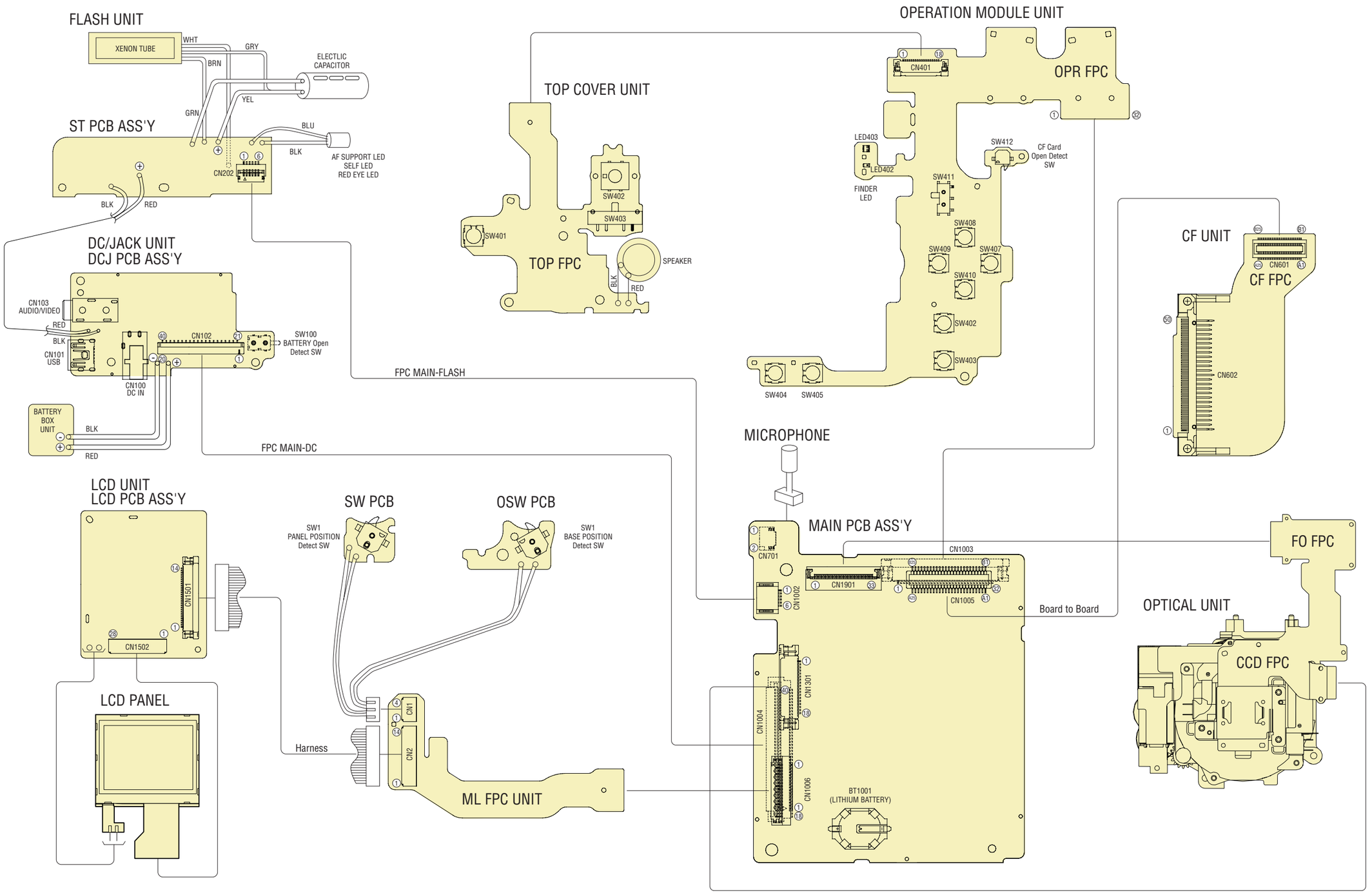
PARTS LIST

SYMBOL	PARTS NO.	CLASS	QTY	DESCRIPTION	REMARKS
1	DY9-2039-100	Y	1	COLOR VIEWER 5600K	
2	DY9-2002-000	Y	1	COLOR BAR CHART	
3	CY4-6016-000	Y	1	CHART, 18% GRAY	
4	CY9-1555-000	Y	1	FILTER, C-12	
5	CY9-1556-000	Y	2	FILTER, W-10	
6	CY9-1557-000	Y	1	FILTER, FL-W	
7	CY9-1552-000	Y	1	FILTER, ND-2	
8	CY9-1553-000	Y	1	FILTER, ND-4	
9	CY9-1554-000	Y	1	FILTER, ND-8	

DIAGRAMS

CONTENTS

1. INTERCONNECTION DIAGRAM



CONNECTORS

ST PCB UNIT

CN202	
1	UV_GND
2	STSP
3	VCHGLVL
4	EFCHG
5	LEDS_AN
6	LED_SELF

MAIN PCB

CN1002	
1	M_GND
2	STSP
3	VCHGLVL
4	EFCHG
5	AFLEDAN
6	AFLEDC

CN1003	
1	M_GND
2	CFOP
3	M_GND
4	MODE
5	POWER
6	VBATT_R
7	DIAL0
8	DIAL1
9	DIAL2
10	DIAL3
11	MENU
12	SET
13	DISP
14	EXP/WB/ ERASE
15	LEFT
16	RIGHT
17	UP
18	DOWN
19	VCC1
20	LED_MACRO
21	LED_ORANGE
22	LED_GREEN
23	WIDE
24	TELE
25	SW1
26	SW2
27	SCAN
28	LED_WEAK
29	C_GND
30	VBATTMP
31	SP-
32	SP+

CN1004	
1	VBUS
2	D+
3	C_GND
4	D-
5	C_GND
6	C_GND
7	VIDEO
8	AUDIO
9	C_GND
10	C_GND
11	VC_DET
12	C_GND
13	C_GND
14	VEE2
15	VBATT
16	VCC2AFE
17	VBATT
18	VCC2AFE
19	VBATT
20	VCC2HDR
21	E1PLAT
22	VCC1M
23	VCC1M
24	VCC1M
25	VCC1L
26	VCC1L
27	VCC1A
28	VCC1A
29	VDD2
30	VCC1
31	VCC1
32	VCC1
33	C_GND
34	VDD3
35	E3LAT
36	E2LAT
37	BTOP
38	M_GND
39	M_GND
40	M_GND

CN1005	
A1	C_GND
A2	/CD1
A3	D03
A4	D11
A5	D04
A6	D12
A7	D05
A8	D13
A9	D06
A10	D14
A11	D07
A12	D15
A13	/REG
A14	A00
A15	Not connected
A16	D00
A17	Not connected
A18	D01
A19	D08
A20	D02
A21	D09
A22	/IOIS16
A23	D10
A24	/CD2
A25	C_GND
B1	/CE1
B2	/CE2
B3	A10
B4	Not connected
B5	/OE
B6	/IORD
B7	A09
B8	/IOWR
B9	A08
B10	/WE
B11	A07
B12	IREQ
B13	VCC1
B14	VCC1
B15	A06
B16	Not connected
B17	A05
B18	Not connected
B19	A04
B20	RESET
B21	A03
B22	/WAIT
B23	A02
B24	Not connected
B25	A01

CN1006	
1	M_GND
2	BASE_POS
3	SCAN
4	ROTATE_SW
5	LTG_CS
6	LDR_CS
7	SDATA3
8	SCLK3
9	C_GND
10	LED_BLC
11	LCD_BY/COMP
12	LCD_RY
13	C_GND
14	LCD_YS
15	C_GND
16	CSYNC
17	VDD3
18	VCC1A_3

CN1301	
1	C_GND
2	V4
3	V3A
4	V3B
5	V2
6	V1A
7	V1B
8	VL
9	CSUB
10	SUB
11	C_GND
12	H1
13	H2
14	RG
15	VDD
16	C_GND
17	C_GND
18	VOUT

CN1701	
1	MIC
2	MIC_GND

CN1901	
1	ZMRST_CO
2	RST_COM
3	ZMRST_AN
4	AFRST_AN
5	ZM+
6	ZM+
7	ZM+
8	ZM+
9	ZM-
10	ZM-
11	ZM-
12	ZM-
13	AFRST_CO
14	ZMPO_COM
15	ZMPO1_AN
16	ZMPO0_AN
17	ZMPO1_CO
18	ZMPO0_CO
19	C_GND
20	C_GND
21	AFB+
22	AFA+
23	AFB-
24	AFA-
25	THM+
26	IRB+
27	IRB-
28	IRA-
29	IRA+
30	SHT+
31	SHT+
32	SHT-
33	SHT-

OPR FPC

CN401	
1	WEAK_AN
2	LED_WEAK
3	SP+
4	SP-
5	POWER
6	VBATT_R
7	M_GND
8	M_GND
9	M_GND
10	DIAL3
11	DIAL0
12	DIAL1
13	DIAL2
14	SCAN
15	SW2
16	SW1
17	TELE
18	WIDE

ML FPC

CN1	
1	BASE_POS
2	SCAN
3	SCAN
4	ROTATE_SW

CN2	
1	LTG_CS
2	LDR_CS
3	SDATA3
4	SCLK3
5	GND
6	LED_BLC
7	LCD_BY/COMP
8	LCD_RY
9	GND
10	LCD_YS
11	GND
12	CSYNC
13	VDD3
14	VCC1A_3

LCD PCB

CN1501	
1	HDB
2	PSAVE
3	DSAVE
4	CKI
5	FRP
6	POCB
7	Not connected
8	PD
9	XVD
10	CS
11	CLK
12	DI
13	HDI
14	VDD
15	VGH
16	VDC
17	VSS
18	C1
19	C2
20	VGL
21	VSS
22	VDD
23	VSH
24	R
25	B
26	G
27	VBC
28	VCOM

CN1502	
1	LTG_CS
2	LDR_CS
3	SDATA3
4	SCLK3
5	GND
6	LED_BLC
7	LCD_BY/COMP
8	LCD_RY
9	GND
10	LCD_YS
11	GND
12	CSYNC
13	VDD3
14	VCC1A_3

DCJ PCB UNIT

CN100	
1	BATT+
2	GND
3	BATT-

CN101	
1	VBUS
2	D-
3	D+
4	Not connected
5	UV_GND

CN102	
1	GND
2	GND
3	GND
4	BTOP
5	E2LAT
6	E3LAT
7	VDD3
8	GND
9	VCC1
10	VCC1
11	VCC1
12	VDD2
13	VCC1A
14	VCC1A
15	VCC1L
16	VCC1L
17	VCC1M
18	VCC1M
19	VCC1M
20	E1PLAT
21	VCC2HDR
22	VBATT
23	VCC2AFE
24	VBATT
25	VCC2AFE
26	VBATT
27	VEE2
28	GND
29	GND
30	VC_DET
31	GND
32	Audio_GND
33	Audio
34	Video
35	Vi deo_GND
36	UV_GND
37	D-
38	UV_GND
39	D+
40	VBUS

CN103	
1	GND
2	AUDIO
3	VIDEO
4	VC_DET

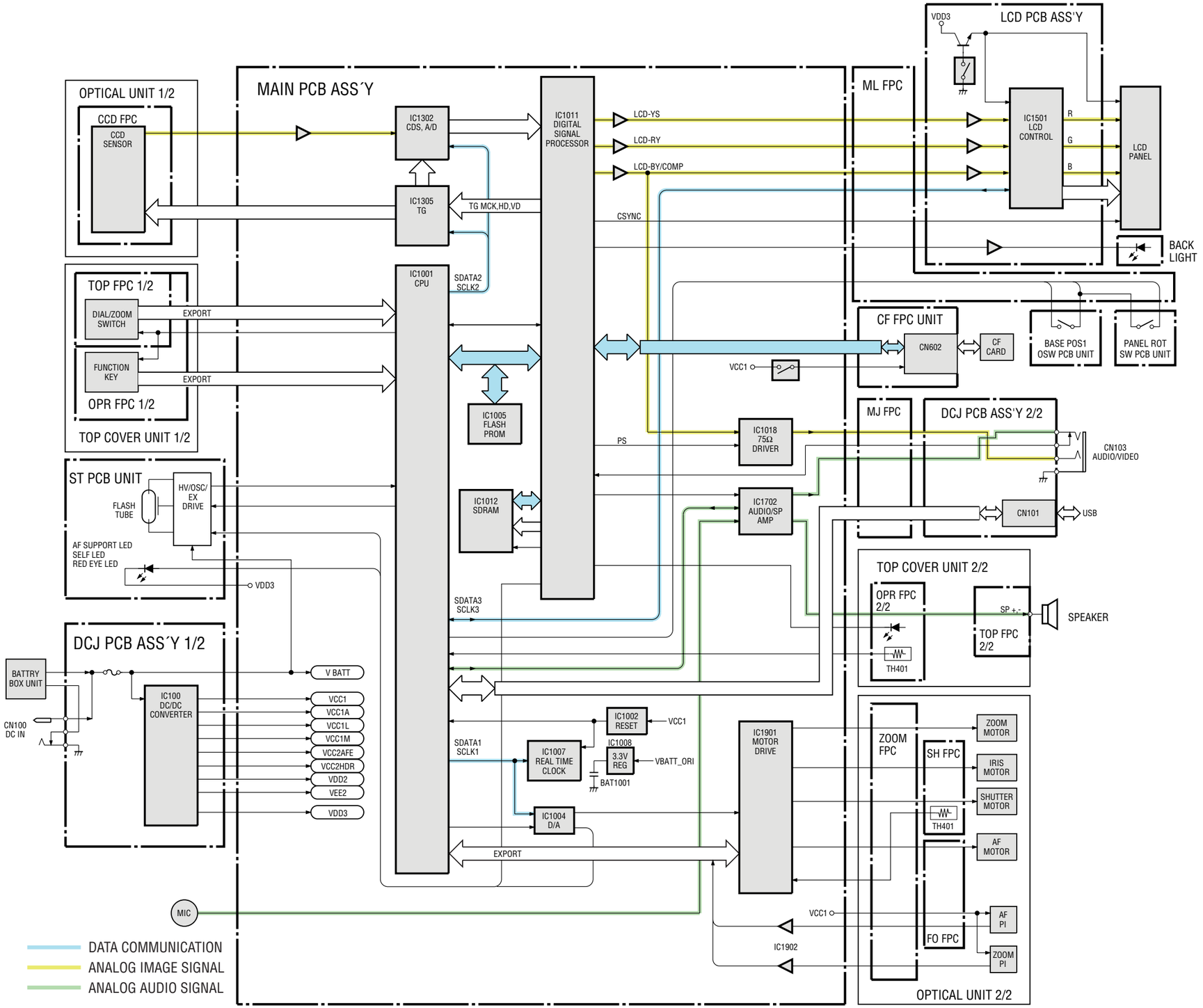
CF FPC UNIT

CN601	
A1	C_GND
A2	/CD1
A3	D03
A4	D11
A5	D04
A6	D12
A7	D05
A8	D13
A9	D06
A10	D14
A11	D07
A12	D15
A13	/REG
A14	A00
A15	Not connected
A16	D00
A17	Not connected
A18	D01
A19	D08
A20	D02
A21	D09
A22	/IOIS16
A23	D10
A24	/CD2
A25	C_GND
B1	/CE1
B2	/CE2
B3	A10
B4	Not connected
B5	/OE
B6	/IORD
B7	A09
B8	/IOWR
B9	A08
B10	/WE
B11	A07
B12	IREQ
B13	VCC1
B14	VCC1
B15	A06
B16	Not connected
B17	A05
B18	Not connected
B19	A04
B20	RESET
B21	A03
B22	/WAIT
B23	A02
B24	Not connected
B25	A01

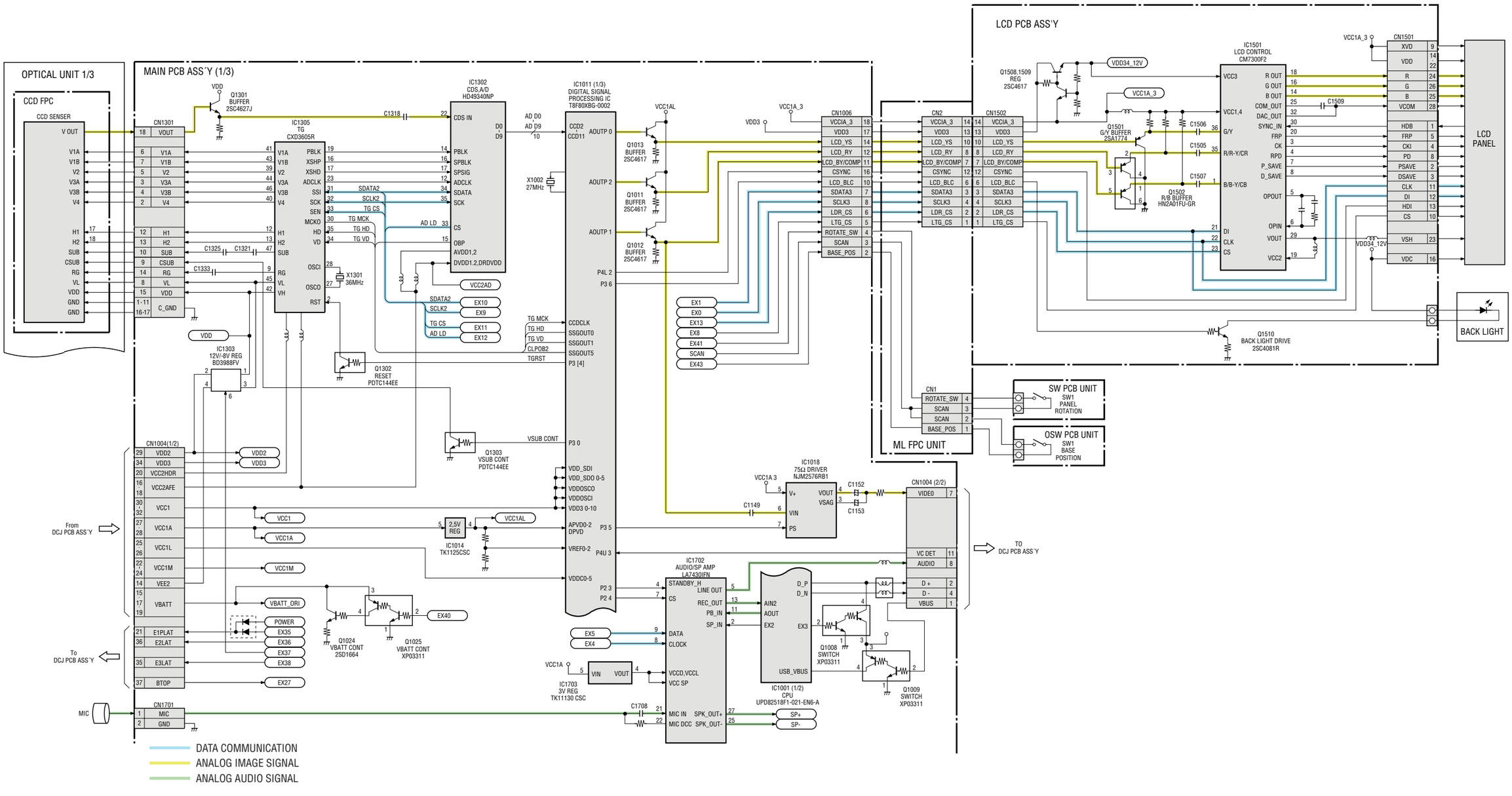
CN602	
1	GND
2	D03
3	D04
4	D05
5	D06
6	D07
7	/CE1
8	A10
9	/OE
10	A09
11	A08
12	A07
13	VCC
14	A06
15	A05
16	A04
17	A03
18	A02
19	A01
20	A00
21	D00
22	D01
23	D02
24	/IOIS16
25	/CD2
26	/CD1
27	D11
28	D12
29	D13
30	D14
31	D15
32	/CE2
33	/VS1
34	/IORD
35	/IOWR
36	/WE
37	IREQ
38	VCC
39	/CSEL
40	/VS2
41	RESET
42	/WAIT
43	/INPACK
44	/REG
45	/SPKR
46	/STSCHG
47	D08
48	D09
49	D10
50	GND

2. BLOCK DIAGRAMS

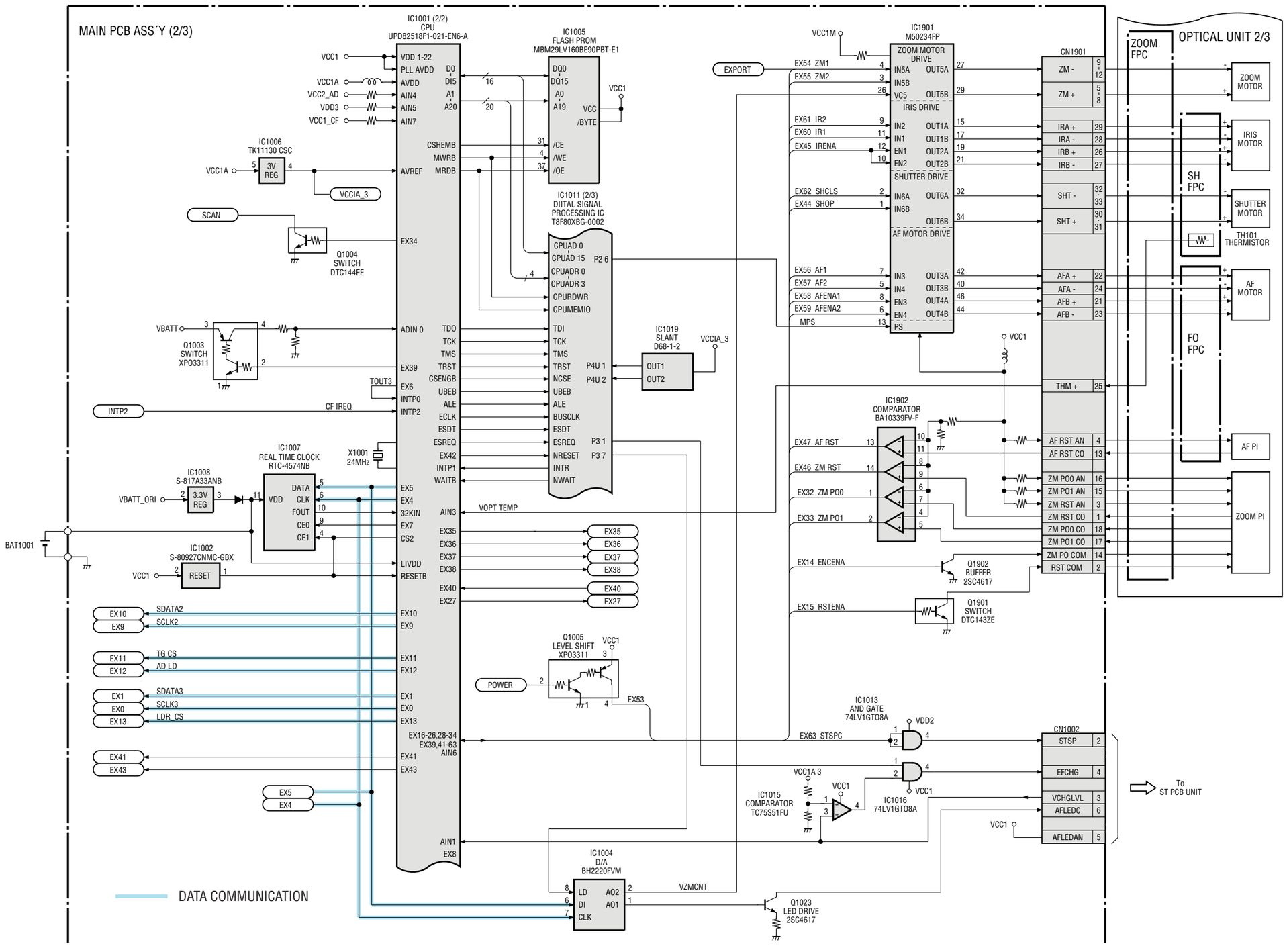
2.1 OVERALL



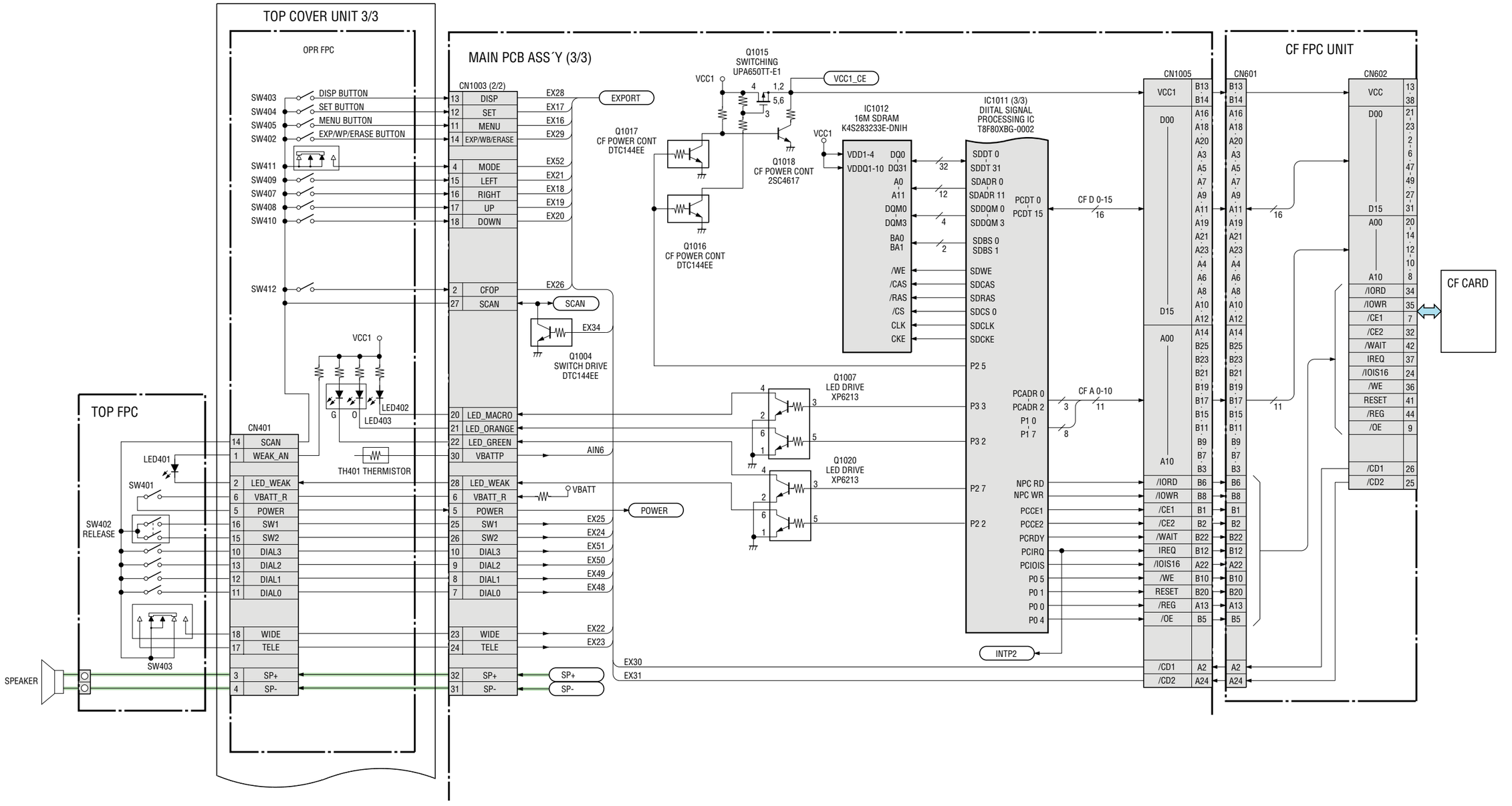
2.2 MAIN PCB ASS'Y (1/3)



2.3 MAIN PCB ASS'Y (2/3)

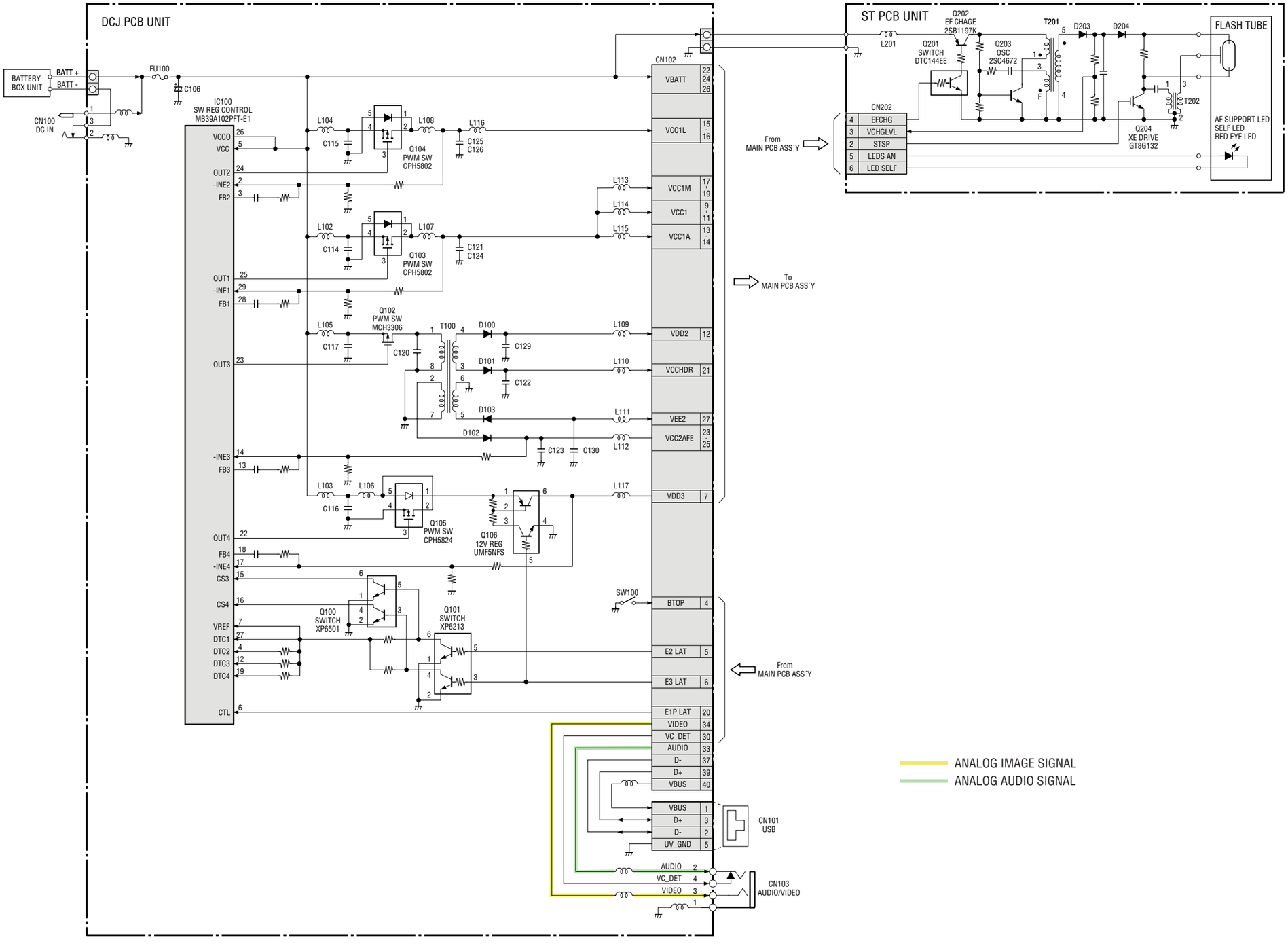


2.4 MAIN PCB ASS'Y (3/3)



ANALOG AUDIO SIGNAL

2.5 POWER BLOCK



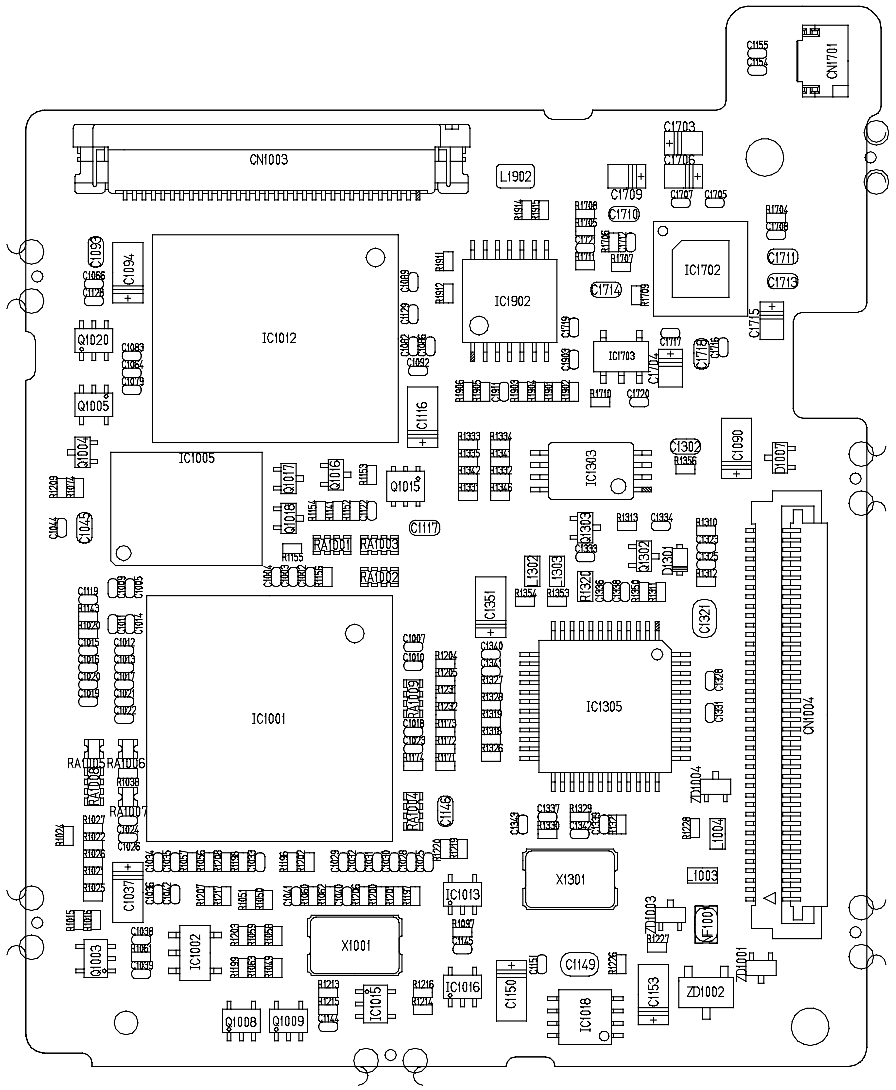
2.6 Abbreviation in Block Diagrams

Abbreviation	Nominal name	Description
ADC	Analog-to-Digital (A/D) Converter	
AE	Automatic Exposure control	
AF	Automatic Focussing control	
AND	Logic AND circuit	
R-Y/B-Y		Color difference signals of TV system
BPF	Band-Pass Filter	
BUFFER	Buffer circuit	
C	Chrominance signal	Color component signal of TV system
CCD	Charge-Coupled Device	CCD imager
CDS	Correlated Double Sampling system	
COMP.VIDEO	Composite video signal	
COMPARATOR	Voltage comparator	
CPU	Central Processing Unit	
DAC	Digital-to-Analog (D/A) Converter	
DRAM	Dynamic Random Access Memory	Memory with which read and write are freely possible.
DSP	Digital Signal Processing	Typically DSP device
EEPROM	Electrically Erasable PROM	PROM that is electrically erasable.
EVF	Electronic View Finder	
FET	Field Effect Transistor	
FLASH MEMORY		Non-volatile memory with which write and read are freely possible.
HPF	High-Pass Filter	
I/F	InterFace	The circuit that interconnects 2 devices or circuits.
IGBT	Insulated Gate Bipolar Transistor	Conductivity-modulation type FET transistor
INV.	Logic Inverter circuit	
IR	InfraRed ray	
IRIS	Iris	
LCD	Liquid Crystal Device	Typically LCD display
LED	Light Emitting Diode	Typically LED display
LPF	Low-Pass Filter	
NTSC	National Television System Committees	NTSC color TV system developed in USA
OP Amp	OPerational Amplifier	
OR	Logic OR circuit	
OSC	OSCillator	
PAL	Phase Alternating by Line	PAL color TV system developed in Germany
PLL	Phase Locked Loop	
PROM	Programmable Read Only Memory	Non-volatile memory in which program can be written.
PWM	Pulse Width Modulation	
REG.	REGulated power supply	
RTC	Real Time Clock	Reference clock oscillator
SDRAM	Synchronous Dynamic RAM	DRAM whose bus interface is synchronous.
SECAM	SEquential Colour À Mémoire	SECAM color TV system developed in France
SW REG	SWitching REGulator	Switching type regulated power supply device
TG	Timing Generator	
USB	Universal Serial Bus	USB type serial data communication system
VCO	Voltage Controlled Oscillator	
VCXO	Voltage Controlled X'tal Oscillator	
XE	Xenon Tube	
Y	Y-signal	Luminance component signal of TV system

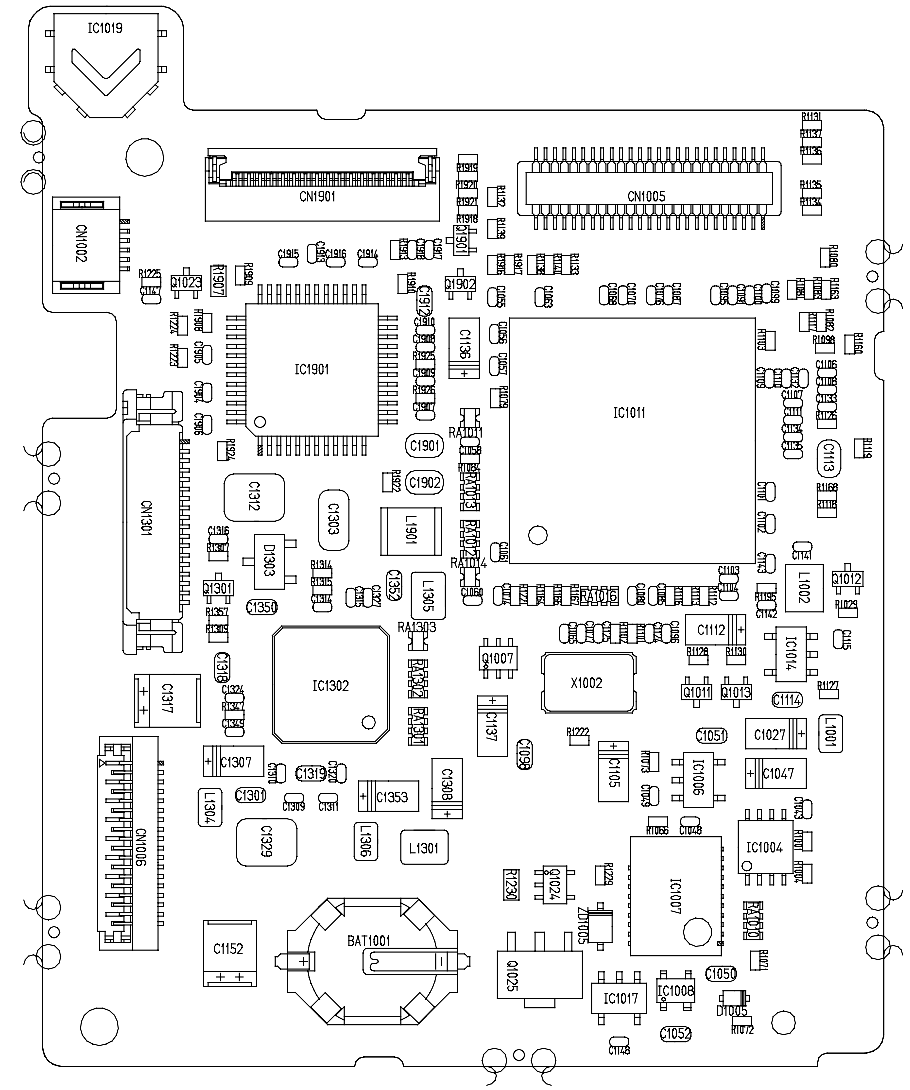
3. P.C.B. DIAGRAMS

3.1 MAIN PCB ASS'Y

MAIN PCB ASS'Y (COMPONENT SIDE)

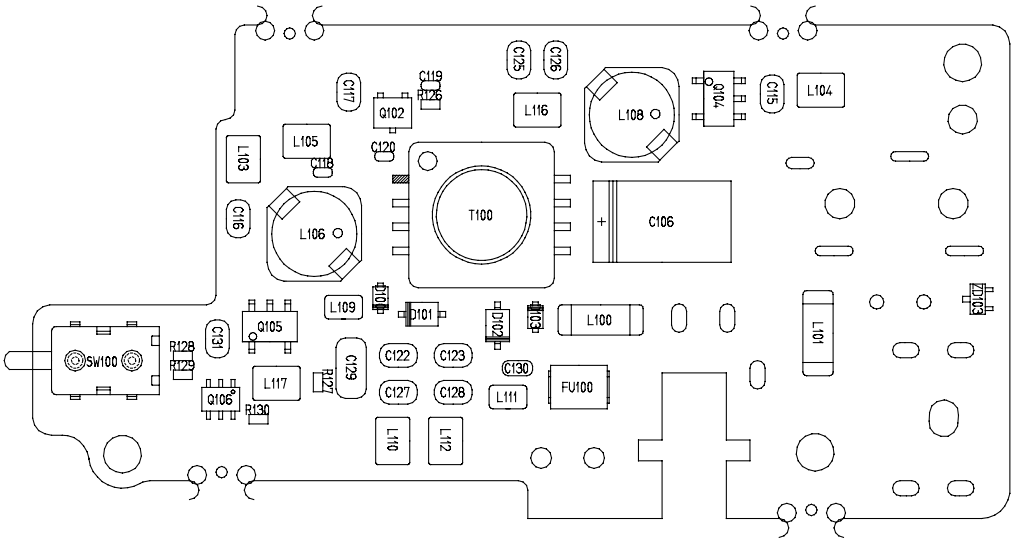


MAIN PCB ASS'Y (CONDUCTOR SIDE)

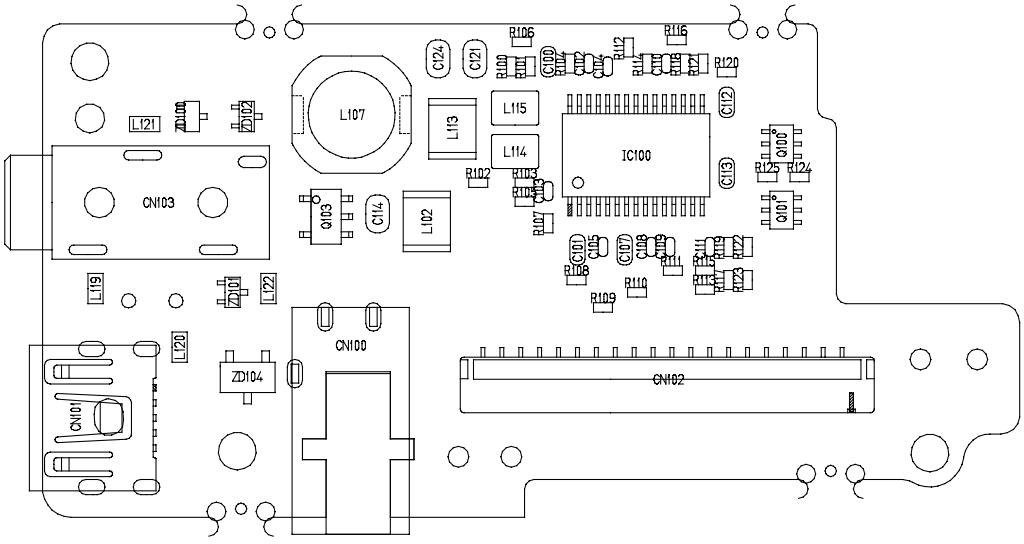


3.2 DCJ PCB ASS'Y

DCJ PCB ASS'Y (COMPONENT SIDE)

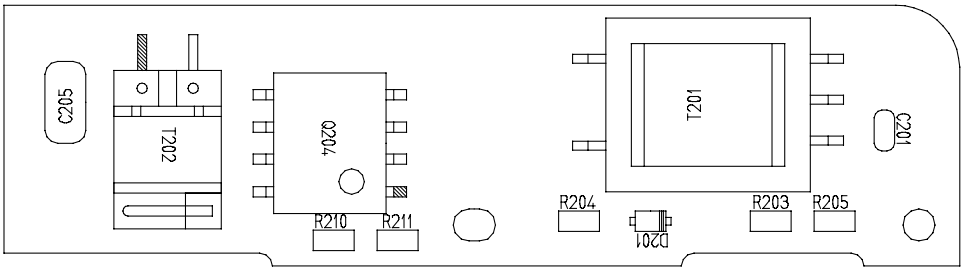


DCJ PCB ASS'Y (CONDUCTOR SIDE)

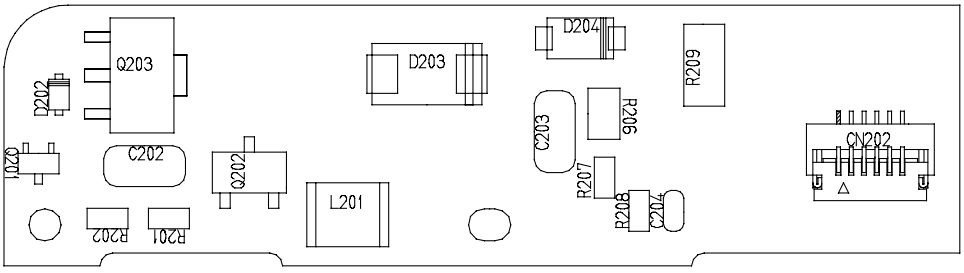


3.3 ST PCB ASS'Y

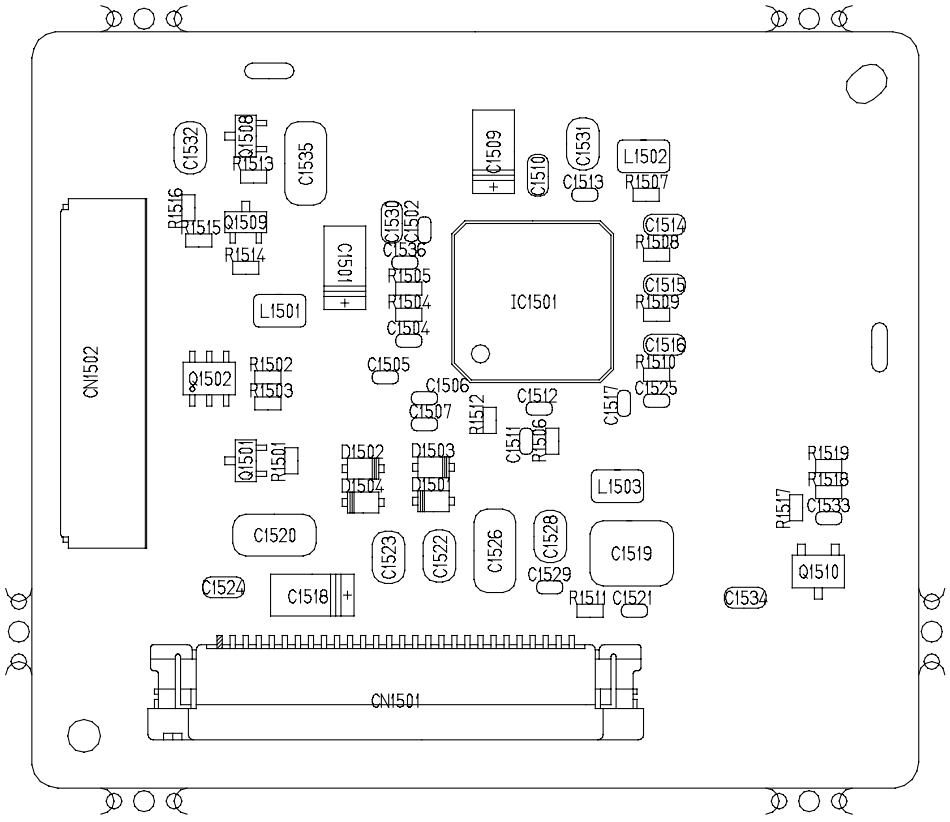
ST PCB ASS'Y (COMPONENT SIDE)



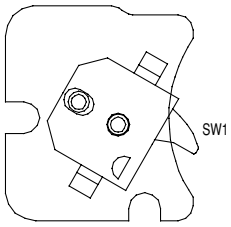
ST PCB ASS'Y (CONDUCTOR SIDE)



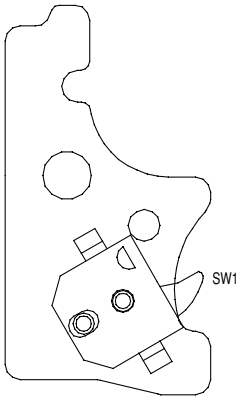
3.4 LCD PCB ASS'Y



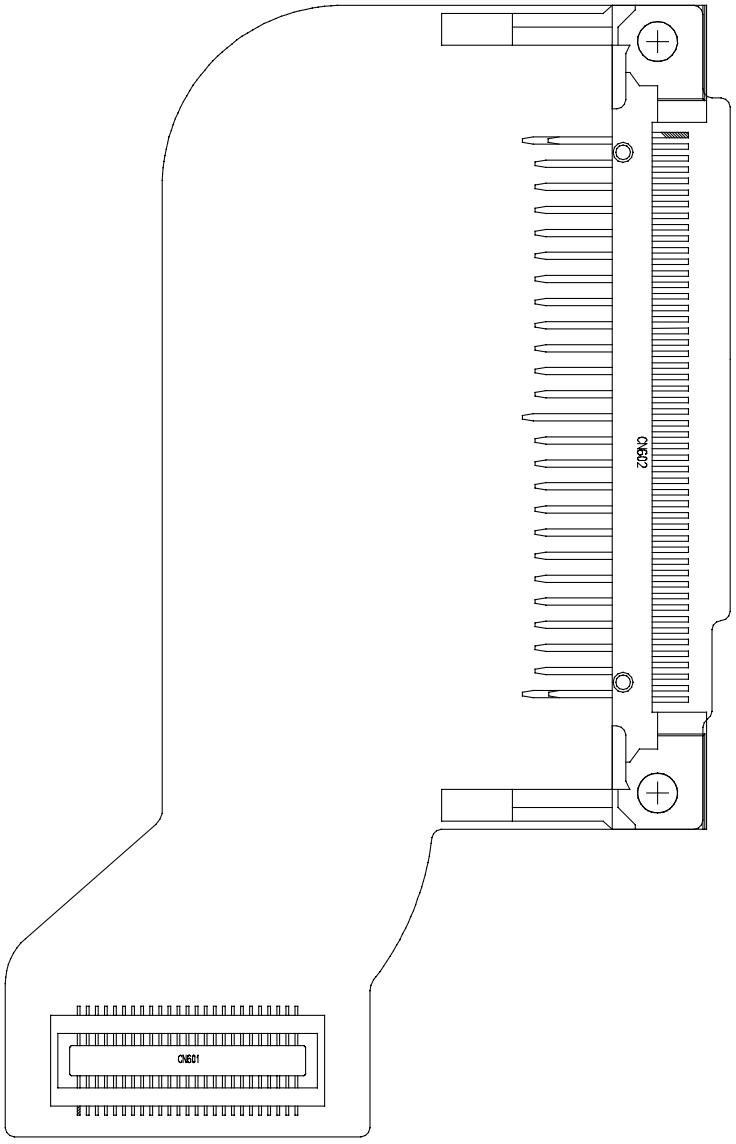
3.5 SW PCB ASS'Y



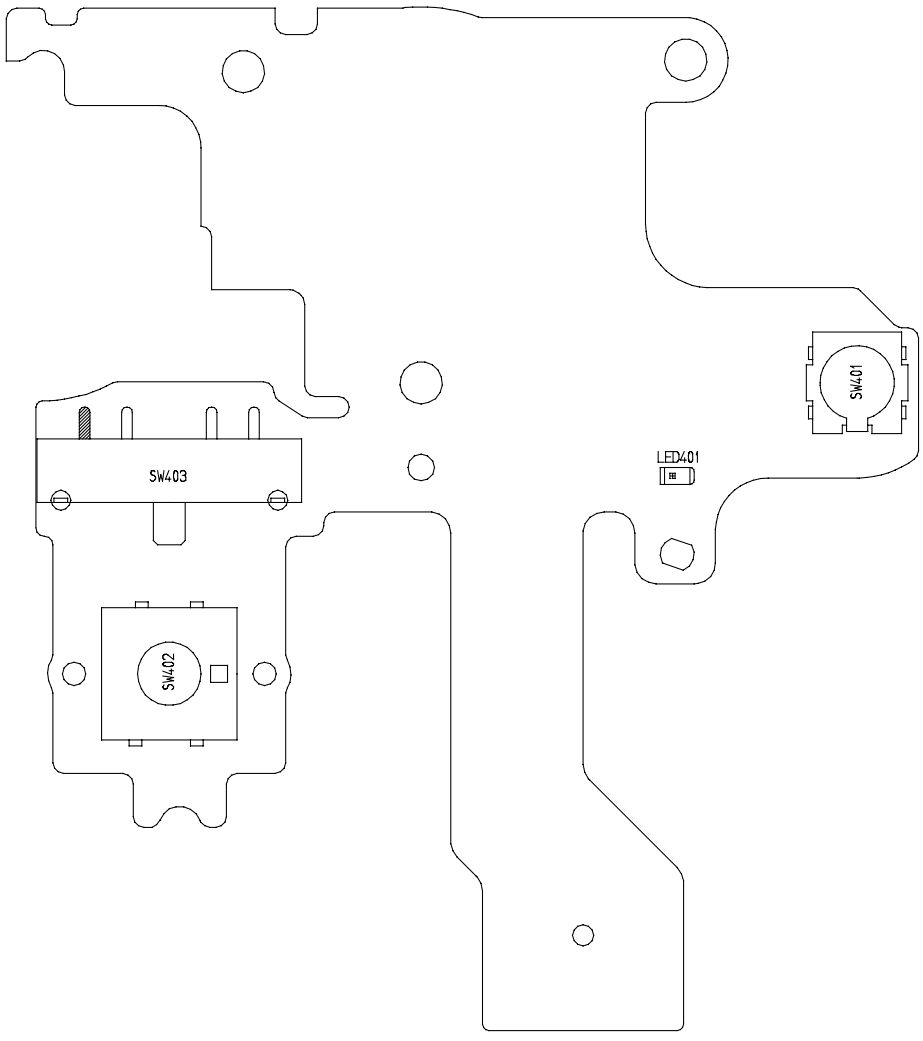
3.6 OSW PCB ASS'Y



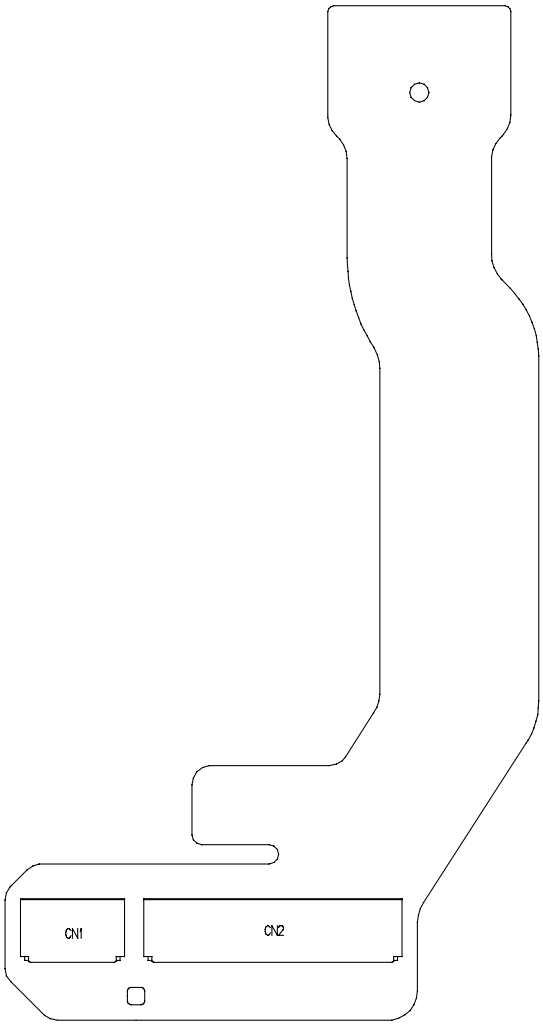
3.7 CF FPC



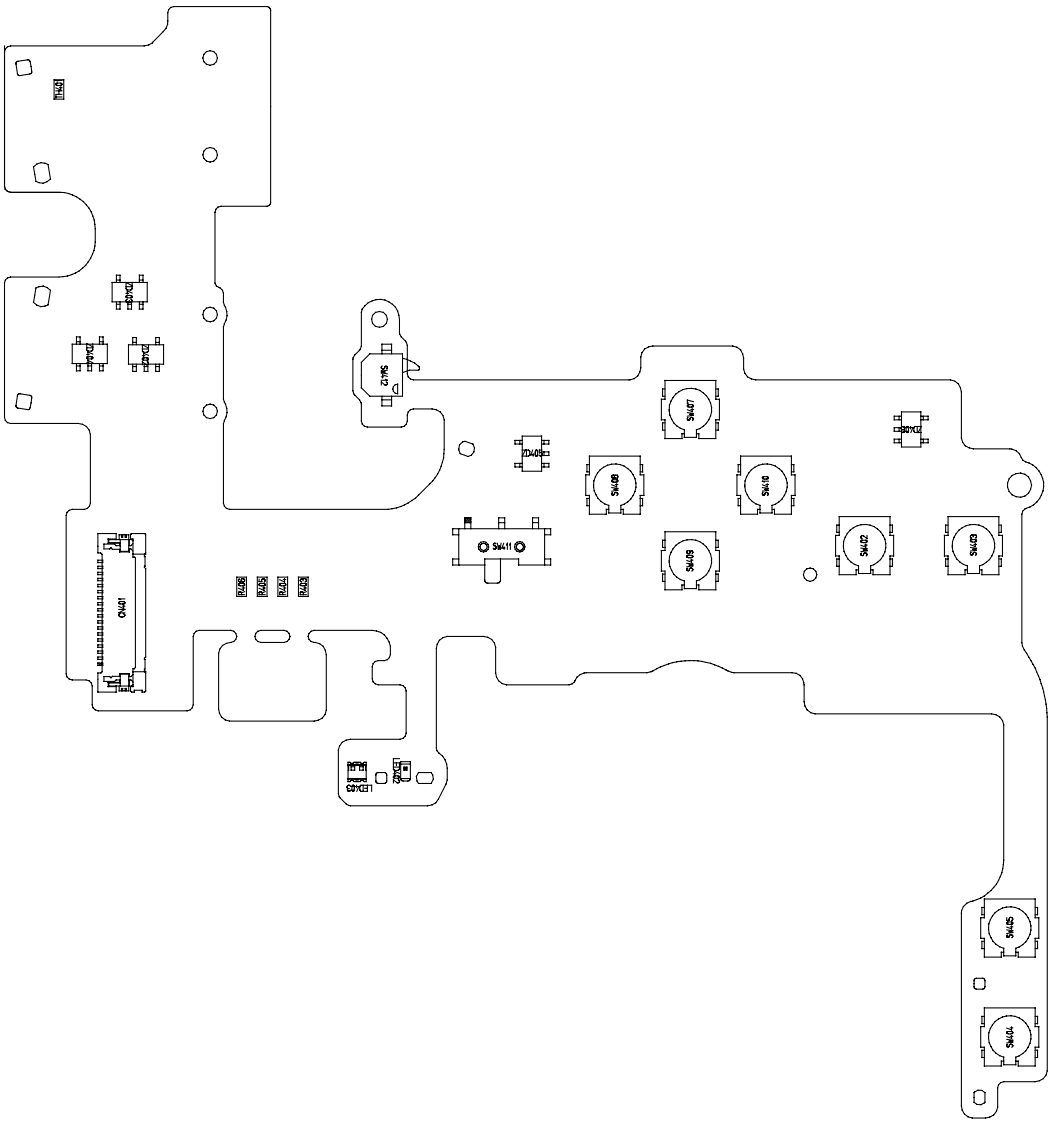
3.8 TOP FPC



3.9 ML FPC



3.10 OPR FPC



3.11 SH FPC