

CANOSCAN

FB330/FB630

SERIES

SERVICE

MANUAL

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Use of this manual should be strictly supervised
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LIST OF SERIAL NUMBER

CanoScan FB330P	F91-3511-200	AZA000000-
	F91-3521-200	MZA000000-
	F91-3541-200	DZA000000-
	F91-3551-200	EZA000000-
	F91-3561-200	FZA000000-
	F91-3571-200	LZA000000-
	F91-3581-200	JZA000000-
	F91-3589-200	RZA000000-
	F91-3591-200	KZA000000-
	CanoScan FB630P	F91-3611-100
F91-3631-100		CZB000000-
F91-3641-100		DZB000000-
F91-3651-100		EZB000000-
F91-3661-100		FZB000000-
F91-3671-100		LZB000000-
F91-3611-200		AZC000000-
F91-3621-200		MZC000000-
F91-3631-200		CZC000000-
F91-3641-200		DZC000000-
F91-3651-200		EZC000000-
F91-3661-200		FZC000000-
F91-3671-200		LZC000000-
F91-3681-200		JZC000000-
F91-3689-200		RZC000000-
F91-3691-200	KZC000000-	
CanoScan FB630U	F91-3831-100	CZD000000-
	F91-3841-100	DZD000000-
	F91-3861-100	FZD000000-
	F91-3871-100	LZD000000-
CanoScan FB636U	F91-3812-100	AZE000000-
	F91-3842-100	DZE000000-
	F91-3872-100	LZE000000-
	F91-3882-100	JZE000000-
	F91-3892-100	KZE000000-

PREFACE

This service manual contains the basic information necessary for servicing the FB330P/FB630P/FB630U/FB636U image scanners.

The service manual consists of the following chapters.

Chapter 1: General Descriptions

Features, specifications, exterior features, installation, customer's daily maintenance

Chapter 2: Operation and Timing

Basic operation, optical system, image processing system, control system, power supply

Chapter 3: Mechanical System

Externals, drive system, optical system, PCB

Chapter 4: Maintenance and Servicing

Periodical replacement parts, consumable parts durability, periodical servicing, special tools, solvents and lubricants

Chapter 5: Troubleshooting

Introduction, troubleshooting, location of electrical parts, canon scanner test

Chapter 6: Parts Catalog

Appendix: General circuit diagram, main PCB circuit diagram

The information in this service manual is subject to change as the product is improved. All relevant information in such cases will be provided by the service information bulletins.

A thorough understanding of the FB330P/FB630P/FB630U/FB636U, based on the service manual and service information bulletins, is vital to the serviceman in maintaining the product quality and performance, and in locating and repairing the cause of malfunctions.

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CHAPTER 1

GENERAL DESCRIPTIONS

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I. FEATURES

CanoScan FB330P (hereafter FB330P) with 300 x 600 dpi resolution, CanoScan FB630P (hereafter FB630P) and CanoScan FB630U/FB636U (hereafter FB630U/FB636U) with 600 x 1200 dpi resolution are flatbed image scanners incorporating the following features.

1. High gradation and high image quality are achieved by employing a highly sensitive contact image sensor with LIDE (LED Indirect Exposure) technology for the reading unit, and by reading each RGB color by 12 bit and outputting by 8 bit.
2. The scanner is a small size of 256.0(W) x 372.5(D) x 39.0(H) mm, and a light weight of 1.5 kg by using a downsized scanning unit.
3. The scanner can easily be connected to the host computer through a parallel interface (FB330P/FB630P) or a USB interface (FB630U/FB636U).
4. The scanner can be placed vertically to scan by using an optional stand.
5. CanoScan FB630U/FB636U draws its power from USB port on the host computer requiring no AC adapter.

II. SPECIFICATIONS

■ CanoScan FB330P

MAIN UNIT

- Type : Flat bed image scanner

READING UNIT

- Image sensor : 2552 pixels contact image sensor
- Light source : LED indirect exposure (RGB each)
- Max. document size : A4 or Letter (216 x 297 mm)
- Image output : RGB 8 bits per channel (input 12 bits)
- Resolution : 300 x 600 dpi
- Scan time : 60 sec. (color, A4, 300 dpi)
20 sec. (grayscale, A4, 300 dpi)
- Resolution conversion : 75/150/300 dpi (Horizontal)
75/150/300/600 dpi (Vertical)
- Cropping area : A rectangular frame can be specified.

INTERFACE

- Interface : Parallel interface (IEEE-1284/ECP)/1 male and 1 female
Power terminal for AC adapter

OTHERS

- Operating environment : Temperature range, 5 to 35°C
Humidity range, 10 to 90%
Air pressure range, 613 to 1013 hPa
- Power consumption : 5.0 W (during operation), 2.5 W (during standby)
- Dimensions : 256.0(W) x 372.5(D) x 39.0(H) mm
- Weight : 1.5 kg

■ CanoScan FB630P**MAIN UNIT**

- Type : Flat bed image scanner

READING UNIT

- Image sensor : 5152 pixels contact image sensor
- Light source : LED indirect exposure (RGB each)
- Max. document size : A4 or Letter (216 x 297 mm)
- Image output : RGB 8 bits per channel (input 12 bits)
- Resolution : 600 x 1200 dpi
- Scan time : 120 sec. (color, A4, 600 dpi)
40 sec. (grayscale, A4, 600 dpi)
- Resolution conversion : 75/150/300/600 dpi (Horizontal)
75/150/300/600/1200 dpi (Vertical)
- Cropping area : A rectangular frame can be specified.

INTERFACE

- Interface : Parallel interface (IEEE-1284/ECP)/1 male and 1 female
Power terminal for AC adapter

OTHERS

- Operating environment : Temperature range, 5 to 35°C
Humidity range, 10 to 90%
Air pressure range, 613 to 1013 hPa
- Power consumption : 5.0 W (during operation), 2.5 W (during standby)
- Dimensions : 256.0(W) x 372.5(D) x 39.0(H) mm
- Weight : 1.5 kg

■ CanoScan FB630U/FB636U

MAIN UNIT

- Type : Flat bed image scanner

READING UNIT

- Image sensor : 5152 pixels contact image sensor
- Light source : LED indirect exposure (RGB each)
- Max. document size : A4 or Letter (216 x 297 mm)
- Image output : RGB 8 bits per channel (input 12 bits)
- Resolution : 600 x 1200 dpi
- Scan time : 120 sec. (color, A4, 600 dpi)
40 sec. (grayscale, A4, 600 dpi)
- Resolution conversion : 75/150/300/600 dpi (Horizontal)
75/150/300/600/1200 dpi (Vertical)
- Cropping area : A rectangular frame can be specified.

INTERFACE

- Interface : USB interface (B plug) x 1

OTHERS

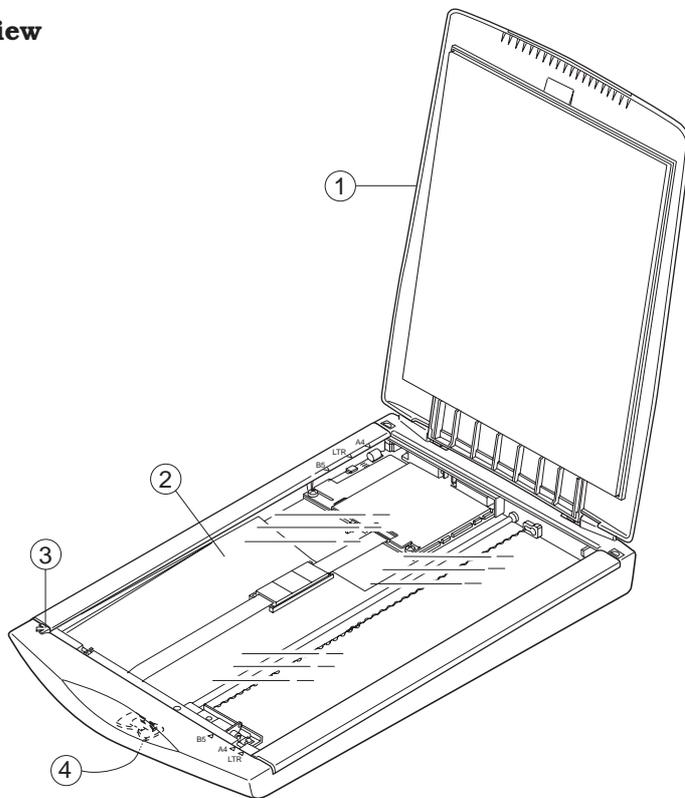
- Operating environment : Temperature range, 5 to 35°C
Humidity range, 10 to 90%
Air pressure range, 613 to 1013 hPa
- Power consumption : 5.0 W (during operation), 2.5 W (during standby)
- Dimensions : 256.0(W) x 372.5(D) x 39.0(H) mm
- Weight : 1.5 kg

Specifications are subject to change with product improvement.
--

III. EXTERIOR FEATURES

■ CanoScan FB330P/FB630P

A. Front View



- ① Document Cover
- ② Document Glass
- ③ Alignment Mark
- ④ Lock Switch

Figure 1-1

B. Rear View



- ① Power Terminal
- ② PC Port
- ③ Printer Port

Figure 1-2

■ CanoScan FB630U/FB636U

A. Front View

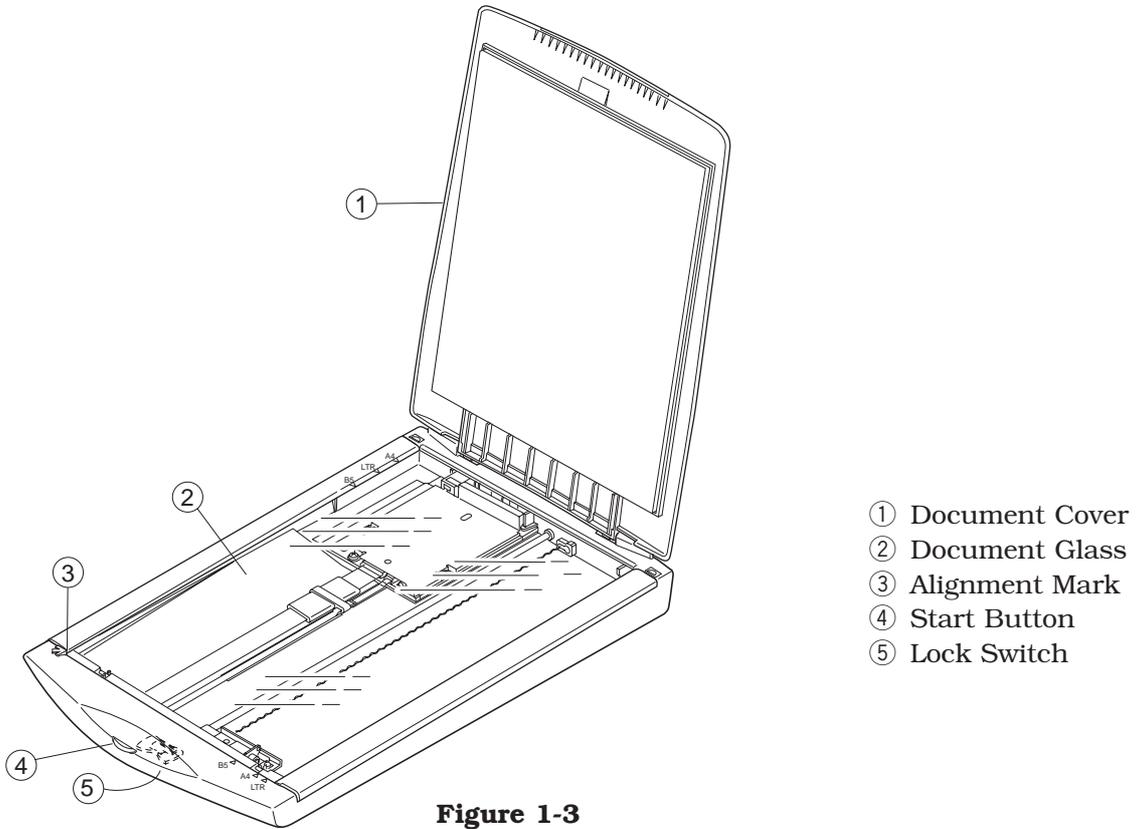


Figure 1-3

B. Rear View

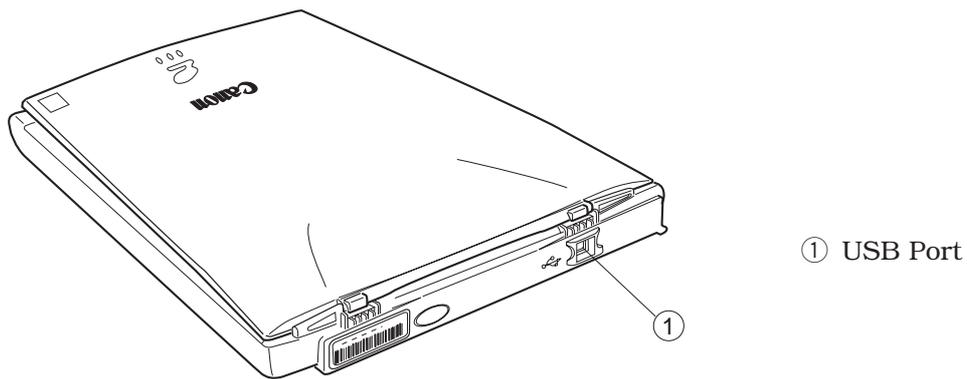


Figure 1-4

IV. INSTALLATION

A. Preface

The following installation conditions are required.

1. Ambient temperature should be between 5½C and 35½C, and humidity between 10% and 90%. Avoid locations near water faucets, boilers, humidifiers, or refrigerators.
2. Avoid locations subject to open flame, dust, or direct sunlight. If it is installed near a window, hang a curtain to block direct sunlight.
3. The room should be well ventilated.
4. Install on a sturdy and level desk, etc.
5. Moving a scanner from a cold place to a warm place can cause condensation on the metal parts, resulting in a faulty operation. Give the scanner at least one hour to adjust to the room temperature before unpacking.

B. Installation

1. Unlocking the lock

The scanner is shipped with the scanning unit locked by the lock switch to prevent damage during transport. Unlock the scanning unit to use the scanner.

- 1) Turn the scanner over as shown in Figure 1-5.

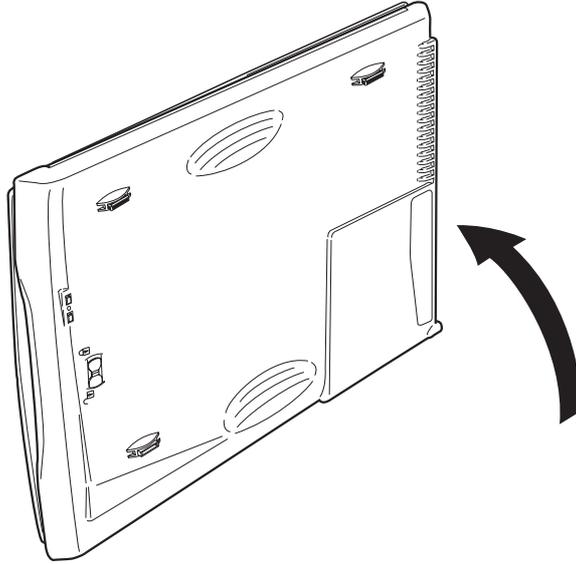


Figure 1-5

- 2) Push the lock switch in the arrow direction to unlock.

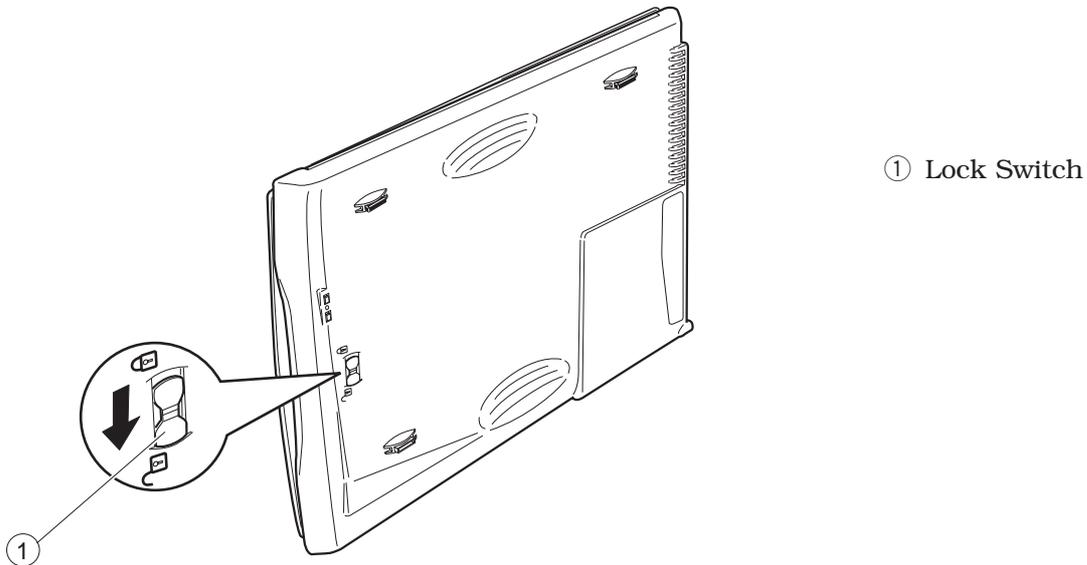


Figure 1-6

- 3) Return the scanner to its standard position.

Note: Always lock the scanning unit during transport.

C. Connecting to the Host Computer

FB330P/FB630P is connected to the parallel port, FB630U/FB636U is connected to the USB port on the host computer. This section explains how to connect the scanner to the host computer using a parallel cable or a USB cable supplied with the scanner. Refer to "Getting Started" for details. For connecting/disconnecting the host computer's cables, refer to the manual supplied with the host computer.

1. Connecting to the host computer (FB330P/FB630P)

- 1) Turn the host computer OFF. Disconnect the printer cable if it is connected to the parallel port on the host computer.
- 2) Connect the parallel cable supplied with the scanner to the parallel port on the host computer.
- 3) Connect the other end of the parallel cable to the PC port on the scanner.

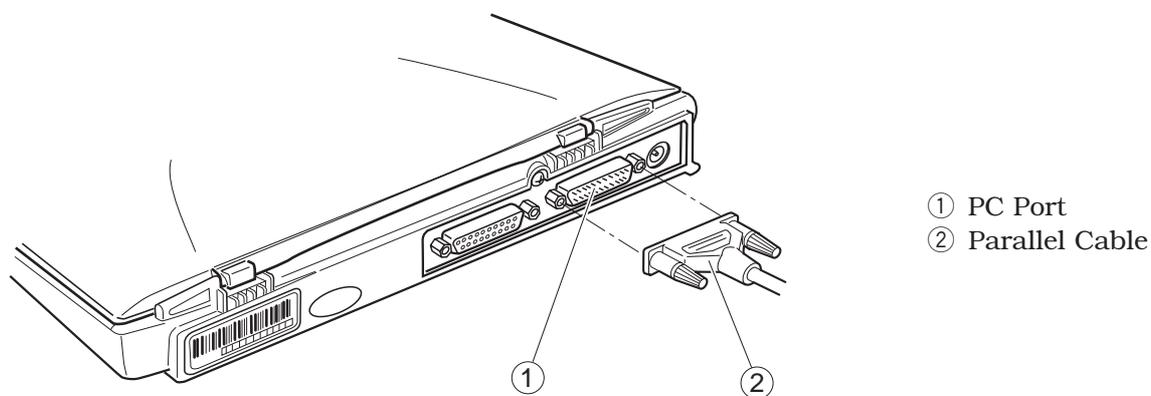


Figure 1-7

- 4) Connect the printer cable if it is disconnected in 1) to the printer port on the scanner.

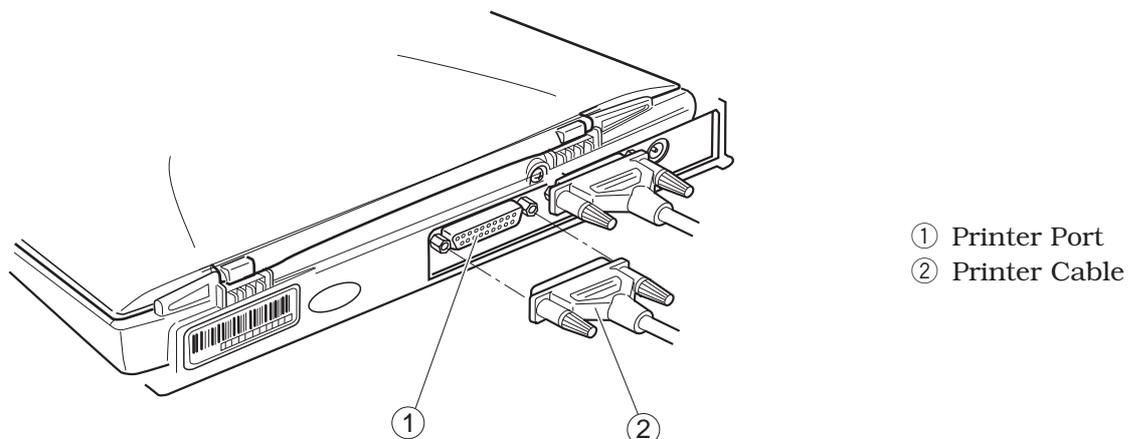


Figure 1-8

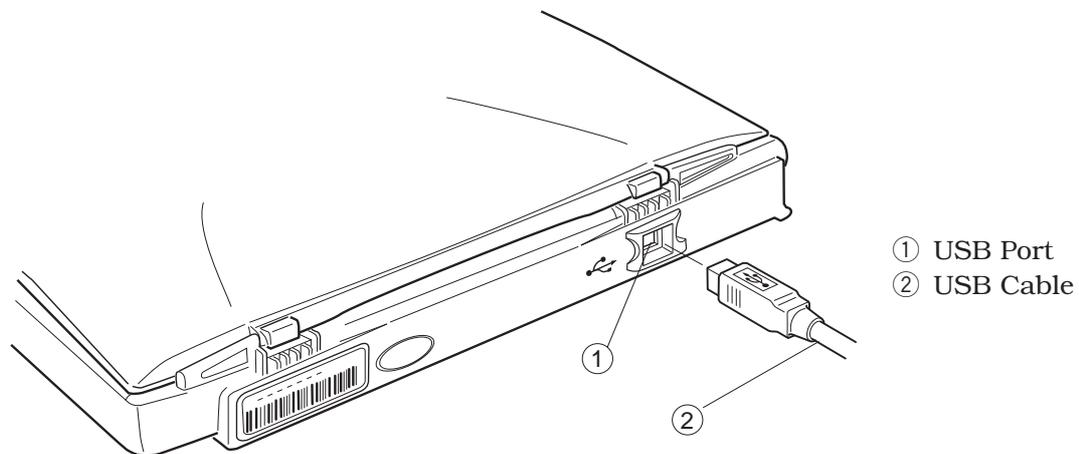
- 5) Connect the AC adapter to the power terminal on the scanner.

Note: Printer precautions

- * WPS (Windows Printing System) printer cannot be used in a daisy-chain configuration.
- * When a printer is daisy-chained to the scanner, turn the scanner ON to use the printer.

2. Connecting to the host computer (FB630U/FB636U)

- 1) Connect the flat connector (A plug) of the USB cable supplied with the scanner to the USB port on the host computer.
- 2) Connect the other end (B plug) of the USB cable to the USB port on the scanner.

**Figure 1-9**

D. Scanning a Document

- 1) Open the document cover.
- 2) Place a document on the document glass, orienting the image face down and aligning its top edge with the alignment mark.

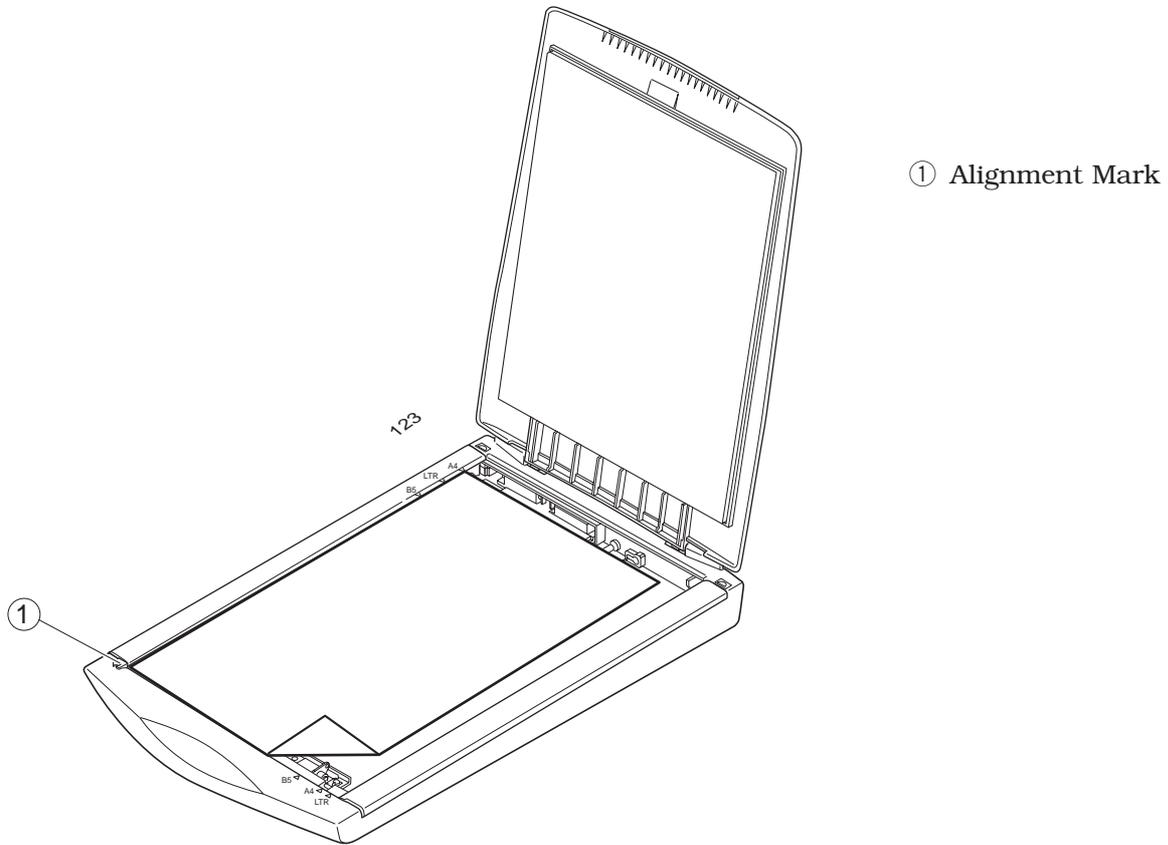


Figure 1-10

- 3) Close the document cover, caring not to dislodge the document.
- 4) Send the "SCAN" command from the host computer to scan.

V. CUSTOMER'S DAILY MAINTENANCE

Dirt on a document glass or a document cover may cause an unclear image or lines on an image. Clean the document glass and the document cover using the following procedures.

- 1) Turn the host computer OFF.
- 2) Disconnect all the cables from the scanner.
- 3) Wipe the dirt or dust off the document cover with a soft clean cloth dampened with water and well wrung. Wipe the document glass with a dry cloth.
- 4) Thoroughly wipe water off the document cover with a dry cloth.

CHAPTER 2

OPERATION AND TIMING

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I. BASIC OPERATION

A. Functions

The scanner functions are divided into the three main blocks of optical system, image processing system, and control system.

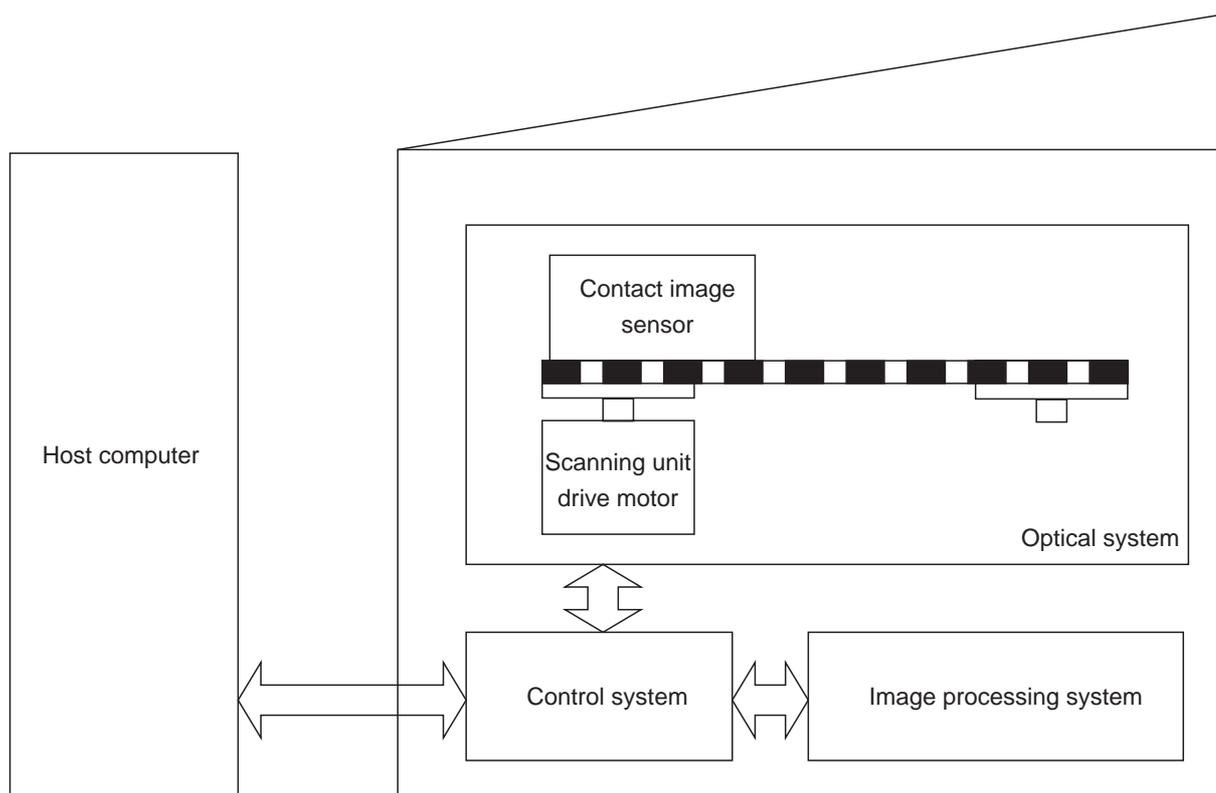


Figure 2-1

B. Outline of Electrical System

1. CanoScan FB330P/FB630P

Figure 2-2 shows the outline of electrical system of CanoScan FB330P/FB630P.

Major electrical control of the scanner is performed by the main PCB.

Image signals read by the contact image sensor are converted into digital data by the analog IC. The converted image data are image-processed by the gate array and output to the host computer via PC port.

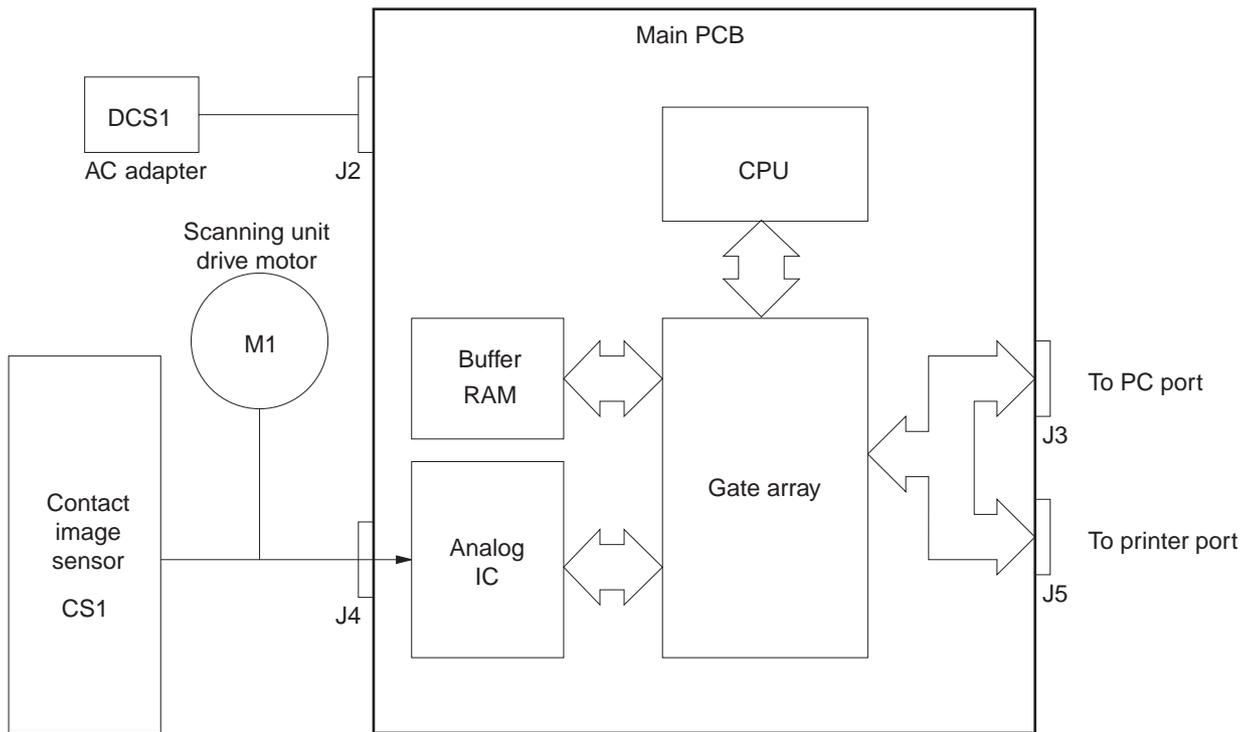


Figure 2-2