

Product: 1999 Canon GP405/335 Printer Service Repair Workshop Manual  
Full Download: <https://www.arepairmanual.com/downloads/1999-canon-gp405335-printer-service-repair-workshop-manual/>

# GP405/335

# SERVICE MANUAL

REVISION 0

**Canon**

**JAN. 1999**

**FY8-13FV-000**

Sample of manual. Download All 682 pages at:

<https://www.arepairmanual.com/downloads/1999-canon-gp405335-printer-service-repair-workshop-manual/>

COPYRIGHT © 1999 CANON INC. CANON 405/335 REV.0 JAN. 1999 PRINTED IN JAPAN (IMPRIME AU JAPON)

## IMPORTANT

THIS DOCUMENTATION IS PUBLISHED BY CANON INC., JAPAN, TO SERVE AS A SOURCE OF REFERENCE FOR WORK IN THE FIELD.

SPECIFICATIONS AND OTHER INFORMATION CONTAINED HEREIN MAY VARY SLIGHTLY FROM ACTUAL MACHINE VALUES OR THOSE FOUND IN ADVERTISING AND OTHER PRINTED MATTER.

ANY QUESTIONS REGARDING INFORMATION CONTAINED HEREIN SHOULD BE DIRECTED TO THE COPIER SERVICE DEPARTMENT OF THE SALES COMPANY.

THIS DOCUMENTATION IS INTENDED FOR ALL SALES AREAS, AND MAY CONTAIN INFORMATION NOT APPLICABLE TO CERTAIN AREAS.

***COPYRIGHT © 1999 CANON INC.***

***Printed in Japan  
Imprimé au Japon***

Use of this manual should be strictly supervised to avoid disclosure of confidential information.
---

Prepared by

OFFICE IMAGING PRODUCTS TECHNICAL SUPPORT DEPARTMENT 1  
OFFICE IMAGING PRODUCTS TECHNICAL SUPPORT DIVISION

**CANON INC.**

5-1, Hakusan, 7-chome, Toride-City, Ibaraki-Pref., 302-8501, Japan

Sample of manual. Download All 682 pages at:

<https://www.arepairmanual.com/downloads/1999-canon-gp405335-printer-service-repair-workshop-manual/>  
COPYRIGHT © 1999 CANON INC. CANON 405/335 REV.0 JAN. 1999 PRINTED IN JAPAN (IMPRIME AU JAPON)

# INTRODUCTION

The copier is a multi-function copier capable of serving as a copier, fax, and printer. This Service Manual provides information needed to service the copier in the field. For information on technologies used in common with the existing copiers, refer to the "Copier Basic Series" as necessary.

This Service Manual consists of the following chapters:

- |            |  |
|------------|--|
| Chapter 1  | General Description introduces the copier's features and specifications, shows how to operate the copier, and explains how copies are made.  |
| Chapter 2  | Basic Operation provides outlines of the copier's various mechanical workings.   |
| Chapter 3  | Exposure System discusses the principles of operation used for the copier's lens drive unit and scanner drive unit. It also explains the timing at which these drive units are operated, and shows how they may be disassembled/assembled and adjusted.  |
| Chapter 4  | Image Formation System discusses the principles of operation used for the copier's image processing units. It also explains the timing at which the various units involved in image processing are operated, and shows how they may be disassembled/assembled and adjusted.  |
| Chapter 5  | Laser Exposure System discusses the principles of operation used for the copier's laser unit. It also explains the timing at which the unit is operated, and shows how they may be disassembled/assembled and adjusted.  |
| Chapter 6  | Image Formation System discusses the principles of how images are formed. It also explains the timing at which the various units involved in image formation are operated, and show how they may be disassembled/assembled and adjusted.   |
| Chapter 7  | Pick-Up/Feeding System explains the principles of picking up and feeding copy paper in view of the functions of electrical and mechanical units used to move copy paper and in relation to their timing of operation. It also shows how these units may be disassembled/assembled and adjusted.                                    |
| Chapter 8  | Side Paper Deck explains the principles of operation used from when paper is picked up to when copies are delivered. It also explains the timing at which various drive units are operated, and shows how they may be disassembled/assembled and adjusted.   |
| Chapter 9  | Fixing System explains the principles used to fuse toner images to transfer media in view of the functions of electrical and mechanical units and in relation to their timing of operation. It also shows how these units may be disassembled/assembled and adjusted.  |
| Chapter 10 | Externals/Auxiliary Mechanisms shows the copier's external parts, and explains the principles used for the copier's various control mechanisms in view of the functions of electrical and mechanical units and in relation to their timing of operation. It also shows how these units may be disassembled/assembled and adjusted. |
| Chapter 11 | Systems explains connections and specifications related to systems and shows how to disassemble and assemble them.   |
| Chapter 12 | Installation introduces requirements for the site of installation, and shows how the copier may be installed using step-by-step instructions.  |

- Chapter 13 Maintenance and Servicing provides tables of periodically replaced parts and consumables/durables and scheduled servicing charts.
- Chapter 14 Troubleshooting provides tables of maintenance/inspection, standards/adjustments, and problem identification (image fault/malfunction).
- Appendix contains a general timing chart and general circuit diagrams.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.

All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins, and be able to identify and isolate faults in the machine.

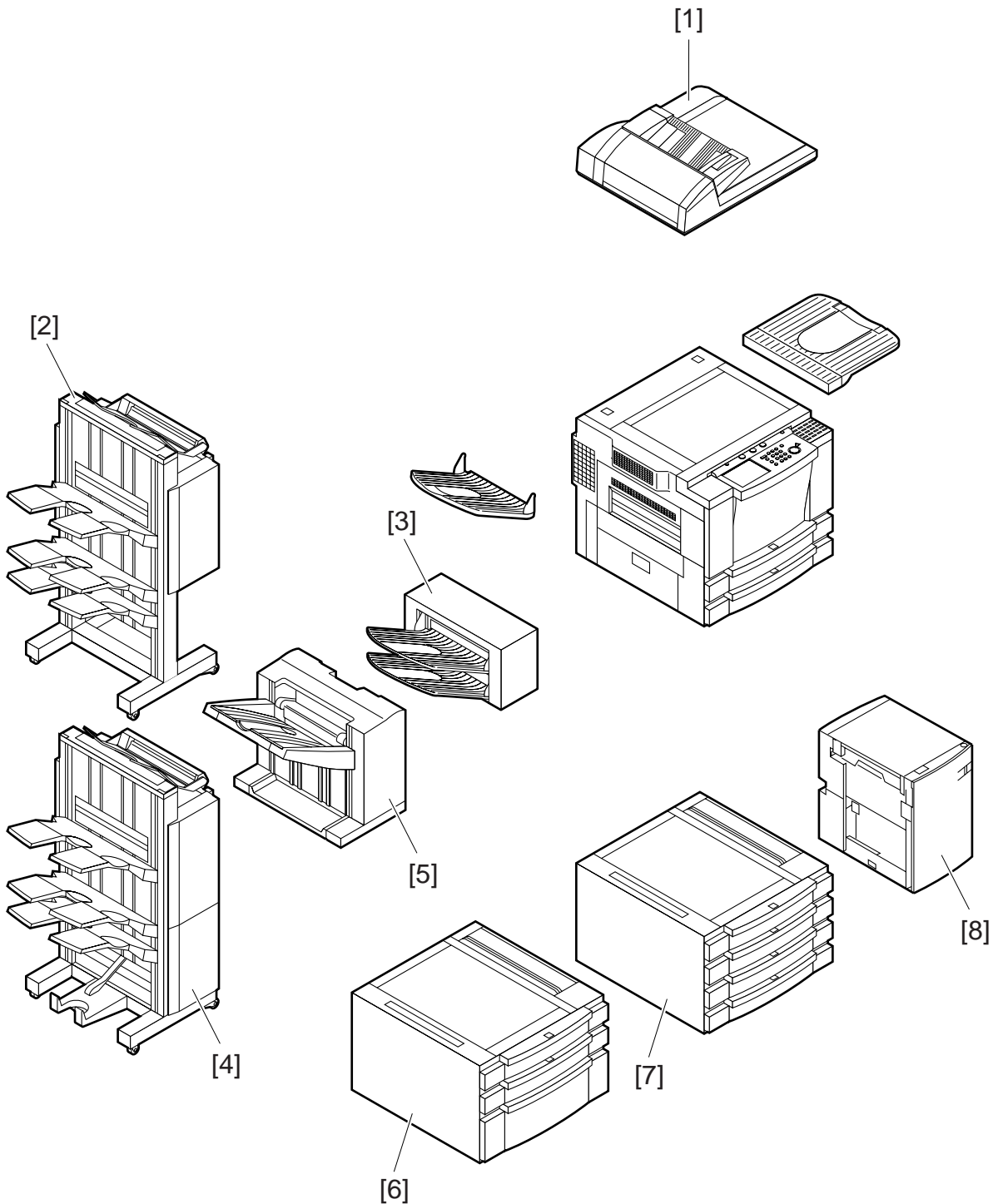
For a full understanding of the copier, this Service Manual should be used side by side with the separately available "Copier Basic Series." Refer to the descriptions in each of the following volumes:

- Volume 1
- Volume 2
- Volume 3
- Volume 4
- Volume 5
- Volume 6
- Volume 7

## System Configuration

The copier may be configured with its accessories as follows:

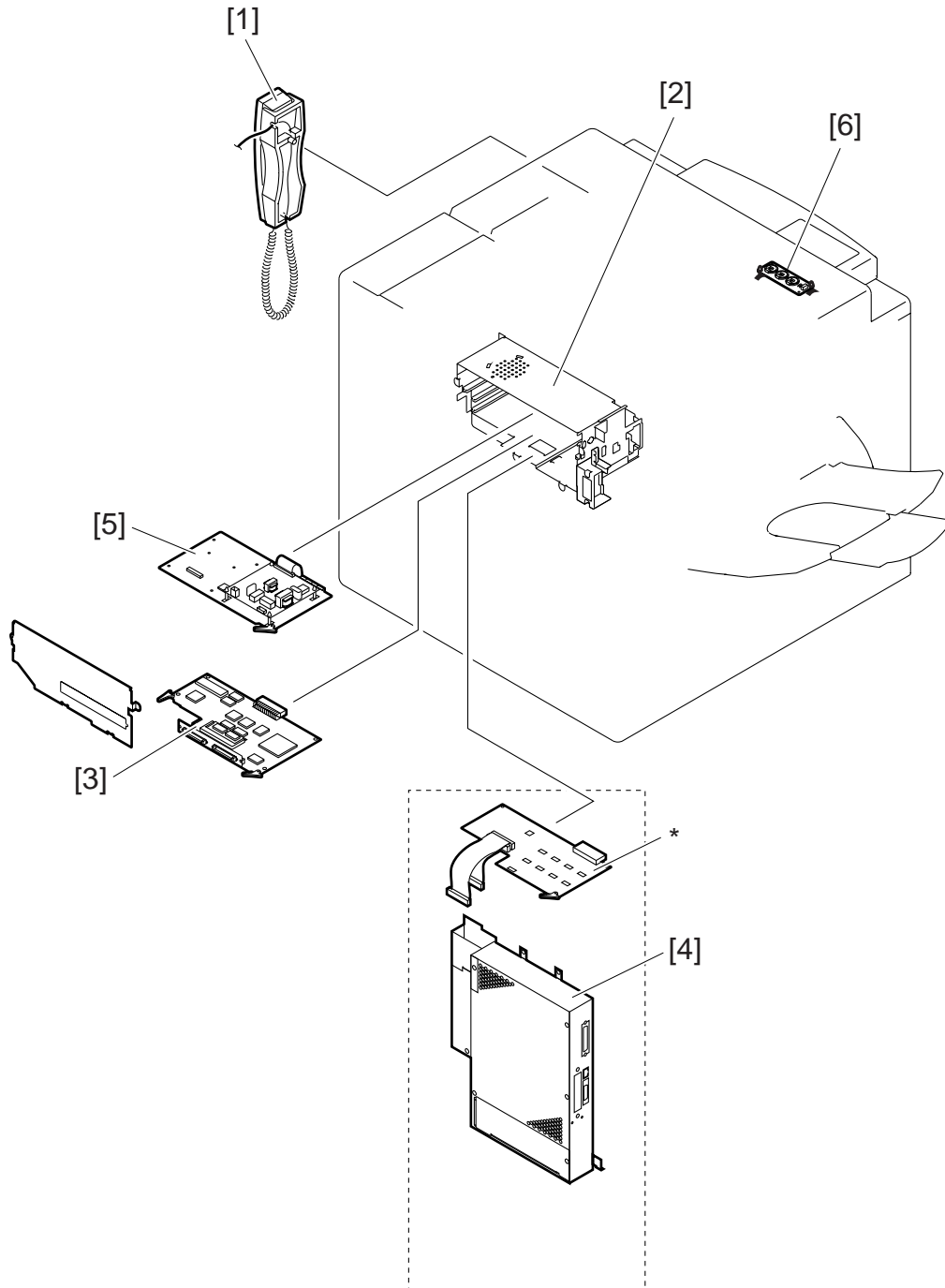
### ■ Pick-Up/Delivery Accessories



- [1] DADF-A1
- [2] Finisher-C1
- [3] Multi Output Tray C1
- [4] Saddle Finisher C2
- [5] Finisher-E1

- [6] Cassette Feeding Unit-S1
- [7] Cassette Feeding Unit-R1
- [8] Paper Deck-B1

■ System Accessories



- [1] Handset-C1 [120V ONLY]
- [2] Expansion Board Base Unit-C1
- [3] SCSI Interface Board-D1
- [4] Printer Board

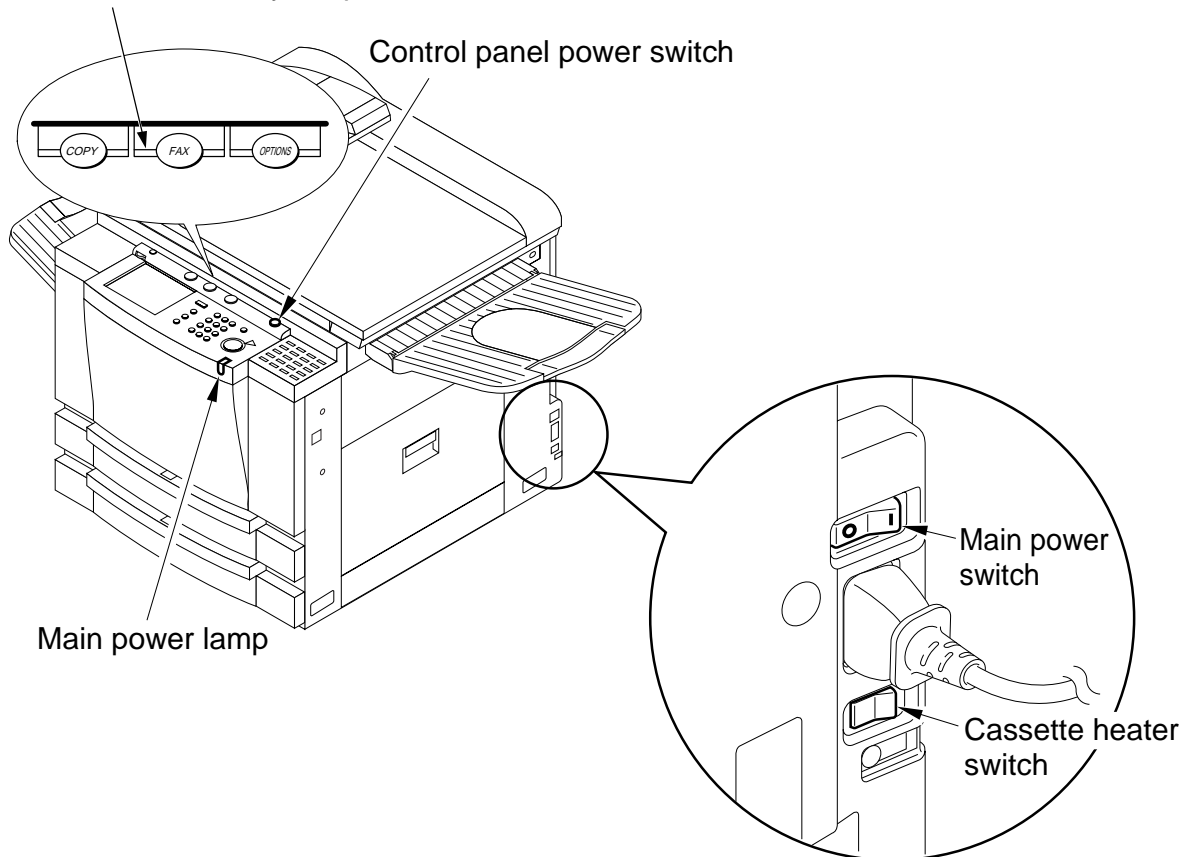
- [5] Super G3 FAX Board
- [6] Battery Board-A1
- \* PDL I/F Board.

## When Turning Off the Main Power Switch

Be sure always to turn off the main power switch and disconnect the power plug before starting disassembly work. In addition,

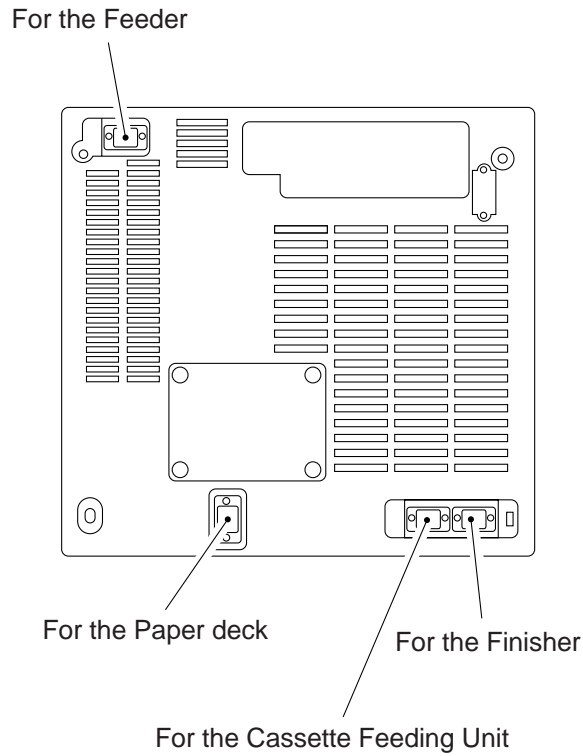
1. When expanding the fax functions, the secondary battery used to retain fax memory images will start to operate as soon as the main power switch is turned off. Be sure to complete any work within one hour if the main power switch must be kept off. (Be sure also to keep the machine powered at least for one week after installation.)
2. The communication memory lamp on the control panel indicates the presence/absence of fax memory images. If it is on (indicating the presence of images), be sure to print out the images before turning off the main power switch and disconnecting the power plug.
3. Turning off the control panel power switch will not remove power from some units. Be sure always to turn off the main power switch before starting disassembly/assembly work.
4. The power will not be removed even when the front door is opened as long as the control panel power switch and the main power switch are both on.

Communication memory lamp



## Connectors for the Pick-Up/Delivery Accessories

When connecting accessories, be sure to use the connectors indicated in the diagram. If, for example, you connect the paper deck to the cassette pedestal connector and turn on the paper, the fuse on the paper deck PCB will blow, at times requiring replacement with a new PCB.



**Figure. Rear View of the Body**

# CONTENTS

---

## CHAPTER 1 GENERAL DESCRIPTION

---

I.	FEATURES.....	1-1	B.	Control Panel .....	1-14
II.	SPECIFICATIONS.....	1-2	C.	Special Features Modes .....	1-15
	A. Type.....	1-2	D.	Additional Functions .....	1-16
	B. Method .....	1-2	V.	ROUTINE MAINTENANCE BY	
	C. Performance.....	1-3		THE USER .....	1-19
	D. Paper Deck-B1 .....	1-4	VI.	SAFETY .....	1-20
	E. Others .....	1-5		A. Safety of Laser Light (CLASS 1	
	F. Default Ratios.....	1-6		LASER PRODUCT) .....	1-20
	G. Copying Speed .....	1-7		B. CDRH Regulations .....	1-21
III.	NAMES OF PARTS .....	1-9		C. Handling the Laser Unit .....	1-22
	A. External view .....	1-9		D. Safety of Toner .....	1-24
	B. Cross Section.....	1-11	VII.	IMAGE FORMATION.....	1-25
IV.	OPERATION.....	1-13		A. Outline .....	1-25
	A. Turning On the Power .....	1-13			

---

## CHAPTER 2 BASIC OPERATION PROVIDES

---

I.	BASIC OPERATION.....	2-1	D.	Main Motor (M1) Control	
	A. Functional Construction .....	2-1		Circuit .....	2-8
	B. Outline of the Electrical		E.	Inputs to and Outputs from	
	Circuitry .....	2-2		the Major PCBs .....	2-10
	C. Sequence of Operations .....	2-4			

---

## CHAPTER 3 EXPOSURE SYSTEM

---

- I. OUTLINE OF OPERATIONS .....3-1
  - A. Outline .....3-1
  - B. Sequence of Operations (original exposure system) .....3-2
- II. SCANNER DRIVE SYSTEM .....3-3
- III. CONTROLLING THE SCANNING LAMP .....3-4
  - A. Outline .....3-4
  - B. Controlling the Pre-Heating Mechanism .....3-5
  - C. Turning On and Off the Scanning Lamp .....3-5
  - D. Controlling the Intensity .....3-5
  - E. Detecting Errors .....3-6
- IV. IDENTIFYING THE SIZE OF AN ORIGINAL .....3-7
  - A. Outline .....3-7
  - B. Identifying the Size by the Paper Sensors (1) .....3-7
  - C. Identifying the Size by the Paper Sensors (2) .....3-9
  - D. Identifying the Size by the Original Width/Length Sensor of the Feeder .....3-10
- V. DISASSEMBLY/ASSEMBLY .... 3-11
  - A. Scanning System .....3-12
  - B. Scanner Drive Assembly .....3-13

---

## CHAPTER 4 IMAGE FORMATION SYSTEM

---

- I. OUTLINE .....4-1
- II. ANALOG IMAGE PROCESSING .. 4-3
  - A. Outline .....4-3
  - B. CCD .....4-3
  - C. AE Processing (ABC processing) .....4-4
  - D. A/D Conversion .....4-5
  - E. Analog Signal Processing Block .....4-6
- III. DIGITAL IMAGE PROCESSING ... 4-7
  - A. Outline .....4-7
- B. Shading Correction .....4-8
- C. Total Processing .....4-9
- D. Density Processing .....4-12
- E. Binary Processing .....4-16
- F. Image Memory .....4-19
- G. Overlay Copying .....4-21
- IV. DISASSEMBLY/ASSEMBLY .... 4-22
  - A. CCD Unit .....4-23
  - B. IP PCB .....4-24
  - C. Replacing the ROM DIMM (on the image processor PCB) .. 4-25

---

## CHAPTER 5 LASER EXPOSURE SYSTEM

---

- I. OUTLINE .....5-1
- II. GENERATING THE BD SIGNAL .. 5-3
- III. LASER DRIVER PCB .....5-5
  - A. Outline .....5-5
  - B. Stabilizing the Laser Output...5-6
  - C. Switching the Laser Activation Mode .....5-7
  - D. Switching the Laser Output....5-7
- IV. CONTROLLING THE LASER SCANNER MOTOR .....5-8
  - A. Outline of Operations .....5-8
  - B. Turning On and Off the Laser Scanner Motor .....5-9
- V. DISASSEMBLY/ASSEMBLY .... 5-10
  - A. Laser Scanner Assembly .... 5-11

---

## CHAPTER 6 IMAGE FORMATION SYSTEM

---

- I. OUTLINE OF IMAGE FORMATION PROCESS ..... 6-1
  - A. Outline ..... 6-1
  - B. Sequence of Operations ..... 6-2
  - C. Controlling the Primary Charging Roller Bias ..... 6-3
  - D. Controlling the Transfer Charging Roller Bias ..... 6-8
  - E. Controlling the Separation Static Eliminator Bias ..... 6-12
  - F. Controlling the Transfer Guide ..... 6-14
  - G. Primary Charging Roller Cleaning Mechanism ..... 6-15
- II. DEVELOPING ASSEMBLY ..... 6-16
  - A. Outline ..... 6-16
  - B. Controlling the Developing Bias ..... 6-17
  - C. Controlling Toner Level Detection ..... 6-20
- III. DRUM CLEANER ..... 6-21
  - A. Outline ..... 6-21
  - B. Detecting Waste Toner ..... 6-22
- IV. DISASSEMBLY/ASSEMBLY .... 6-23
  - A. Drum Unit ..... 6-24
  - B. Transfer Charging Roller .... 6-25
  - C. Drum Sensor Unit ..... 6-25
  - D. Magnet Plate ..... 6-26
  - E. Primary Charging Roller Cleaning Solenoid ..... 6-27
  - F. Developing Assembly ..... 6-28

---

## CHAPTER 7 PICK-UP/FEEDING SYSTEM

---

- I. OUTLINE OF OPERATIONS ..... 7-1
  - A. Outline ..... 7-1
  - B. Sequence of Operations (pick-up from the cassette) .... 7-4
  - C. Operation in Standby State . 7-16
  - D. Detecting the Level of Paper .. 7-18
  - E. Identifying the Size of Paper .. 7-20
  - F. Multifeeder ..... 7-25
  - G. Controlling the Registration Roller Clutch ..... 7-27
  - H. Making Overlay Copies ..... 7-28
  - I. Operation ..... 7-28
  - J. Delivery Assembly ..... 7-40
  - K. Detecting Jams ..... 7-43
- II. DISASSEMBLY/ASSEMBLY .... 7-51
  - A. Pick-Up Assembly ..... 7-52
  - B. Multifeeder ..... 7-55
  - C. Feeding Assembly ..... 7-58
  - D. Lower Feeding Assembly .... 7-59
  - E. Registration Roller Assembly ... 7-61
  - F. Delivery Assembly ..... 7-62
  - G. Lower Feeding Motor ..... 7-66
  - H. Pick-Up Drive Assembly ..... 7-67
  - I. Vertical Path Assembly ..... 7-68

---

## CHAPTER 8 PAPER DECK

---

- I. PAPER DECK ..... 8-1
  - A. Inputs to and Outputs from the Deck Driver ..... 8-1
  - B. Pick-Up ..... 8-4
  - C. Detecting Paper ..... 8-7
  - D. Deck Lifter ..... 8-9
  - E. Opening/Closing the Deck (compartment) ..... 8-12
  - F. Controlling the Deck Motor . 8-14
- II. DETECTING JAMS ..... 8-18
  - A. Outline ..... 8-18
- III. DISASSEMBLY/ASSEMBLY .... 8-20
  - A. External Covers ..... 8-21
  - B. Paper Deck ..... 8-24
  - C. Drive System ..... 8-29
  - D. Feeding System ..... 8-36
  - E. Electrical System ..... 8-39

---

## CHAPTER 9 FIXING SYSTEM

---

- |   |  |
|---|--|
| I. OUTLINE OF OPERATIONS ..... 9-1                          | II. DISASSEMBLY/ASSEMBLY .... 9-13                       |
| A. Outline ..... 9-1  | A. Fixing Assembly ..... 9-14                            |
| B. Fixing Drive Assembly ..... 9-3                          | B. Fixing Cleaner Assembly .... 9-26                     |
| C. Controlling the Fixing<br>Temperature ..... 9-6          | C. Fixing Assembly Inlet<br>Solenoid Assembly ..... 9-28 |
| D. Protective Mechanism for the<br>Fixing System ..... 9-10 | D. Fixing Drive Assembly ..... 9-29                      |
| E. Upper Fixing Roll Bias ..... 9-12                        | E. Fixing Cleaning Belt<br>Solenoid ..... 9-29           |

---

## CHAPTER 10 EXTERNALS/AUXILIARY MECHANISMS

---

- |  |  |
|--|--|
| I. CONTROL PANEL ..... 10-1                          | B. Operations of Counters..... 10-16                   |
| A. Outline ..... 10-1                                | V. DISASSEMBLY/ASSEMBLY .. 10-17                       |
| B. Operation ..... 10-2                              | A. External Covers ..... 10-18                         |
| II. FANS ..... 10-4                                  | B. Removing the Front<br>Door/Inside Cover ..... 10-20 |
| A. Arrangement and Functions .. 10-4                 | C. Control Panel ..... 10-21                           |
| B. Sequence of Operations .... 10-6                  | D. DC Controller PCB ..... 10-23                       |
| C. Detecting Errors (E805) ..... 10-9                | E. Composite Power Supply<br>PCB ..... 10-24           |
| III. POWER SUPPLY ..... 10-10                        | F. Low-Voltage Power Supply<br>PCB ..... 10-24         |
| A. Outline of the Power Supply<br>System ..... 10-10 | G. Accessories Power Supply<br>PCB ..... 10-25         |
| B. Power Supply PCB ..... 10-11                      | H. Fans ..... 10-25                                    |
| C. Transition to and from Sleep<br>Mode ..... 10-12  |  |
| IV. COUNTERS ..... 10-14                             |  |
| A. Outline ..... 10-14                               |  |

---

## CHAPTER 11 SYSTEM INTEGRATION

---

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| I. SYSTEM INTEGRATION ..... 11-1    | C. Hardware ..... 11-6              |
| A. Outline ..... 11-1               | III. DISASSEMBLY/ASSEMBLY .... 11-7 |
| II. SCSI INTERFACE BOARD ..... 11-4 | A. Basic Expansion Kit ..... 11-8   |
| A. Outline ..... 11-4               | B. SCSI Interface Board ..... 11-10 |
| B. Specifications ..... 11-4        | C. Battery Board ..... 11-11        |

---

## CHAPTER 12 INSTALLATION

---

I.	SELECTING THE SITE .....	12-1	G.	Making Settings .....	12-17
II.	UNPACKING AND INSTALLATION .....	12-3	H.	Checking the Copy images ..	12-18
	A. Unpacking and Removing the Fixing Materials .....	12-4	III.	RELOCATING THE MACHINE ..	12-27
	B. Supplying Toner .....	12-7	IV.	INSTALLING THE CONTROL CARD V .....	12-29
	C. Stirring the Toner .....	12-9	V.	INSTALLING THE COPY DATA CONTROLLER-A1 .....	12-33
	D. Setting the Drum Cartridge ..	12-11		A. Copy Data Controller-A1 ...	12-33
	E. Setting the Cassette .....	12-14	VI.	INSTALLATION OF THE NE CONTROLLER-A1 .....	12-43
	F. Installing the Feeder (DADF standard model only) .....	12-16			

---

## CHAPTER 13 MAINTENANCE AND SERVICING

---

I.	PERIODICALLY REPLACED PARTS .....	13-1	III.	SCHEDULED SERVICING CHART .....	13-3
II.	CONSUMABLES AND DURABLES .....	13-1	IV.	SCHEDULED SERVICING TABLE .....	13-5
	A. Copier .....	13-1		A. Copier .....	13-5
	B. Paper Deck .....	13-2		B. Paper Deck .....	13-6

---

## CHAPTER 14 TROUBLESHOOTING

---

I.	MAINTENANCE AND INSPECTION .....	14-3	V.	TROUBLESHOOTING FEEDING PROBLEMS .....	14-102
	A. Image Basic Adjustment Procedure .....	14-3		A. Paper Jams .....	14-102
	B. Points of Scheduled Servicing .....	14-4		B. Feeding Faults .....	14-107
II.	STANDARDS AND ADJUSTMENTS .....	14-5	VI.	ARRANGEMENT AND FUNCTIONS OF ELECTRICAL PARTS .....	14-108
	A. Image Adjustment .....	14-5		A. Clutches and Solenoids ..	14-108
	B. Exposure System .....	14-10		B. Motors .....	14-110
	C. Image Formation System ..	14-13		C. Fan .....	14-112
	D. Pick-Up/Feeding System ..	14-15		D. Sensors .....	14-114
	E. Fixing System .....	14-20		E. Switches and Counters ...	14-116
	F. Electrical System .....	14-22		F. PCBs .....	14-118
III.	TROUBLESHOOTING IMAGE FAULTS .....	14-33		G. Side Paper Deck .....	14-120
	A. Initial Checks .....	14-33		H. Variable Resistors, Light-Emitting Diodes, and Check Pins by PCB ..	14-124
	B. Sample Image Faults .....	14-36	VII.	UPGRADING .....	14-131
	C. Troubleshooting Image Faults .....	14-37		A. Replacing the DIMM .....	14-131
IV.	TROUBLESHOOTING MALFUNCTION .....	14-56	VIII.	SERVICE MODE .....	14-137
				A. Outline .....	14-137

B. DISPLAY Control Display Mode .....	14-143	IX. SELF DIAGNOSIS .....	14-223
C. I/O Operation Check Mode...	14-158	A. Copier .....	14-225
D. ADJUST Adjustment Mode ..	14-181	B. DADF .....	14-231
E. FUNCTION Operation Check Mode .....	14-189	C. Cassette Feeding Unit-R1/S1 .....	14-232
F. OPTION Settings Mode ..	14-201	D. Multi Output Tray-D1 .....	14-232
G. PG test Print .....	14-209	E. Finisher-C1 .....	14-233
H. COUNTER Mode .....	14-214	F. Saddle Finisher-C2 .....	14-235
I. FEEDER .....	14-217	G. Finisher-E1 .....	14-239
J. SORTER (finisher, saddle stitcher) .	14-221	H. Paper Deck-B1 .....	14-241
		I. SCSI Interface Board-D1 ...	14-242

---

## APPENDIX

---

A. GENERAL TIMING CHART .....	A-1	D. SIDE PAPER DECK GENERAL CIRCUIT DIAGRAM .....	A-13
B. SIGNAL NAME/ABBREVIATION LIST .....	A-3	E. SPECIAL TOOLS .....	A-15
C. GENERAL CIRCUIT DIAGRAM....	A-7	F. SOLVENTS AND OILS .....	A-17

---

# CHAPTER 1

---

## GENERAL DESCRIPTION

---

I.	FEATURES .....	1-1	B.	Control Panel .....	1-14
II.	SPECIFICATIONS .....	1-2	C.	Special Features Modes .....	1-15
	A. Type .....	1-2	D.	Additional Functions .....	1-16
	B. Method .....	1-2	V.	ROUTINE MAINTENANCE BY	
	C. Performance .....	1-3		THE USER .....	1-19
	D. Paper Deck-B1 .....	1-4	VI.	SAFETY .....	1-20
	E. Others .....	1-5		A. Safety of Laser Light (CLASS 1	
	F. Default Ratios .....	1-6		LASER PRODUCT) .....	1-20
	G. Copying Speed .....	1-7		B. CDRH Regulations .....	1-21
III.	NAMES OF PARTS .....	1-9		C. Handling the Laser Unit .....	1-22
	A. External view .....	1-9		D. Safety of Toner .....	1-24
	B. Cross Section .....	1-11	VII.	IMAGE FORMATION .....	1-25
IV.	OPERATION .....	1-13		A. Outline .....	1-25
	A. Turning On the Power .....	1-13			



## I. FEATURES

### 1. High-Speed, High-Image Quality

- Copy Speed:
 

405/400	40 ppm
335/330	33 ppm
- Resolution
 

Read in copier mode	600 x 600 dpi
Write in copier mode	1200-equivalent x 600 dpi
In fax mode	600 x 600 dpi (hyper GENESIS smoothing)
- Gradation 256

### 2. Large-Capacity Image Memory

- The machine comes with a 32-MB image memory as standard, which may be expanded up to 96 MB.
- The use of an image memory has enabled making as many copies as needed with a single scan of an original, significantly improving the efficiency of copying work.

### 3. New No-Stacking Duplexing Mechanism

- Double-sided copies may be made without holding paper in the duplexing assembly, helping to improve the efficiency of copying work. The mechanism can turn out a large number of double-sided copies while limiting damage to the paper to a minimum.

### 4. Large-Capacity Paper Source

Adding accessories, the machine can be turned into a paper source holding as many as 5550 sheets.

- 2 cassettes (front loading; standard) 500 x 2
- Multifeder 50
- Cassette Pedestal-S1 500 x 2
- Paper Deck-B1 3500 (A4, B5)

### 5. Saddle Finisher w/ Book Binding Mode/Saddle Finisher (accessory)

- The saddle stitcher unit will prove its ability when producing booklets in book bind mode.
- The finishers unit is capable of stapling/sorting a total of 100 sets (193.6 mm high; 1300 A4 sheets of 80 g/m<sup>2</sup>).
- The finisher unit is capable of delivering as many as 50 sheets to the trays 1 through 3 (220.6 mm high; about 1500 sheets of 80 g/m<sup>2</sup>) and the interrupt tray.
- The finisher unit is equipped with a job offset function to facilitate sorting work.
- The buffer path function ensures that the host copier's productivity will not be affected by the use of various finishing work.

## II. SPECIFICATIONS

### A. Type

Item	Specifications
Copier	Desktop
Copyboard	Fixed
Light source	Fluorescent lamp
Lens	Lens array
Photosensitive medium	OPC drum

### B. Method

Item	Specifications
Copying	Indirect electrostatic copying
Charging	Roller charging (AC + DC)
Exposure	Laser exposure
Copy density adjustment	Automatic or manual
Development	Dry, single-component, toner projection
Pick-up	Cassette: Retard method (center reference)
	Multifeeder: Dupro-method (center reference)
Transfer	Roller charging (DC)
Separation	Static (static eliminator) + curvature
Cleaning	Cleaning blade
Fixing	Heating roller

## C. Performance

Resolution		600 x 600 dpi (reading) 600 x 600 dpi (during output; by smoothing, 200-equivalent x 600 dpi)
Gradation		256 gradations
Original type		Sheet, book, 3-D object (2 kg max.)
Maximum original size		A3 (297 x 420 mm)/297 x 432 mm (11"x17") max.
Copy size	AB	6R6E
	Inch	5R5E
	A	3R4E
	AB/Inch	6R6E
Zoom		25% to 800% (in 1% increments)
Auto		Provided
XY independent zoom		Provided
Wait time (20°C)		From main power supply    77 sec or less From sleep state            77 sec or less From power save mode Without recovery time    0 sec -10% mode                 9 sec or less -25% mode                 20 sec or less -40% mode                 33 sec or less
First copy time		6.0 sec or less (topmost cassette, Direct, A4/LTR, auto density adjustment, no pre-scanning)
Continuous copying		1 to 999 copies
Copying speed		See Table 1-201.
Copy size	Cassette	A3 (297 x 420 mm)/297 x 432 mm (11"x17") to A5 (STMT)
	Multifeeder	A3 (297 x 420 mm)/297 x 432 mm (11"x17") to postcard
	Double-sided	A3 (297 x 420 mm)/297 x 432 mm (11"x17") to A5 (STMT)
Copy paper type	Cassette	Plain paper, recycled paper, eco paper (64 to 80 g/m <sup>2</sup> )
	Multifeeder	Plain paper, recycled paper, eco paper, transparency, colored paper, postcard, label, thick paper, tracing paper (64 to 128 g/m <sup>2</sup> )
	Double-sided	Plain paper, recycled paper eco paper
Cassette specifications	Claw	Not used
	General/universal	500 sheets (average; of 80 g/m <sup>2</sup> )

		Item	Specifications
Multifeeder tray		50 sheets	80 g/m <sup>2</sup>
Copy tray		100 sheets	80 g/m <sup>2</sup>
Non-image width	Leading/trailing edge	2.5 mm	
	Left/right	2.5 mm	
Auto clear		Provided	2 min standard; may be varied between 0 and 9 min.
Auto sleep time		Provided	10 min to 8 hr

## D. Paper Deck-B1

Item	Specifications
Pick-up	No claw (retard) method
Paper holder	Side tray method
Copy paper type	<ul style="list-style-type: none"> <li>• Plain paper (65 to 80 g/m<sup>2</sup>) A4, B5, LTR</li> <li>• Colored paper (Canon-recommended) A4</li> </ul>
Paper holding capacity	385 mm high (3500 sheets of 80 g/m <sup>2</sup> )
Serial number	A4 ZSKxxxxx LTR ZSLxxxxx
Paper size switching	Shifting the size guide plate and setting in service mode (OPTION>ACC> <b>DK-P</b> )
Dimensions	(not including protrusions/grip cover, rail)
Weight	31 kg (approx.; body)/10 kg (approx.; rails)
Power supply	By copier (DC power)
Operating environment Temperature Humidity	Same as copier

The above specifications are subject to change for product improvement.

## E. Others

Item		Specifications		
Operating environment	Temperature	7.5 to 32.5°C		
	Humidity	5 to 85%		
	Atmospheric pressure	810 to 1013hPa (0.8 to 1.0)		
Power supply		405/400	335/300	
	120V (USA)	400E NNUxxxxx 400S NNVxxxxx	300E NNxxxxxx 300S NNYxxxxx	
	230V (Italia)	405 PNYxxxxx	335 PNZxxxxx	
	230V (Others)	405 PNWxxxxx	335 PNxxxxxx	
	230V (UK)	405 QNYxxxxx	335 QNZxxxxx	
	230V (CA)	405 RNxxxxxx	335 RNYxxxxx	
	230V (FRN)	405 SNYxxxxx	335 SNZxxxxx	
	230V (GER)	405 TNYxxxxx	335 TNZxxxxx	
	230V (AMS)	405 UNYxxxxx	335 UNZxxxxx	
Power consumption* (reference only; at time of 23°C and at rated input; for the copier, actual measurement)		w/o FAX expansion		
	Copying	910W		
	Standby	193W		
	Sleep 1	190W		
	Sleep 2	No recovery time	190W	
		-10%	170W	
		-25%	143W	
-40%		116W		
Sleep 3	69W			
Noise	Copying	71 dB or less (by sound power level, Impulse mode)		
	Standby	50 dB or less (by sound power level, Impulse mode)		
Ozone	0.01 ppm or less in average; 0.02 ppm or less at max.			
Dimensions	Width	585mm		
	Depth	720mm		
	Height	538mm		
Weight	97.5 kg or less (w/DADF-A1) 83.4 kg or less (w/o DADF-A1)			
Consumables	Copy paper	Keep wrapped to avoid humidity.		
	Toner	Avoid direct sunshine; store at 40°C, 85%.		

\* With expanded fax functions                      maximum + 12W  
 With expanded printer functions                maximum + 37W

## F. Default Ratios

Country	Reduction		Enlargement	
Japan, Australia, others (6R6E)		0.250	B4→A3 B5R→A4R B5→A4	1.153
		0.500	A4R→B4 A5→B5	1.223
	A3→B5	0.611	A4RA3 B5RB4	1.414
	A3→A4R B4→B5R	0.707	A5A3	2.000
	B4→A4R	0.815		4.000
	A3→B4 A4R→B5R	0.865		8.000
North America (5R5E)		0.250	LGL→11x17	1.214
		0.500	LTRR→11x17	1.294
	11x17→LTRR	0.647	STMT→LTRR	2.000
	11x17→LGL	0.733	STMTR→11x17	4.000
	LGL→LTRR	0.786		8.000
Europe (3R4E)		0.250	A4R→A3	1.414
		0.500	A5→A3	2.000
	A3→A4R	0.707		4.000
				8.000

**Table Default Reproduction Ratios**

## G. Copying Speed

Mode		Size	Copy size	405/400 (copies/min)	335/330 (copies/min)
Direct		A3	A3	19	19
		A4	A4	40	33
		A4R	A4R	28	28
		A5	A5	40	33
		A5R	A5R	40	33
		B4	B4	22	22
		B5	B5	40	33
Reduce	II	A3→A5	A5R	40	33
	III	A3→B5	B5R	33	33
	IV	A3→A4	A4R	28	28
		B4→B5	B5R	33	33
	V	B4→A4	A4R	28	28
		B5→A5	A5	40	33
VI	A3→B4	B4	22	22	
	A4→B5	B5	40	33	
Enlarge	II	A5→A3	A3	19	19
	III	A4→A3	A3	19	19
		B5→B4	B4	22	22
	IV	A4→B4	B4	22	22
		A5→B5	B5	40	33
V	B4→A3	A3	19	19	
	B5→B4	B4	22	22	

Feeder used, delivery to copy tray, auto paper select used, density auto adjust used, non-sort mode, topmost cassette used, no data in memory.

**Table 1-201 Copying Speed (copier only)**

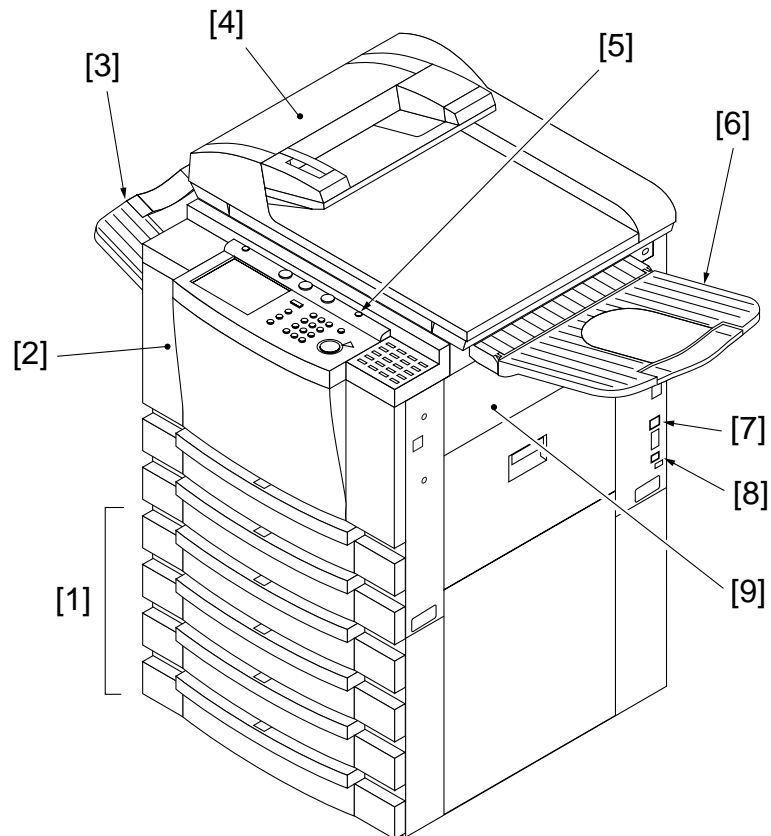
Ratio	Size	405/400 Copies/min	335/330 Copies/min
DIRECT	LTR	40	33
	11x17	19	19
	LGL	23	23
	LTRR	30	30
	STMT	40	33
	STMTR	40	33
REDUCE	LGL→LTRR	30	30
	11x17→LGL	23	23
	11x17→LTRR	30	30
	11x17→STMTR	40	33
	11x15→LTRR	30	30
ENLARGE	LGL→11x17	19	19
	LTRR→11x17	19	19
	STMTR→11x17	19	19

The above specifications are subject to change for product improvement.

### III. NAMES OF PARTS

#### A. External view

- Model with DADF-A1 as Standard



**Figure 1-301**

- |  |   |
|--|---|
| [1] Cassette Feeding Unit-R1 (accessory) | [6] Original delivery tray (for feeder) |
| [2] Front cover                          | [7] Multifeder                          |
| [3] Copy tray                            | [8] Main power switch                   |
| [4] DADF-A1                              | [9] Cassette heater switch (accessory)  |
| [5] Control panel power switch           |   |

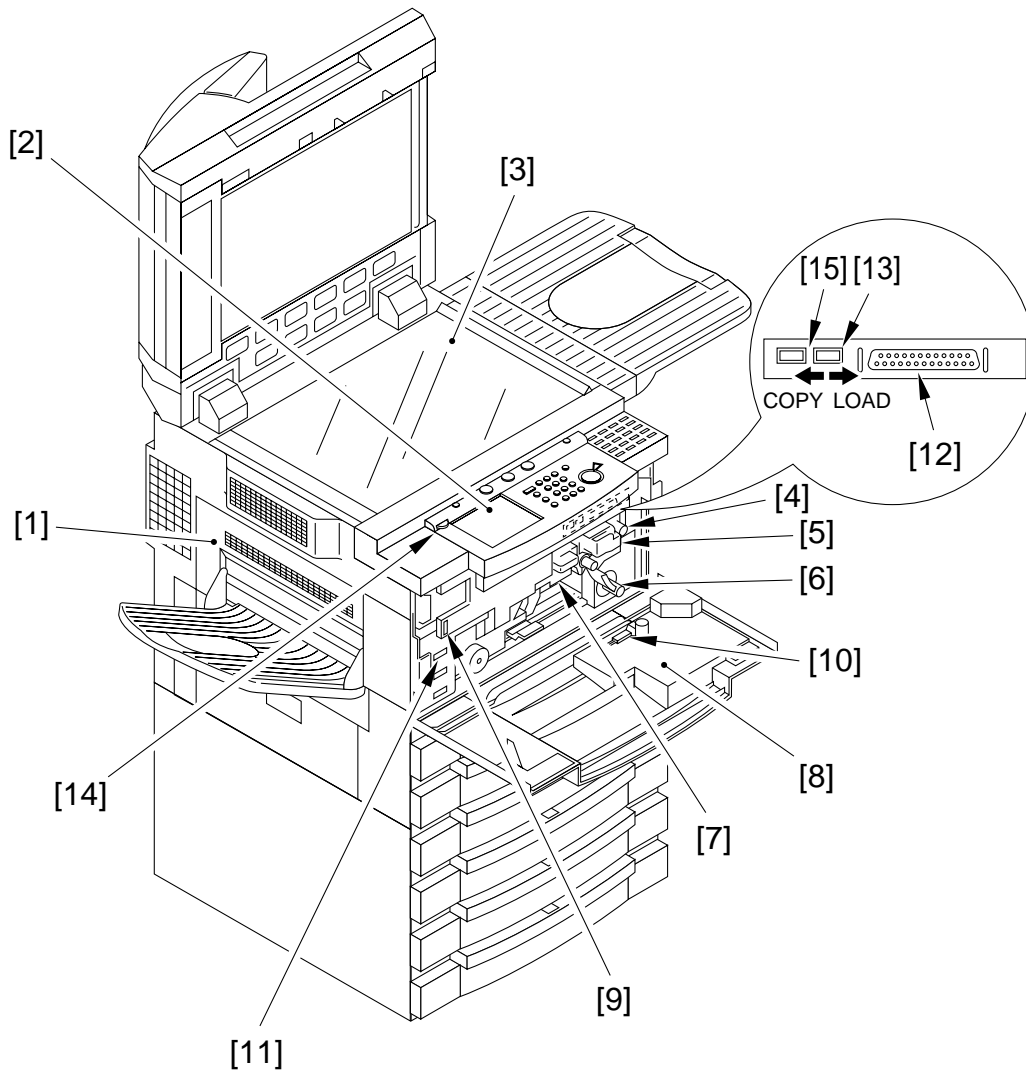
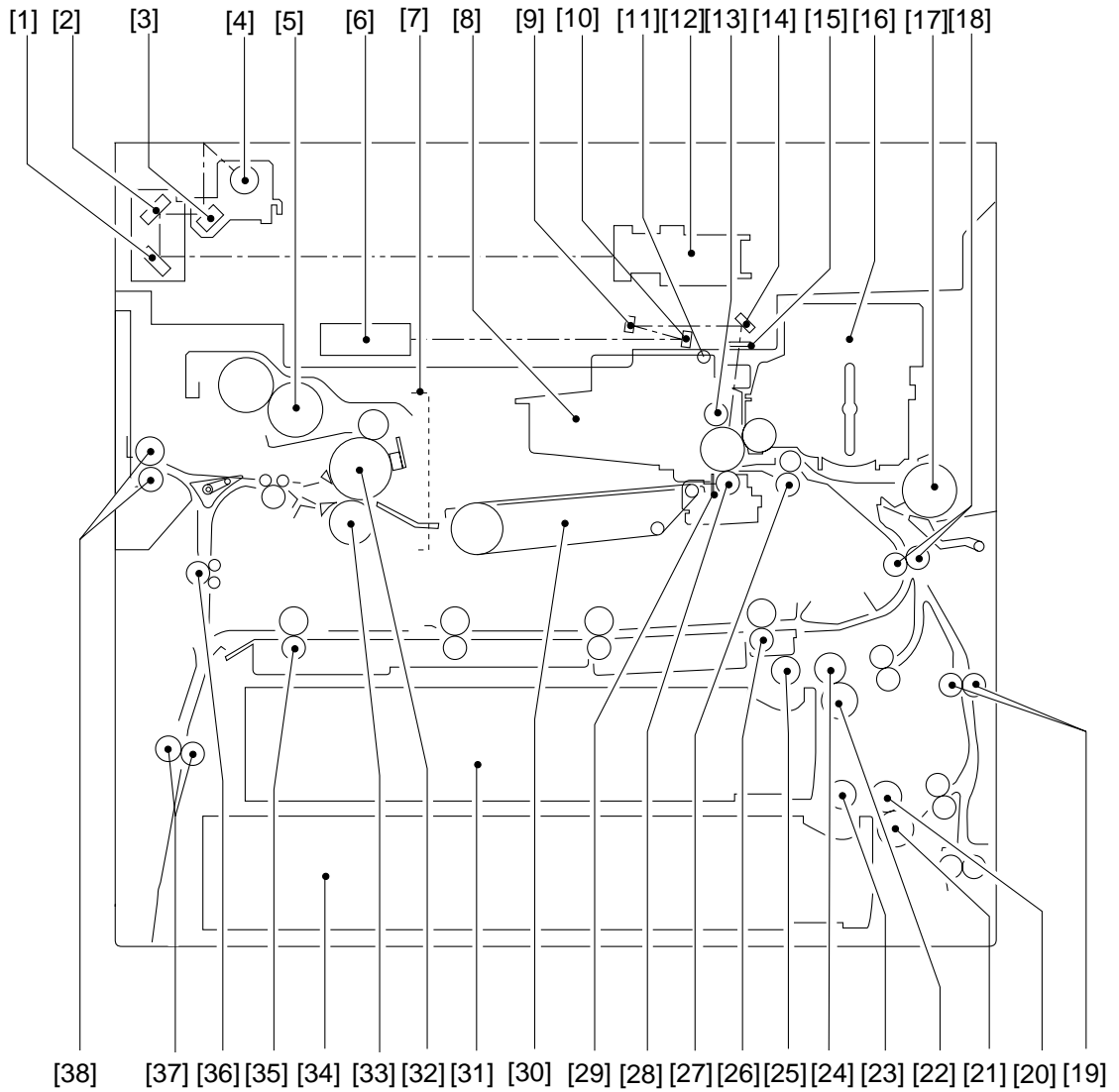


Figure 1-302

- |   |  |
|---|--|
| [1] Delivery assembly cover             | [10] Static eliminator cleaning tool       |
| [2] Control panel                       | [11] Total copy counter                    |
| [3] Copyboard glass                     | [12] Downloading connector (bi-Centronics) |
| [4] Developing assembly releasing lever | [13] Downloading switch                    |
| [5] Developing assembly                 | Left: for downloading                      |
| [6] Feeding assembly releasing lever    | Right: for copying                         |
| [7] Drum unit                           | [14] LCD contrast adjustment               |
| [8] Service documentation case          | [15] Not used                              |
| [9] Door switch assembly                |  |

**B. Cross Section**



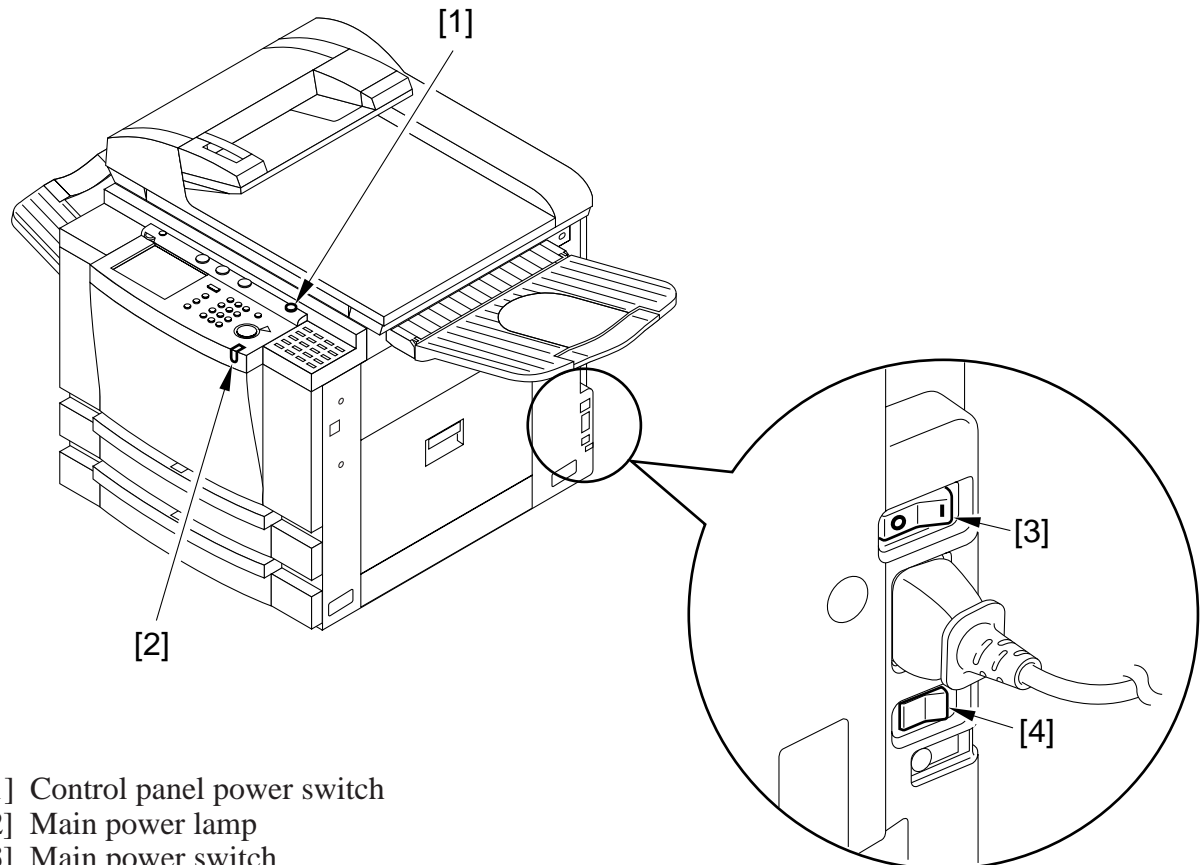
**Figure 1-303**

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| [1] No. 3 mirror                     | [20] Cassette 2 feeding roller        |
| [2] No. 2 mirror                     | [21] Cassette 2 separation roller     |
| [3] No. 1 mirror                     | [22] Cassette 1 separation roller     |
| [4] Scanning lamp (fluorescent lamp) | [23] Cassette 2 pick-up roller        |
| [5] Cleaning belt assembly           | [24] Cassette 1 feeding roller        |
| [6] Laser unit                       | [25] Cassette 1 pick-up roller        |
| [7] Fixing unit                      | [26] Duplexing assembly outlet roller |
| [8] Drum cartridge                   | [27] Registration roller              |
| [9] Bending mirror 2                 | [28] Transfer roller                  |
| [10] Bending mirror 1                | [29] Static eliminator                |
| [11] Pre-exposure lamp               | [30] Feeding assembly                 |
| [12] CCD unit                        | [31] Cassette 1                       |
| [13] Primary charging roller         | [32] Upper fixing roller              |
| [14] Bending mirror 3                | [33] Fixing assembly locking roller   |
| [15] Dust-proofing glass             | [34] Cassette 2                       |
| [16] Developing assembly             | [35] Duplexing assembly inlet roller  |
| [17] Multifeeder pick-up roller      | [36] Reversal feeding roller 2        |
| [18] Vertical path roller 1          | [37] Reversal feeding roller 1        |
| [19] Vertical path roller 2          | [38] Delivery roller                  |

## IV. OPERATION

### A. Turning On the Power

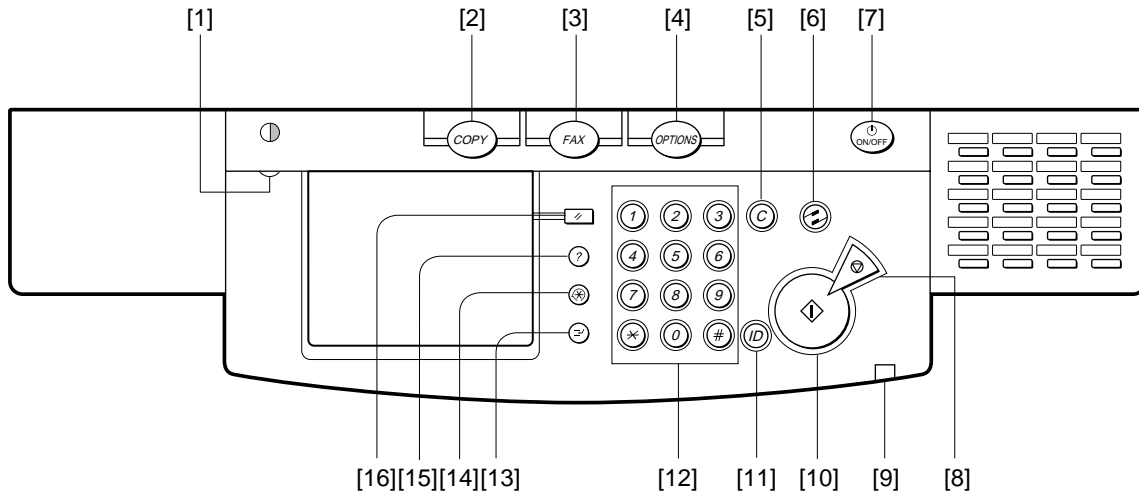
The machine is equipped with two power switches: main power switch and control panel power switch. To turn on the machine, be sure to turn on the main power switch and then the control panel switch in sequence.



- [1] Control panel power switch
- [2] Main power lamp
- [3] Main power switch
- [4] Cassette heater switch (accessory)

Figure 1-401

## B. Control Panel



- |                              |                               |
|------------------------------|-------------------------------|
| [1] Display contrast control | [9] Power indicator*          |
| [2] COPY key                 | [10] START key                |
| [3] FAX key                  | [11] ID key                   |
| [4] OPTIONS key**            | [12] Number keys              |
| [5] CLEAR key                | [13] INTERRUPT key            |
| [6] ENERGY SAVER key         | [14] ADDITIONAL FUNCTIONS key |
| [7] Control panel power      | [15] GUIDE key                |
| [8] STOP key                 | [16] RESET key                |

Figure 1-402

\* Turns on when the main power switch is on.

\*\* 120V PRINT • I/F Key.