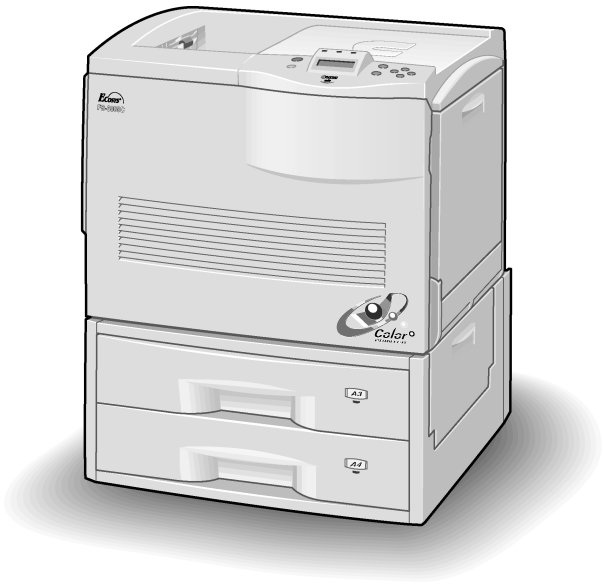
KYOCERA mita

FS-8000C
FS-8000CD
FS-8000CN

Color Printer
Operation Guide



ECOSYS®

Please read the Operation Guide before using the printer.
Keep it close to the printer for easy reference.

Caution

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SOFTWARE USED WITH THIS PRINTER MUST SUPPORT THE PRINTER'S EMULATION MODE. The printer is factory-set to emulate the PCL 5c. The emulation mode can be changed by following the procedures described in *Chapter 3*.

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FCC statement (for users in the United States)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is not guarantee that interference will not occur in a particular installation. If this equipment does not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that used for the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the manufacturer for compliance could void the user's authority to operate the equipment. Shielded circular cables should be used for interfacing with the computer.

Cautions to the user:

- Any modifications without prior permission of Kyocera may cause harmful interference.
- If any modifications or changes are made to this equipment without prior permission of Kyocera, Kyocera as the manufacturer does not guarantee the compliance with the FCC Rules.
- The use of equipment that does not comply with the FCC Rules is prohibited.

Important Notes for Interface connectors

Be sure to power off the printer before connecting or disconnecting an interface cable. For protection against static electricity discharge to the printer's internal electronics through the interface connector(s), cover any interface connector that is not in use with the protective cap supplied.

Use shielded interface cables.

Safety information

Laser safety:

This printer is certified as a Class 1 laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. This means that the printer does not produce hazardous laser radiation. Because radiation emitted inside the printer is completely confined within the protective housings and external covers, the laser beam cannot escape from the printer during any phase of user operation.

Laser notice:

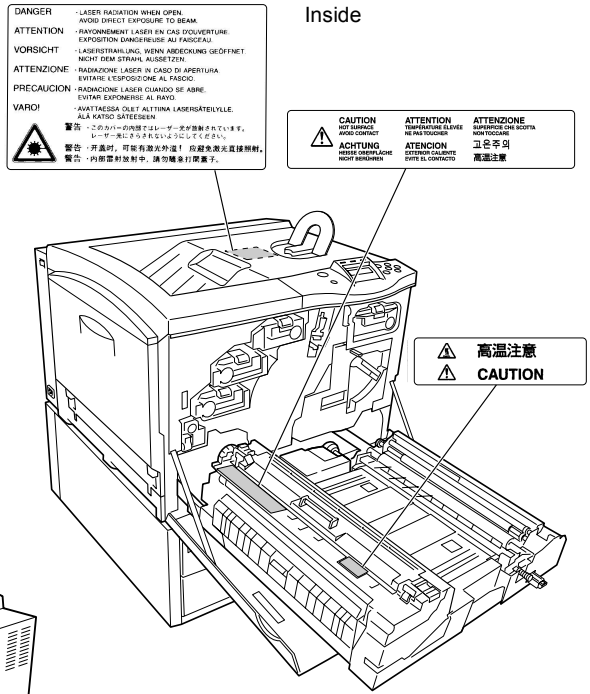
This printer is certified in the United States to conform to the requirements of DHHS 21 CFR Subchapter for Class I (1) laser products, and is certified elsewhere as a Class I laser product conforming to the requirements of IEC 825-1.

Cautions:

- Laser radiation will open. DO NOT STARE INTO THE BEAM OR VIEW THE BEAM DIRECTLY WITH OPTICAL INSTRUMENTS.
- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Cautionary Labels

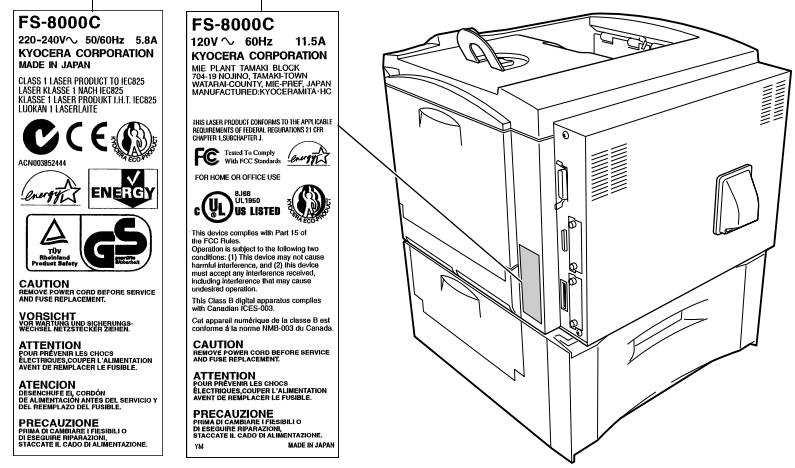
The printer bears any of the following labels.

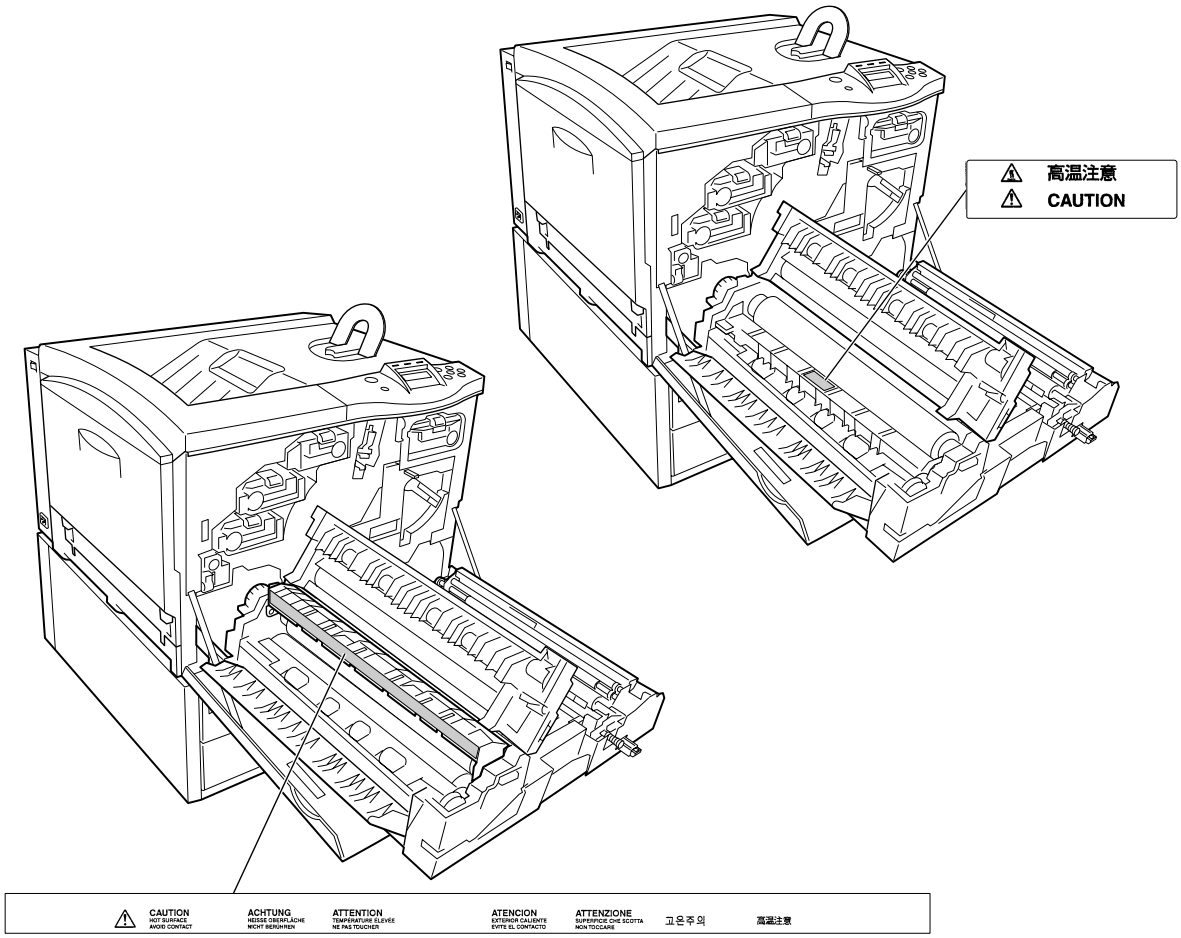


Inside

For European and Asian countries

For U.S.A. and Canada





U.S. CDRH regulations

The Center of Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 2, 1976. These regulations apply to laser products manufactured on and after August 1, 1976. Compliance is mandatory for products marketed in the United States. A label indicating compliance with the CDRH regulations must be attached to laser products marketed in the United States.

Ozone concentration

The printers generate ozone gas (O_3) which may concentrate in the place of installation and cause an unpleasant smell. To minimize the concentration of ozone gas to less than 0.1 ppm, we recommend you not to install the printer in a confined area where ventilation is blocked.

To Prevent Printer from Tipping Over

To prevent the FS-8000C printer from tipping over, the optional CA-31B caster kit must be installed when the printer is installed with more than one paper feeder or a duplex unit. For detailed information on the CA-31B caster kit, see *page A-11*.

Declaration of Conformity for U.S.A.

Model name: Color Page Printer FS-8000C
Trade name: Kyocera Mita
Responsible party: Kyocera Mita America, Inc.
Address: 225 Sand Road PO Box 40008 Fairfield, New Jersey 07004-0008, U.S.A.
Telephone: (973) 808-8444
Fax: (973) 882-6000

Contact person for technical matter: Ryozo Kojima
Phone: (973)-882-6019

Manufacturer's name: Kyocera Corporation, Printer Division
Manufacturer's address: 2-14-9 Tamagawadai, Setagaya-ku, Tokyo 158-8610, Japan

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The manufacturer and its merchandising companies retain the following technical documentation in anticipation of the inspection that may be conducted by the authorities concerned.

User's instruction that conforms to the applicable specifications.
Technical drawings.
Descriptions of the procedures that guarantee the conformity.
Other technical information.

Kyocera Mita America Inc.

CE Marking Directive

According to Council Directive 89/336/EEC and 73/23/EEC

Manufacturer's name: Kyocera Corporation, Mie Plant Tamaki Block
Manufacturer's address: 704-19 Nojino, Tamaki-Cho, Watarai-Gun, Mie-Ken 519-0497, Japan

Declares that the product

Product name: Color Laser Printer

Model number: FS-8000C / FS-8000CN
(as tested with enhancement optional units; Duplex unit PD-30, Paper Feeder PF-30A, Document Finisher DF-31 etc.)

Conforms to the following product specifications:

EN 55 022: 1998 Class B
EN 61 000-3-2: 1995
EN 61 000-3-3: 1995
EN 55 024: 1998
EN 60 950: 1992+A1+A2+A3+A4+A11
EN 60 825-1: 1994+A11

The manufacturer and its merchandising companies retain the following technical documentation in anticipation of the inspection that may be conducted by the authorities concerned.

User's instruction that conforms to the applicable specifications.
Technical drawings.
Descriptions of procedures that guarantee conformity.
Other technical information.

Declaration of Conformity for Australia

Manufacturer's name: Kyocera Corporation, Printer Division
Manufacturer's address: 2-14-9 Tamagawadai, Setagaya-ku, Tokyo 158-8610, Japan

declares that the product

Product name: Page Printer
Model name: FS-8000C

Description of devices: This Page Printer Model FS-8000C is the 30 ppm (monochrome)/8 ppm (color), A4 size and utilized plane paper; laser; dry toner; etc. The printer can be equipped with several enhancement optional units as a paper feeder as PF-30A, a duplex unit as PD-30, a mailbox/sorter as SO-30, IB-21E, etc.

conforms to the following product specifications:

AS/NZS 3548: 1995 (EN 55 022: 1998 Class B)
IEC60950 (EN 60 950: 1992+A1+A2+A3+A4+A11)
IEC60825-1 (EN 60 825-1: 1994+A11)

The manufacturer and its merchandising companies retain the following technical documentation in anticipation of the inspection that may be conducted by the authorities concerned.

User's instruction that conforms to the applicable specifications
Technical drawings
Descriptions of procedures that guarantee conformity
Other technical information

The manufacturer has been employed with ISO9001 scheme. JQA and BS have attested the manufacturer.

Kyocera Mita Australia Pty., Ltd.
6-10 Talavera Road, North Ryde, NSW 2113, Australia
Telephone: +61 2-9888-9999
Fax: +61 2-9888-9588

Canadian Department of Communications compliance statement

This Class B digital apparatus complies with Canadian ICES-003.

Avis de conformité aux normes du ministere des Communications du Canada

Cet appareil numérique de la classe B est conforme a la norme NMB-003 du Canada.

ISO 7779

Maschinenlärminformationsverordnung 3. GSGV, 18.01.1991: Der höchste Schalldruckpegel beträgt 70 dB (A) oder weniger gemäß ISO 7779.

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ENERGY STAR®

As an ENERGY STAR Partner, Kyocera Corporation has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

The basic objective of the ENERGY STAR Program is to reduce environmental pollution by encouraging the manufacture and sale of equipment that uses energy more efficiently.

This printer is equipped with a sleep timer function that conforms with the standards of the ENERGY STAR Program. This function makes it possible to reduce the amount of electrical power consumed by the printer. For maximum power savings, turn off the printer's power supply when not using the printer for extended periods of time.

For details on the sleep timer function and printer power consumption, refer to this manual.

Initial settings of the sleep timer function and power saved using the sleep timer function:

	Initial sleep mode setting	Power consumption in sleep mode
FS-8000C	30 minutes (30 minutes)	34 W (40 W)
FS-8000CD		
FS-8000CN		37 W (40 W)

( ): ENERGY STAR program guideline

Kyosera ECO-PRODUCT

This product has been developed and manufactured with the express interest of reducing the impact on the environment.

Using Kyocera's innovative cartridge free techology, Kyocera has created an advanced printing system that does not require the wasteful replacement and disposal of a cartridge.

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Chapter 1 Introduction

Welcome to the professional color printer from Kyocera Mita. Using the Ecosys Color Printer, you can now print top quality documents at 30 pages per minute for monochrome and 8 pages per minute for color in A4, Letter, and A5 paper sizes.

The Kyocera Mita Ecosys Color FS-8000C Series printers are available in the following three models:

Ecosys Color FS-8000C

Basic model of the FS-8000C Series. Equipped with two paper cassettes, each with a capacity for holding 500 standard-size sheets of paper.

Ecosys Color FS-8000CD

FS-8000C Series model which is equipped with a duplexer (for two-sided printing) and a paper cassette with a capacity for holding 500 standard-size sheets of paper.

Ecosys Color FS-8000CN

FS-8000C Series network model. Equipped with two paper cassettes, each with a capacity for holding 500 standard-size sheets of paper. This model is also equipped with an network interface card and a hard disk as the standard features.

1.1 Features

This section outlines the common major printer features of the FS-8000C, FS-8000CD, and the FS-8000CN Ecosys Color printers.

1.1.1 General

Components with an ultra-long product life

The main printer components such as the imaging drum, development units, and fuser unit have an ultra-long product life.

The imaging drum has been developed using Kyocera's leading-edge ceramic technology that makes full use of amorphous silicon.

High-speed printing

The printer supports print speeds of 30 pages per minute for monochrome outputs; and 8 pages per minute for color outputs. (Actual time varies according to page complexity.)

Superb color printing quality and versatile color control

Multi-bit color depth renders continuous tone images. The intelligent color calibration system automatically optimizes colors every time the printer is powered.

Variety of paper sizes and types

In addition to ordinary paper, you can use print media such as transparencies, labels, and other special papers for printouts.

Environmental-friendly materials

The toner container is made of materials that can be incinerated without polluting the environment. (However, be sure to dispose of toner containers according to your local safety code or regulations.)

Sleep mode

Conserves energy while printing is stopped.

1.1.2 Hardware

Advanced Performance Data Processing

A 400 MHz CPU, 64 MB of RAM, and the optional hard disk deliver ideal throughput for wide varying printing applications.

Two expansion slots for hardware interfaces

The printer is equipped with two expansion slots for plugging in optional network interface cards and a hard disk. The expansion slot for network interface cards accommodates two cards at the same time.

Standard bidirectional parallel interface

Ensures high-speed data transfer between the host computer and printer.

Memory card slot

You can select and read the data in a memory card set in this slot from the printer operator panel.

Large-capacity paper cassettes

Each paper cassette can hold approximately 500 sheets of 80 g/m^2 paper which is 0.1 mm thick. The printer also has a multipurpose tray that can hold approximately 150 sheets of nonstandard size paper. Printed sheets can be stacked in the face-down output tray or an optional face-up output tray.

Displaying printer messages in any of eight languages

Printer messages can be displayed in English, French, German, Italian, Dutch, Danish, Spanish or Swedish.

1.1.3 Software

e-MPS

'e-MPS' is an abbreviation for 'enhanced-Multiple Printing System,' which is a post-processing function that combines electronic sorting, job retention, virtual mailboxing, and a barcode printing system for job retrieval.

When printing multiple copies of a document, the data is transferred from the computer to the printer only for the first copy; the data is then stored on the printer's hard disk. Copies of the document are printed using the stored data.

Printing is performed faster with less computer spooling time and less network traffic.

Furthermore, printed data that is stored on the hard disk can be called up using job retention functions, such as Quick Copy etc., allowing you to quickly print additional copies of a document from the printer at any time, without needing to re-spool the document or start up the computer system.

Printer control language PRESCRIBE

The printer uses PRESCRIBE, Kyocera's page printer control language with enhanced color graphics capabilities. The simple commands of PRESCRIBE allow the programmers to easily define pagination and device control.

KPDL3 (Kyocera Printer Description Language 3)

The printer uses KPDL3, Kyocera's implementation of the PostScript page description language Level 3. The printer has 136 fonts that are compatible with Adobe PostScript fonts. (The printer also has 80 PCL fonts.)

PDF417 two-dimensional bar codes

The printer has the built-in two-dimensional stacked bar codes of PDF 417 (Portable Data File 417).

1.1.4 Networking

Ethernet network interface

The FS-8000CN comes built-in with a 10 Base-T/100 Base-TX network interface card for readily connecting to a network.

SNMP compliance

The printer complies with Simple Network Management Protocol (SNMP). The SNMP is used for providing and transferring management information (MIB) between the printer and the host computer.

Support for network printer monitor utility (KM-NET VIEWER)

Allows network wide management of printers. See the readme file in the Kyocera Mita Digital Library CD-ROM (comes with the printer) for details.

1.2 Parts and Functions

This section provides explanations and illustrations for you to determine the parts and their functions. Try to be familiar with the names and functions of these parts for correct use and optimal performance.

1.2.1 Front

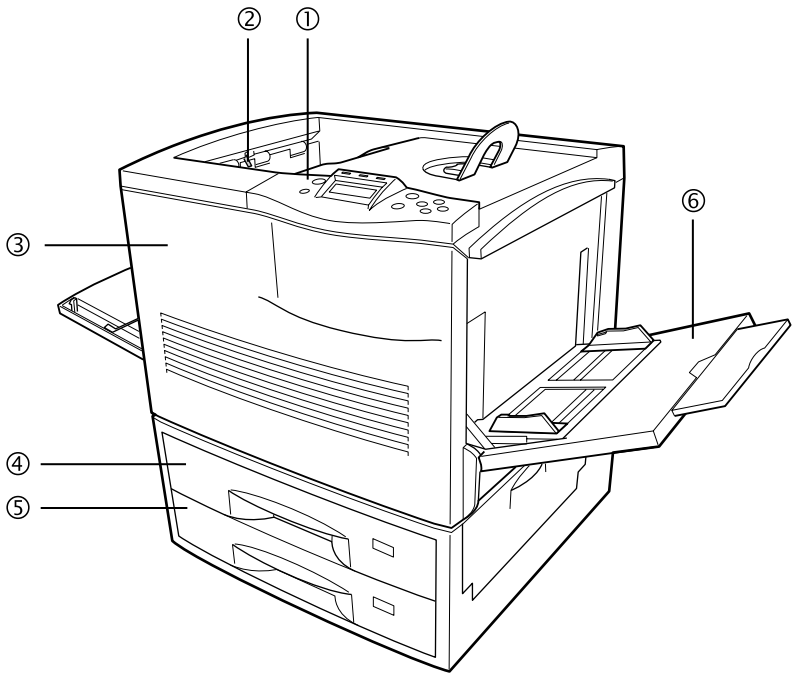


Figure 1-1

1 Operator Panel
Used to specify printer functions and display the printer operating status.

2 Paper-full Sensor
This sensor detects the tray full condition. When the Face-down tray is full, the printer stops operating and urges you to clear the Face-down tray.

3 Front Cover
When open, this cover gives you access to the internal component for replacing toner containers. The cover must also be open to clear paper jam.

4 Top Paper Cassette (FS-8000C/FS-8000CN)/Duplex Drawer (FS-8000CD)
The cassette holds up to 500 sheets of A5 to A3 sizes. For the FS-8000CD, the top drawer includes the duplexer for two-sided printing.

5 Bottom Paper Cassette
The cassette holds up to 500 sheets of A5 to A3 sizes as a second paper source (for the FS-8000C and FS-8000CN).

6 MP (Multi-Purpose) Tray
The MP tray holds up to 150 sheets of standard and non-standard sizes. Transparencies, envelopes, etc. must be fed using this tray.

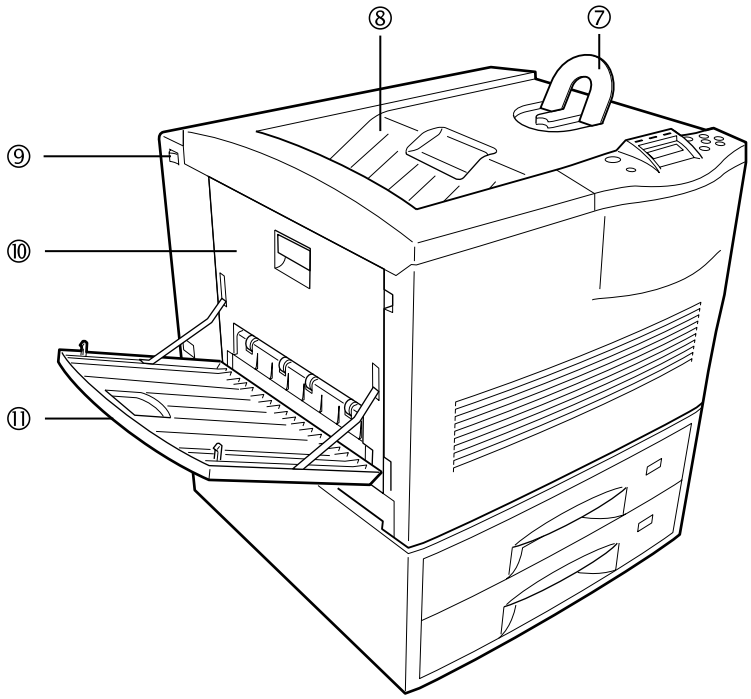


Figure 1-2

7 Paper Stopper
This stopper, when flipped up, prevents the printed sheet of large size from falling.

8 Face-down Tray
This tray receives printouts face down.

9 Power Switch
This switch turns printer power on and off.

Caution

The power cord must not be unplugged from power at least 30 minutes since the printer is switched off.

10 Side Cover
This cover is open by pulling the handle to clear paper jams.

11 Face-up Tray
This tray receives printouts face up.

1.2.2 Internal

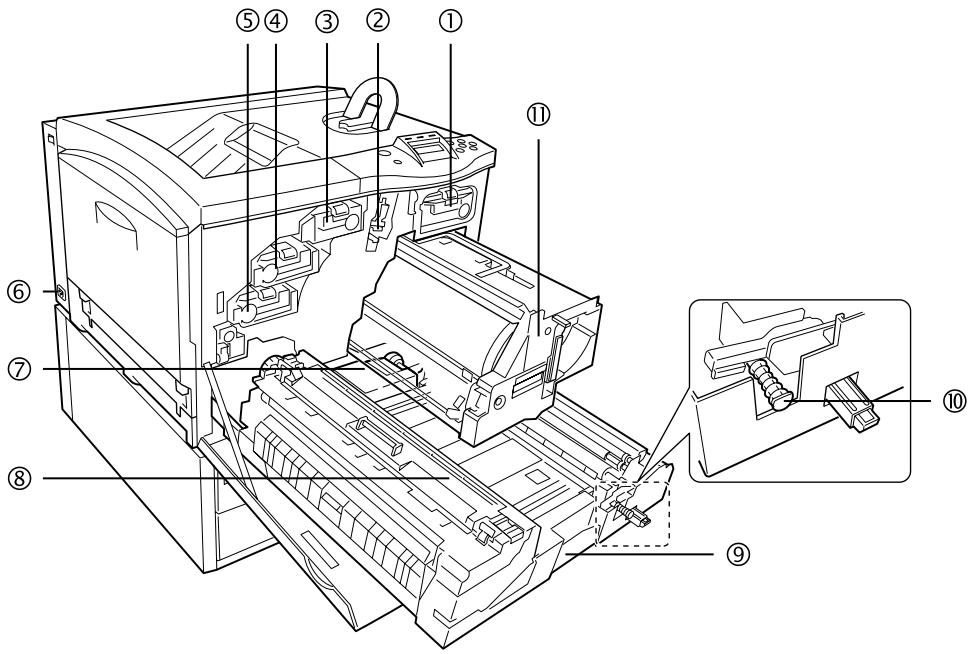


Figure 1-3

1 Black Toner Container
This container holds black (K) toner. You must replace the container when the toner run out.

2 Main Charger Unit
This is an electrical component used to transfer the toner onto the drum unit. The main charger unit must be cleaned when you replace the toner container.

3 Yellow Toner Container
This container holds yellow (Y) toner. You must replace the container when the toner run out.

4 Magenta Toner Container
This container holds magenta (M) toner. You must replace the container when the toner run out.

5 Cyan Toner Container
This container holds cyan (C) toner. You must replace the container when the toner run out.

6 Power Cord Connector
This connector accepts the power cord supplied with the printer.

Caution

The power cord must not be unplugged from power at least 30 minutes since the printer is switched off.

7 Waste Toner Bottle
This plastic bottle collects waste toner for later disposal. The bottle has a cap which is used to seal the bottle opening when being disposed of.

8 Fuser Unit
The fuser unit fixes the toner permanently on the paper. The fuser becomes very hot during printing.

9 Paper Feed Unit
The paper feed unit transports paper from the paper source for developing and fixing images.

10 Separation Charger Cleaning Knob
This cleaning knob (green) is used to clean the separation charger. The separation charger unit must be replaced after every 100,000 pages of printing and requires professional servicing. Contact your Kyocera Mita dealer.

11 Primary Transfer Unit
This unit is used to create the image developed by toner and to transfer it onto the surface of the paper.

1.2.3 Rear

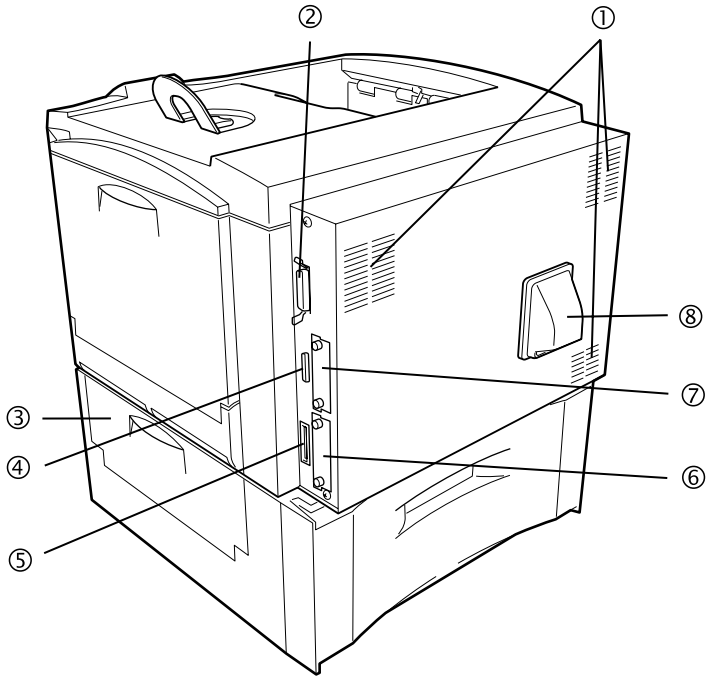


Figure 1-4

1 Vents
Air is purged through these vents to cool down the inside.

2 Parallel Interface Connector
This connector is for a standard Centronics parallel interface cable from the computer. Connect this connector to the computer's parallel port.

3 Paper Feeder Side Cover
This cover is opened to clear paper jams in the paper feeder section.

4 Serial Interface Connector
This connector is for D-sub 25-pin RS-232C cable from the computer. Connect this connector to the computer's serial printer port with a serial cable.

5 Memory Card Slot
This slot receives a memory card. A memory card can hold fonts, macros, forms, etc., that can be downloaded in the printer's memory. For details, see *Appendix A Options, section A.3.1 Memory Card on page A-7*.

6 Network Interface Card Slot (OPT1)
This slot holds an optional network interface card for network printing. (An optional Hard disk can't be used in this slot.) For details see *Appendix A Options, section A.3.10 IB-20/ IB-21E Network Interface Cards on page A-13*.

7 Hard Disk or Network Interface Card Slot (OPT2/HDD)
This slot holds an optional hard disk for storing print jobs or network interface card for network printing. A Kyocera Mita manufactured hard disk must be used. For details, see *Appendix A Options, section A.3.8 HD-3 Hard Disk on page A-12*.

8 Ozone Filter Duct
The ozone filter behind the duct is provided to prevent the ozone generated in the printer from escaping out the air.

Do not block the cooling air in and out vents and the ozone filter duct against walls or with other objects. If the flow of cooling air is blocked, heat will be built up in the printer, and there will be a risk of fire.

1.3 Clearance

Allow the following clearance on all sides of the printer.

Caution

Prolonged use without sufficient clearance may cause heat to build up within the printer, resulting in fire.

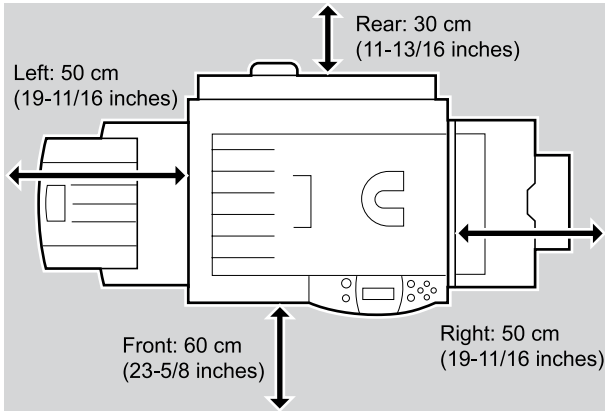


Figure 1-5

Chapter 2 Handling Paper

The printer can use a variety of media in various sizes. However, any media you will choose to use with the printer must be in accordance with the guidelines and specifications in this chapter. Use of paper not satisfying these guidelines and specifications may cause problems such as frequent paper jams, poor quality printing, and possible damage to the printer mechanism.

Even meeting the instructions provided in this chapter, special media such as transparencies, labels, envelopes, non-standard-size paper must be fed directly from the printer's MP (multi-purpose) tray and delivered in the face-up tray in 'straight path' manner. For details on use of MP tray, see *Chapter 3 Using the Operator Panel, section 3.10.1 MP Tray Mode on page 3-79*.

2.1 General

The Ecosys Color FS-8000C Series printers are designed for high-grade bond (copy) paper, like those widely used for ordinary xerographic copiers. The printers will also support other types of paper as long as they meet the standards explained in this chapter.

Selecting the right paper is very important. Use of unsuitable paper can cause paper jams, misfeed, curling, poor print quality, and even worse, printer damage. This chapter shows you how to use your printer in a way that will ensure efficient, error-free printing and minimal printer damage. This practice will increase your office productivity.

Note

Kyocera Mita will not be liable for any problems that may occur if you use paper that does not meet these standards.

2.1.1 Available paper types

The FS-8000C Series printers can use almost any type of printer paper. These printers accept paper used for xerographic copiers as well.

Paper comes in three generic grades: economy, standard, and premium. The grades are determined by how easily the paper can pass through the printer. This depends on the smoothness, size, moisture content, and cutting of the paper. The higher the grade, the less risk of problems (such as paper jams), and higher the print quality.

The differences in paper characteristics of different paper makers also affect the printer performance. High-performance printers can produce high-quality results only when the right types of paper are selected. Low-priced paper is not always economical, especially if it ends up causing frequent printing problems.

Paper of the different grades is available in basis weights (explained later). The recommended basis weights of paper for the printers are 16, 20, and 24 pounds. When expressed in grams per square meter, the recommended basis weights range from 60 to 90 g/m^2.

2.1.2 Paper specifications

Table 2-1 summarizes the basic paper specifications. Details are given on the subsequent pages.

Item	Values
Weight (basis weight)	Cassette: 64 to 90 g/m^2 (17 to 24 lb/ream) MP tray: 64 to 220 g/m^2 (17 to 58 lb/ream)†
Thickness	0.086 to 0.110 mm (3.4 to 4.3 mils)
Dimensions	See **Table 2-3**.
Dimensional accuracy	±0.7 mm (±0.0276 inches)
Squareness of corners	90 ±0.2 °
Moisture content	4 to 6 %

Table 2-1

Item	Values
Direction of grain	Long grain
Pulp content	80 % or more

Table 2-1 (Continued)

† Paper of 135 to 220 g/m^2 thick should be A4 or Letter size and fed laterally.

2.1.3 Minimum and Maximum Paper Sizes

The minimum and maximum paper sizes are as follows. For non standard paper such as cut-sheet, the MP (multi-purpose) tray must be used.

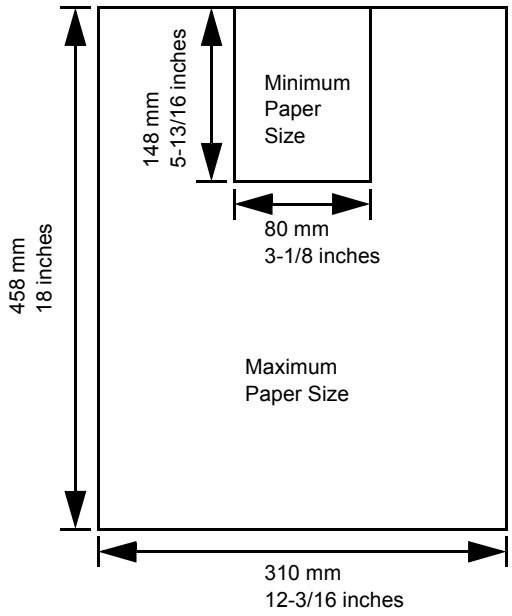


Figure 2-1

2.1.4 Recommended Paper

The following products are recommended for use with the printer for optimum performance.

Size	Product	Weight
Letter, Legal	Hammermill LASER PRINT	90 g/m^2 (24 lb)
A4, A3	NEUSIEDLER COLOR COPY	90 g/m^2

Table 2-2

2.2 Selecting the Right Paper

To get clean, crisp printouts from laser printers all the time, select high-quality printer paper that meets the printer's requirements. Laser printers use laser beams, electrostatic discharge, toner, and heat, all of which affect the paper. Furthermore, paper slide, bends, and twists as it passes through laser printers during printing. Therefore, printer paper must be able to withstand such great stress.

This section describes the major considerations for selecting the right printing paper.

2.2.1 Guidelines

Paper conditions

Do not use paper with folded edges, curls, warps, smudges, tears, or embossing. Also do not use paper containing lint, clay, or paper debris. Using such paper may cause illegible printing, misfeeds, paper jams, etc., and shorten the product life of the printer. Never use paper with surface coating or other surface treatment. The paper surface should be as smooth and even as possible.

Paper composition

Do not use paper with surface-coating or containing plastic or carbon. The heat of fusing causes such paper to emit toxic fumes.

Bond paper should have at least an 80 % pulp content. The percentage of cotton and other fibers should not exceed 20 %.

Paper sizes

Table 2-3 lists the standard paper sizes and dimensions. Note that certain paper sizes are available only for MP tray feeding (as remarked) and face-up tray delivering. For details on using MP tray, see *Chapter 3 Using the Operator Panel, section 3.10.1 MP Tray Mode* on page *3-77*.

The dimensional tolerances for these paper sizes are ±0.7 mm (±0.0276 inches) for both length and width of paper. The corner angles must be 90 ±0.2 °.

Paper Size	Dimensions	Remarks
Ledger	11 × 17 inches	
Legal	8-1/2 × 14 inches	
Letter	8-1/2 × 11 inches	
ISO A3	297 × 420 mm	
ISO A4	210 × 297 mm	
ISO A5	148 × 210 mm	
JIS B4	257 × 364 mm	

Table 2-3

Paper Size	Dimensions	Remarks
JIS B5	182 × 257 mm	
Monarch	3-7/8 × 7-1/2 inches	MP tray only
Business	4-1/8 × 9-1/2 inches	MP tray only
ISO DL	110 × 220 mm	MP tray only
ISO C5	162 × 229 mm	MP tray only
ISO C4	229 × 324 mm	MP tray only
ISO B5	176 × 250 mm	MP tray only
ISO A6	105 ×148 mm	MP tray only
Executive	7-1/4 × 10-1/2 inches	MP tray only
Commercial 9	3-7/8 × 8-7/8 inches	MP tray only
Commercial 6-3/4	3-5/8 × 6-1/2 inches	MP tray only
JIS B6	128 × 182 mm	MP tray only
Japanese postcard	100 × 148 mm	MP tray only
Japanese double-postcard	148 × 200 mm	MP tray only
Custom	80 × 148 mm to 310 × 458 mm	MP tray only

Table 2-3 (Continued)

2.2.2 Paper properties

Smoothness

Paper should have a smooth, uncoated surface. Paper with a rough or sandy surface can cause gaps in printouts. However, paper with surfaces that are too smooth may cause multiple-sheet feeding and fogging problems (fogging is a gray background effect).

Basis weights

Basis weight is the weight in pounds of 500 sheets (called a ream) of paper cut to the basic size, which is 17 × 22 inches. The number of sheets in a ream and the basic paper size relating to basis weights depend on paper classifications. In the metric system, the basis weight is expressed in grams per square meter (g/m^2).

Paper that is too heavy or too light may cause misfeeds, jams, and premature wear of printer parts. Uneven weight of paper can cause multiple-sheet feeding, print defects, poor toner fusing, blurring, and other print quality problems. The recommended basis weights for this printer are between 64 and 90 g/m^2 (17 to 24 lb per ream).

When you use paper with basis weights of 135 to 220 g/m^2, use the face-up tray for high-quality printouts.

Thickness (Caliper)

Thick paper is called high-caliper paper and thin paper is called low-caliper paper. Paper used by the printer should be neither too thick nor too thin. If you encounter paper jam, multiple-

sheet feed, or too light printing problems, the paper may be too thin. If you encounter paper jam or too heavy printing problems, the paper may be too thick. The recommended thickness of a sheet for this printer is between 0.086 and 0.110 mm (from 3.4 to 4.3 mils).

Moisture content

Moisture content is the percentage of the weight of water in paper. Moisture affects the appearance, feeding, curling, electrostatic properties, toner fusing of the paper.

The moisture content of paper varies with the relative humidity in the room. If the room is too humid, paper will absorb more moisture. The edges will swell and the paper will become wavy. If the room is too dry and the paper loses moisture, the edges shrink and tighten, and the print contrast may be degraded.

Wavy or tight edges can cause paper misfeeds and misalignments. The recommended moisture content is between 4 and 6 %.

To maintain the correct moisture content level, store the paper in an environment that allows moisture control. These are tips for moisture control:

- Store paper in a cool, dry place.
- Leave packages of paper wrapped as long as possible. Rewrap unused paper.
- Return paper to its paper carton, whenever possible. Place the cartons on a pallet or other furniture so that they are not in direct contact with the floor.
- Before using paper stored for an extended period of time, condition it in the printer's environment for at least 48 hours.
- Do not expose paper to heat, direct sunlight, or damp.

Grain

Technically, grain is the direction of paper in the paper machine. Grain is parallel with the direction of movement in the paper machine. Grain long means that the grain runs along the length of the sheet, and grain short means that the grain runs along the width of the sheet. Because grain short causes paper feed problems, always select grain long for the printers.

2.2.3 Other properties of paper

Porosity

The density of paper structure, which indicates the compactness of the fiber bonding. It is also the characteristic that allows air to pass through paper (i.e., air permeability).

Stiffness

The ability of paper to resist deformation under stress. In the printer, limp paper can buckle and too stiff paper can bind. Both conditions result in paper jams.

Curl

Most paper naturally tends to curl one way. To produce flat printouts, load the paper sheets so that the upward pressure from the printer can correct their curling. When loading paper, it is also important to distinguish between the front side and backside of the paper. Be sure to follow the paper loading instructions printed on the paper carton.

Electrostatic discharge

During the printing process, paper is given an electrostatic charge to attract the toner. Therefore, the paper must discharge the static electricity so that the printouts do not stick to each other in the output tray.

Whiteness

The contrast of printed images depends on the whiteness of the paper. Whiter paper produces sharper and clearer images.

Quality control

Uneven paper sizes, corners that are not square, jagged paper edges, irregularly cut sheets, torn edges and corners, etc. can cause various printer troubles. Before purchasing paper, find out whether the paper store always takes measures to prevent such problems in its products.

Packaging

Paper sheets should be shipped in strong cartons to protect them from damage during transportation. Before purchasing paper, make sure the store ships its products in proper packages.

2.3 Special Paper

Besides plain paper, this printer can use the following types of special paper:

- Transparencies
- Pre-printed
- Labels
- Bond
- Recycled
- Vellum
- Rough
- Letterhead
- Color
- Pre-punched
- Envelope
- Card stock
- Coated
- Second side†
- Customs

† Paper printed using this printer only. You cannot use paper already copied or printed by another printer.

You can assign one of these special paper type to a paper cassette or MP (multi-purpose) tray by using the printer's operator panel keys. Then, the printer can automatically select the paper cassette or malti-purpose tray to feed the special paper from and internally adjust the electrical parameters for optimum printing performance according to the special paper type. For details, see *Chapter 3 Using the Operator Panel, section 3.10.4 Setting the Cassette Paper Type on page 3-82*.

Note that some types of special paper do not allow feeding from the paper feeder cassette or duplex (two-sided) printing.

2.3.1 Selecting the Special Paper

Since special paper differs significantly in paper composition and quality, special paper is more likely to cause problems than white bond paper during printing. When using special paper, be sure that they are manufactured for photocopiers and/or laser printers.

Before purchasing any special paper, make a test print using the printer and check whether the results are satisfactory.

Note

Kyocera Mita shall not be liable for any danger to a person or machine that is caused by using special paper (e.g., fumes emitted from the special paper).

To avoid problems, stack transparencies, labels, or envelopes on the tray or cassette face up.

Major considerations for each type of special paper are given below.

Transparency

Transparencies for overhead projectors must withstand the heat of fusing during the printing process. The recommended transparency product is as follows:

3M CG3700 (Letter, A4)

Transparencies must be placed on the MP (multi-purpose) tray with the long edge towards the printer. To avoid problems, stack transparencies face up on the face-up tray.

When unloading transparencies (e.g., for clearing jams), hold them carefully by the edges to avoid leaving fingerprints on them.

Adhesive-backed labels

Label paper must be fed manually.

For printing on labels, use extreme care so that the adhesive may not come in direct contact with any part of the printer. Adhesives that stick to the drum or rollers will cause printer damage.

Labels consist of three parts. Printing is done onto the top sheet (also called the face sheet). The adhesive contains chemicals. The carrier sheet (also called the backing paper or liner) bears the top sheet. This composition of labels can cause more problems than other print forms during printing.

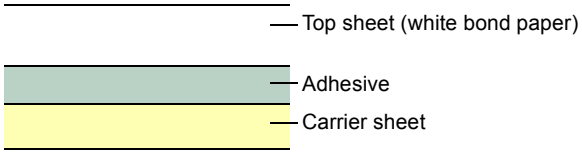


Figure 2-2

When using label paper, do not leave gaps between the arranged labels (i.e., top sheets). Labels arranged with gaps in-between can easily be peeled off during printing, causing serious jam problems.

When the label paper has extra margin around the label's outside edges that correspond to the margins of the printable area, do not remove the extra top sheet from the carrier sheet until printing is finished.

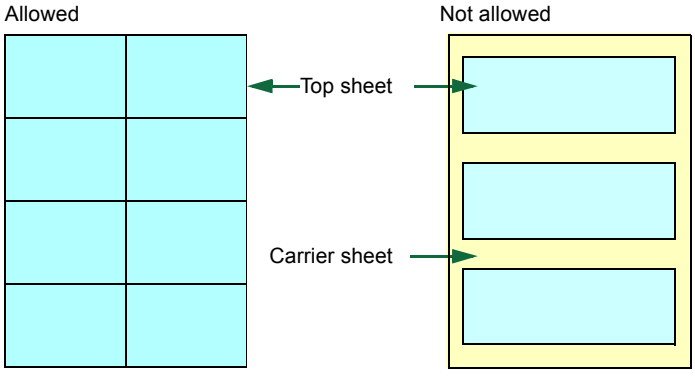


Figure 2-3

When selecting labels, make sure to use only those meeting the following requirements:

Item	Value
Top sheet weight	44 to 74 g/m^2 (12 to 20 lb)
Total weight	104 to 151 g/m^2 (28 to 40 lb)
Top sheet thickness	0.086 to 0.107 mm (3.9 to 4.2 mils)
Total thickness	0.115 to 0.145 mm (4.5 to 5.7 mils)
Moisture content	4 to 6 % (composite)

Table 2-4

Envelopes

Envelopes must be fed manually.

Since the composition of an envelope is more complex than that of ordinary paper, it is not always possible to ensure consistent printing quality over the entire envelope surface.

Normally, envelopes have a diagonal grain direction. See section *Grain* on page *2-6*. This direction can easily cause wrinkles and creases when envelopes pass through the printer. Before purchasing envelopes, make a test print to check whether the printer accepts the envelope.

Other handling cautions follow:

- Do not use envelopes that have an encapsulated liquid adhesive.
- Avoid a long printing session for envelopes only. Extended envelope printing can cause premature printer wear.
- To avoid jams caused by curled envelopes, stack the printed envelopes no higher than 10 on the output tray.

Colored paper

Colored paper should have the same specifications as the white bond paper listed. In addition, the pigments in the paper must be able to withstand the heat of fusing during the printing process (up to 200 °C or 392 °F).

Pre-printed paper

Pre-printed paper should basically be bond paper. The inks on the paper must be able to withstand the heat of fusing during the printing process and must not be adversely affected by silicon oil. Do not use paper with any kind of coating, such as calendar stock.

Recycled paper

Select recycled paper that has the same specifications as white bond paper. See *Table 2-1 on page 2-2*. Recycled paper, however, does not have to be as white as white bond paper.

Note

Before purchasing recycled paper, make a test using the printer and check whether the print quality is satisfactory.

Chapter 3 Using the Operator Panel

This chapter provides the information you need to configure the Ecosys Color printer. In general you need to use the operator panel only to make default settings. You can make most changes to the printer settings using the printer driver trough the application software. For details, see *Chapter 4 Printer Drivers and Utilities*.

Note

Changes to printer settings made using a software application override changes made using the operator panel.

You can also rely on other printer utilities such as Kyocera Mita PrintMonitor if you need to change settings that are not available on the printer driver. It will allow you remotely access to printer settings. Printer utilities are supplied in the software CD-ROM supplied with the printer.

The chapter describes the operator panel in detail, including its menus and the procedures for changing various printer settings.

3.1 Understanding the Operator Panel

The operator panel on the top of the printer has a 2-line by 16-character liquid crystal display (LCD), eight keys, and three indicators (LED).

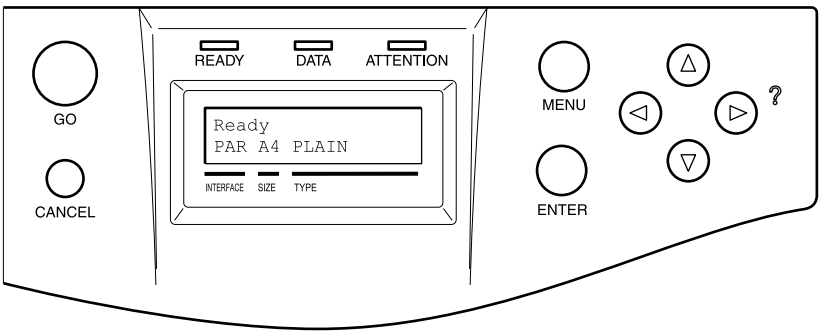


Figure 3-1

Messages that appear on the display and functions of indicators and keys are explained in the sections that follow.

3.1.1 Message Display

The message display on the operator panel shows:

- Status information, the eight messages listed below which are displayed during normal operation.
- Error codes, when the printer requires the operator's attention; as explained in *Chapter 5 Troubleshooting*.

Status Information

Message	Meaning
`Self test`	The printer is performing self-diagnostics after power-up.
`Please wait`	The printer is warming up and is not ready. When the printer is switched on for the first time, the message display shows `Adding toner` which will take several minutes.

Table 3-1

Message	Meaning
`Please wait (Calibrating)`	The color calibration function is being performed automatically as you powered on the printer. You can also execute this function manually on the operator panel. For details, see *Section 3.11.4 Color Calibration on page 3-100*.
`Ready`	The printer is ready to print.
`Processing`	The printer is receiving data to print. This is also shown when the printer is reading a memory card or hard disk.
`Sleeping`	The printer is in sleep mode. The printer wakes from sleep mode whenever a key on the operator panel is pressed, the cover is opened or closed, or a print job is received. The printer then warms up and goes on-line. For details on sleep mode, see *Section Sleep Timer Timeout Time on page 3-107*.
`Cancelling data`	Jobs inside the printer are being canceled. To cancel a job, see *Section 3.1.3 Keys on page 3-6* .
`Waiting`	The printer is waiting for the rest of print job before completing the last page. Pressing the **GO** key allows you to obtain the last page immediately. See below.
`FormFeed TimeOut`	The printer is printing the last page after a waiting period.

Table 3-1 (Continued)

Error codes

See *Chapter 5 Troubleshooting*.

3.1.2 Indicators in Message Display

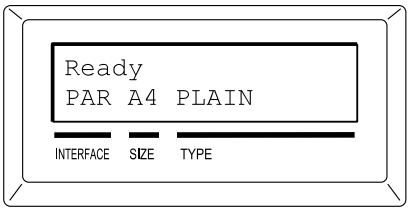


Figure 3-2

Interface Indicator (INTERFACE)

The interface indicator shows the interface that is currently in use:

PAR Parallel interface is in use.
SER Serial (RS-232C) interface is in use.
OP1 (2) Network interface is in use.
--- No interface is in use.

Each interface has a timeout time of 30 seconds during which the other interface should wait to receive a print job. Even a print job has been complete on the interface, you should wait for this period until the other interface begins printing the job.

Paper Size Indicator (SIZE)

This indicator indicates:

- While the printer is in standby, the paper size of the cassette. The default paper cassette is determined by the operator panel keys. For details, see *Section 3.10 Paper Handling on page 3-79*.
- While the printer is printing, the paper size used to format the document to print by the application software.

The abbreviations used to indicate the paper sizes and their dimensions are as follows:

A3	ISO A3 (29.7 × 42 cm)
A4	ISO A4 (21 × 29.7 cm)
A5	ISO A5 (14.8 × 21 cm)
A6	ISO A6 (10.5 × 14.8 cm)†
B4	JIS B4 (25.7 × 36.4 cm)
B5	JIS B5 (18.2 × 25.6 cm)
B6	JIS B6 (12.8 × 18.2 cm)†
LT	Letter (8-1/2 × 11 inches)
LD	Ledger (11 × 17 inches)
LG	Legal (8-1/2 × 14 inches)
MO	Monarch (3-7/8 × 7-1/2 inches)†
BU	Business (4-1/8 inches)†
DL	ISO DL (11 × 22 cm)†
C4	ISO C4 (22.9 × 32.4 cm)†
C5	ISO C5 (16.2 × 22.9 cm)†
b5	ISO B5 (17.6 × 25 cm)†
EX	Executive (7-1/4 × 10-1/2 inches)†
#6	Commercial 6-3/4 (3-5/8 × 6-1/2 inches)†
#9	Commercial 9 (3-7/8 × 8-7/8 inches)†
HA	Japanese Postcard (10 × 14.8 cm)†
OH	Return Postcard (20 × 14.8 cm)†
CU	Custom Size (8 × 14.8 cm to 31 × 45.8 cm)†

† Only with MP tray feeding

Paper Type Indicator (TYPE)

This indicator shows the paper type defined for the current paper casette. The paper type can be manually defined using the operator panel. For more information, see *Section 3.10 Paper Handling on page 3-79*.

The following abbreviations are used:

(none)	Auto
PLAIN	Plain paper
TRNSPRNCY	Transparency†
PREPRINTE	Pre-printed paper
LABELS	Labels†
BOND	Bond paper

RECYCLED	Recycled paper
VELLUM	Vellum†
ROUGH	Rough paper
LETTERHEA	Letterhead
COLOR	Colored paper
PREPUNCH	Pre-punched paper
ENVELOPE	Envelope†
CARDSTOCK	Card stock†
COATED	Coated paper
2ND SIDE	Second side of paper
CUSTOM1 (to 8)	Custom 1 (to 8)

† Only with MP tray feeding

READY, DATA, and ATTENTION Indicators

The following indicators light during normal operation and whenever the printer needs operator's attention. Depending on the status of lighting, each indicator has the following meaning:

Indicator	Description
READY	**Flashing.** Indicates an error that you can recover by yourself, such as the loose front cover. For details, see *Chapter 5 Troubleshooting, section 5.3.1 Error Messages on page 5-7*. **On.** Indicates that the printer is ready and on-line. The printer prints the data it receives. **Off.** Indicates that the printer is off-line. Data can be received but will not be printed until the printer is on-line by pressing the **GO** key. Also, indicates when printing is automatically stopped due to the occurrence of an error. For details see *Chapter 5 Troubleshooting, section 5.3.1 Error Messages on page 5-7*.
DATA	**Flashing.** Indicates that a data is being received from the computer. **On.** Indicates either that data received is being processed before printing starts, or that data received is being written to a memory card or a hard disk.
ATTENTION	**Flashing.** Indicates that the printer requires maintenance or is warming up. **On.** Indicates the occurrence of a problem or an error. For details, see *Chapter 5 Troubleshooting, section 5.3.1 Error Messages on page 5-7*.

Table 3-2

3.1.3 Keys

The operator panel keys are used to configure the printer operation. Note that certain keys have the secondary function.

The printer has a parallel, serial, and an optional network interface. Configuration to the printer settings made with these keys affect only one of these interfaces that is currently active (indicated by the INTERFACE indicator on the message display). See *Interface Indicator (INTERFACE) on page 3-3*.

GO Key

The **GO** key switches the printer between on-line and off-line. Use this key to:

- Toggle the printer's on-line and off-line states. You can temporarily stop the print job by switching the printer off-line.
- Print and feed out one page when the printer displays `Waiting`.

CANCEL Key

This key is used to:

- Cancel a printing job
- Stop the alarm sound
- Reset numeric values or cancels a setting procedure while using menu system

To cancel a printing job:

1 While the printer displays `Processing`, press the **CANCEL** key.

`Print Cancel?` appears on the message display followed by the interface which the job to cancel is on. The interface is indicated by one of the following message:

```
Parallel
Serial
Option 1
Option 2
```

If you wish to abort the cancellation procedure, press the **CANCEL** key again.

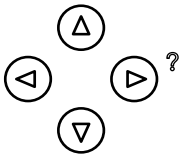
2 Press the **ENTER** key. `Cancelling data` appears on the message display and printing stops after the current page is printed.

MENU Key

The **MENU** key lets you enter the menu system to change the setup and printing environment of the printer.

Pressing this key during a menu selection will terminate the selection and return the printer to the normal operation.

Arrow Keys



The four arrow keys are used in the menu system to access a desired item or enter numeric values.

The arrow key with the question mark (**?**) may be pressed when the paper jam message has appeared on the message display. Then a help message will appear to facilitate jam clearing in the location.

ENTER Key

The **ENTER** key finalizes settings of numeric values and other selections.

3.2 Using the Menu Selection System

This section explains how to use the menu selection system. The **MENU** key on the operator panel allows you to enter the menu when the printer is in ready state.

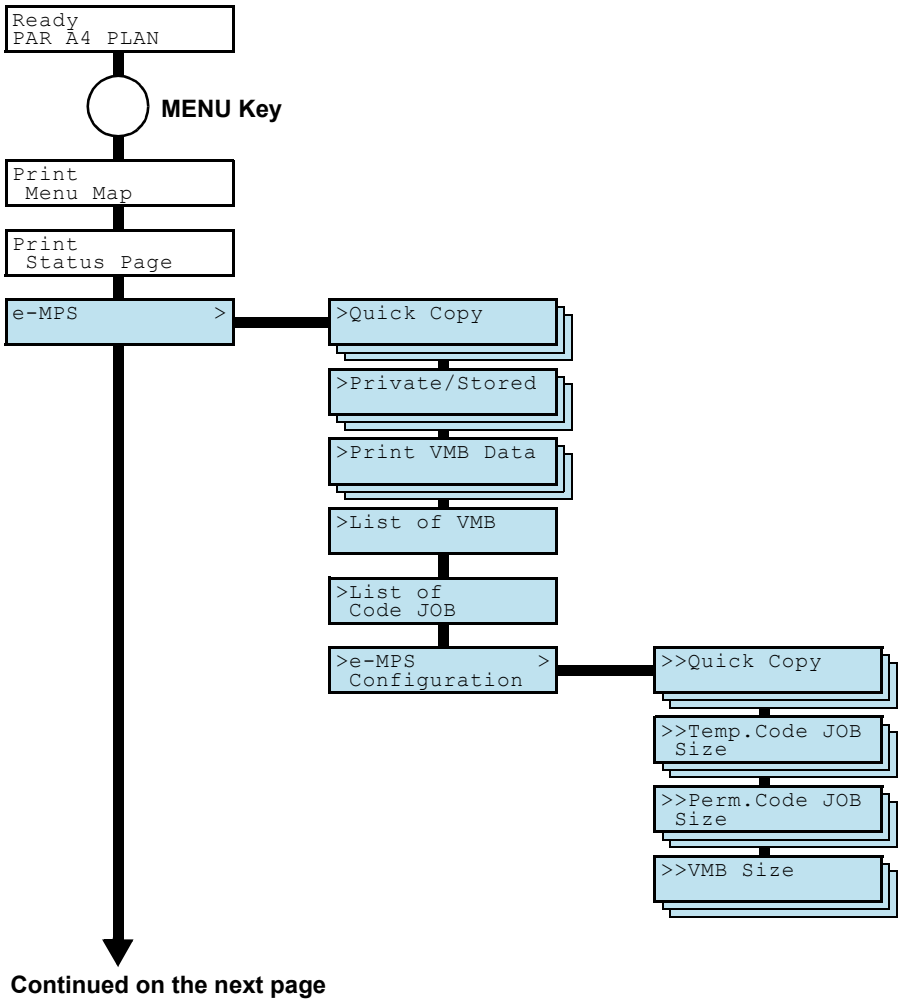
Note

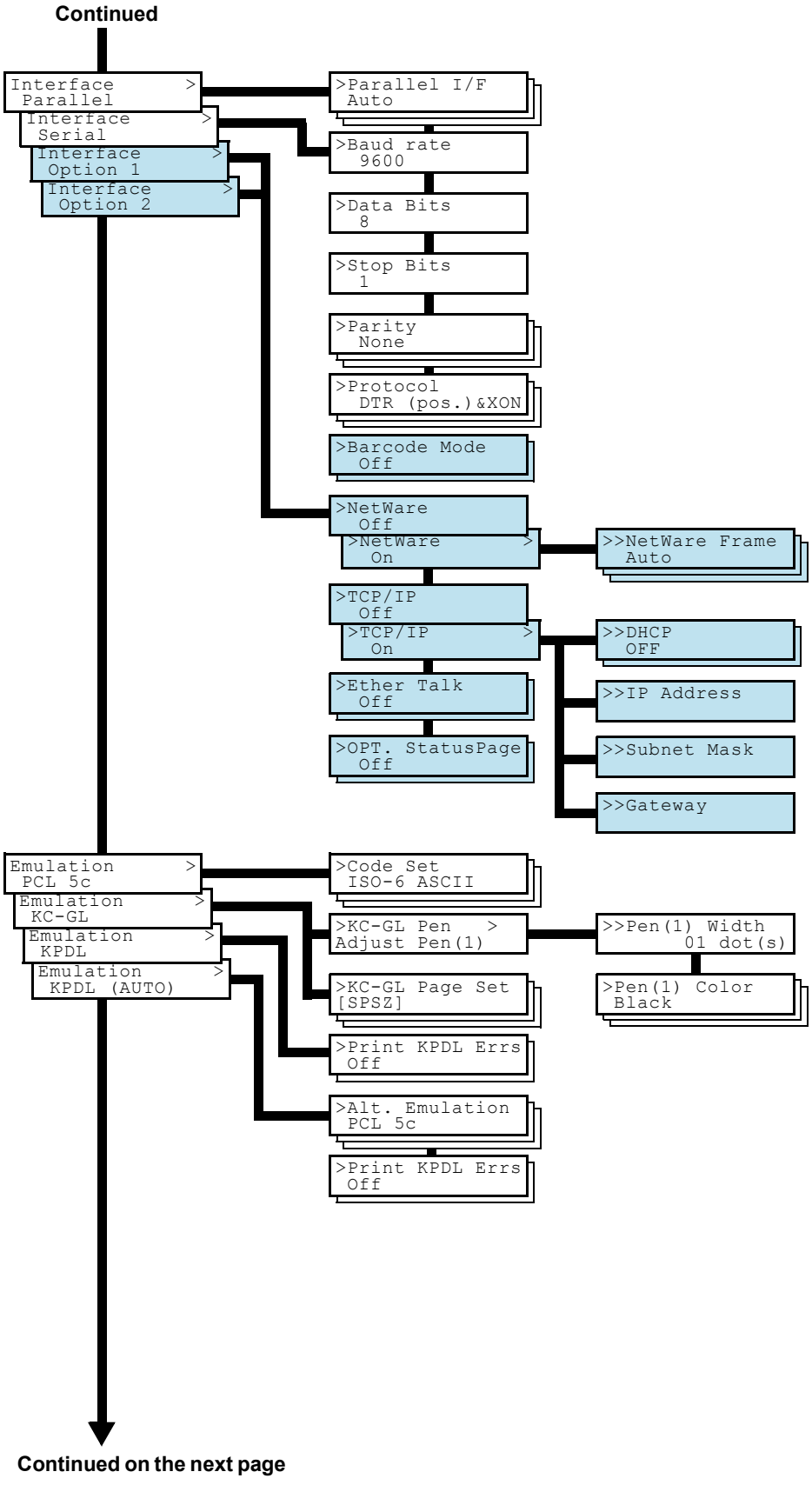
The printer operates according to the most recent printer settings sent from the application software, or from the printer driver, which take priority over the settings made using the menu selection system.

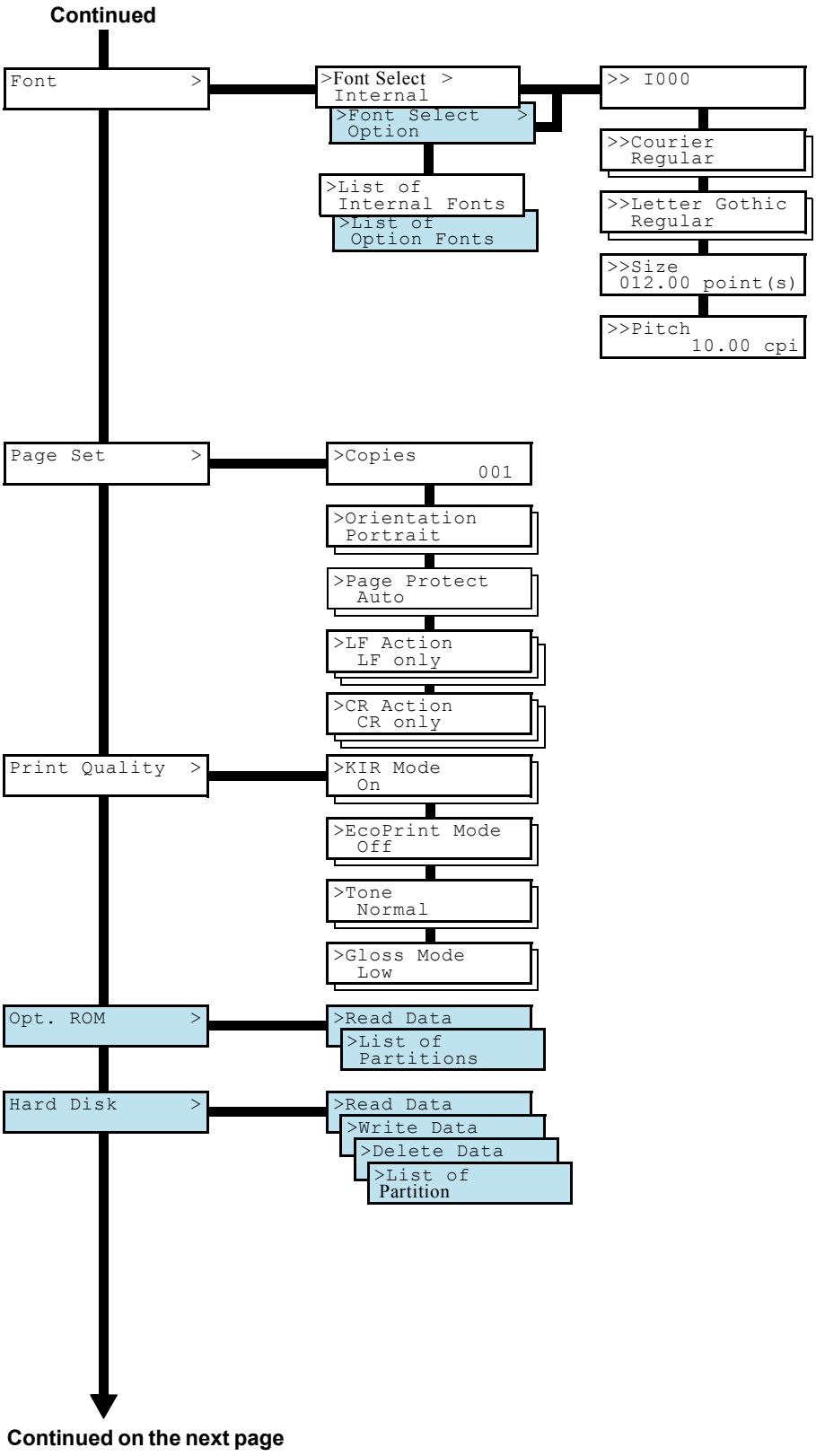
3.2.1 Menu System Road Map

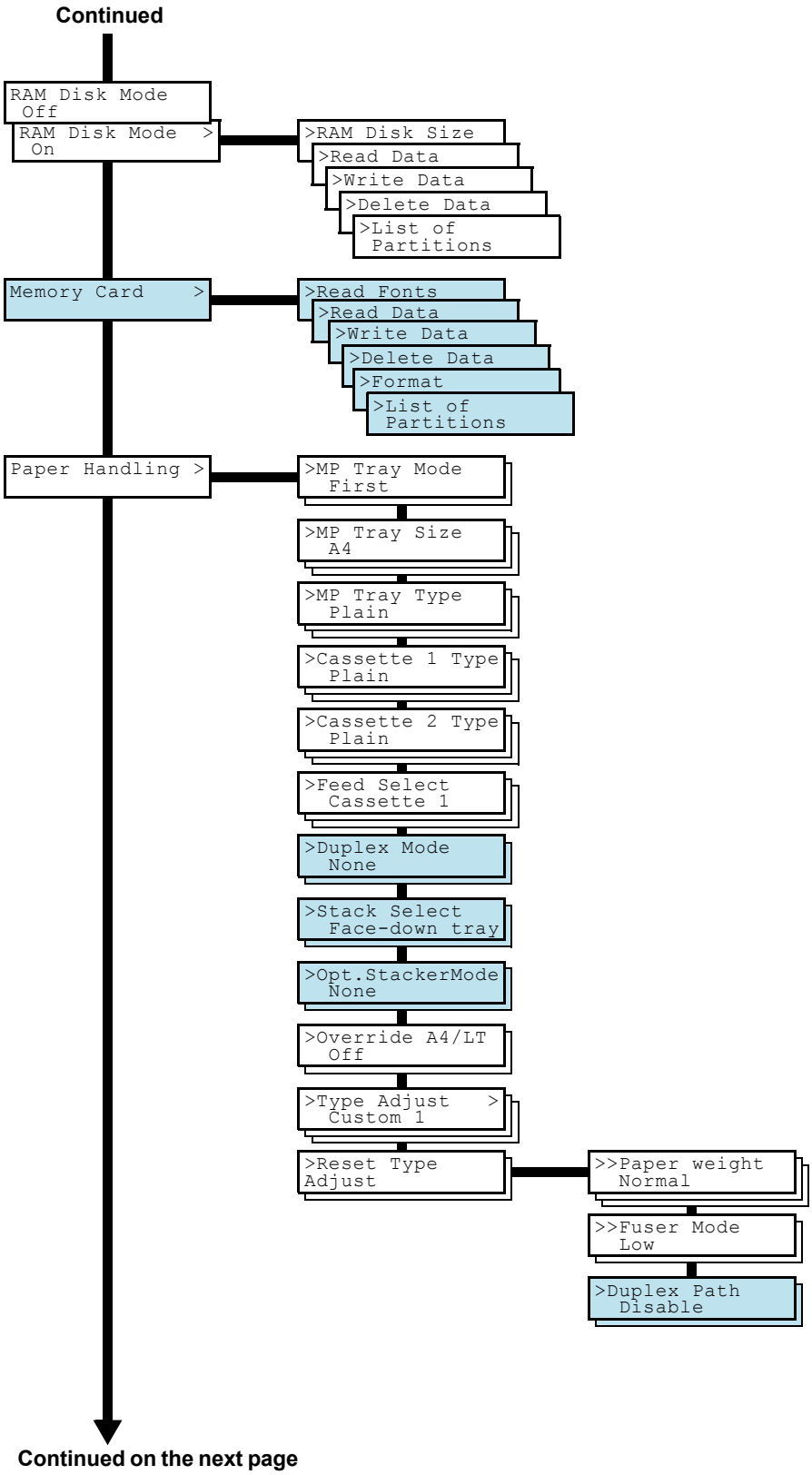
The overview of the printer's menu system is diagrammed below and on the following pages. For convenience, the printer can print out the simplified version of menu map. To print a menu map, see *Section 3.3.1 Printing a Menu Map on page 3-14*.

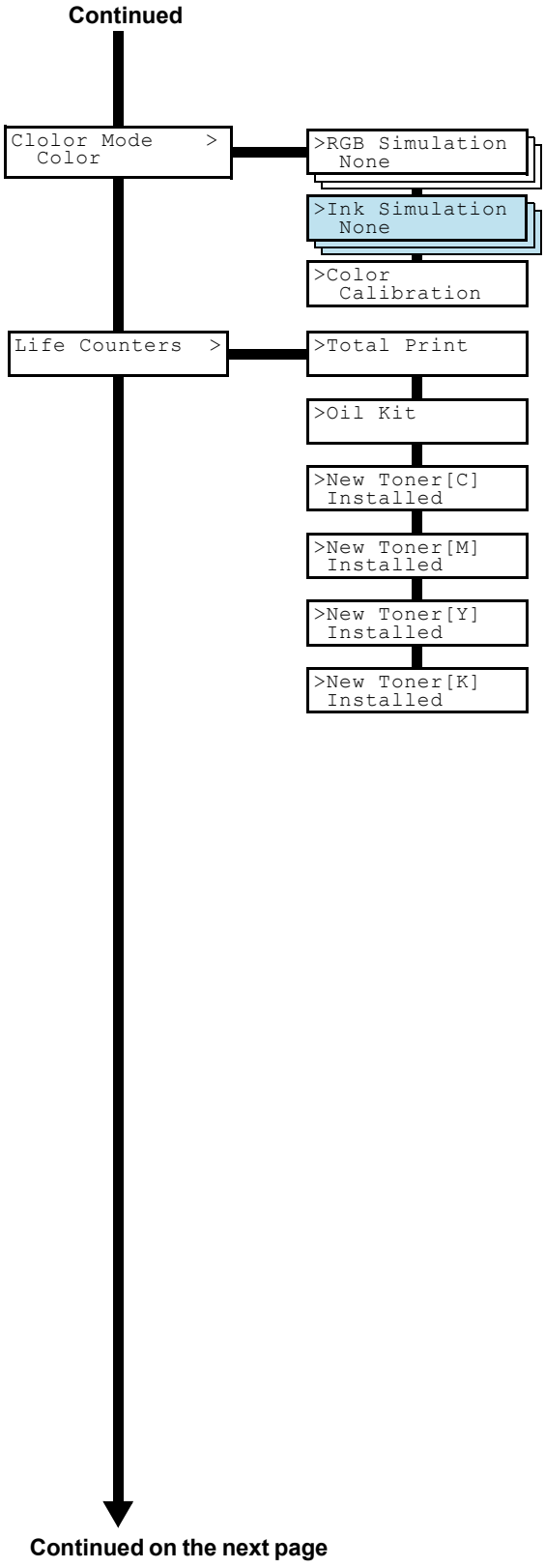
The shaded items mean that these are available only when the corresponding optional device is installed in the printer. For example, **e-MPS** and its submenus will not appear unless a hard disk is installed in the printer.

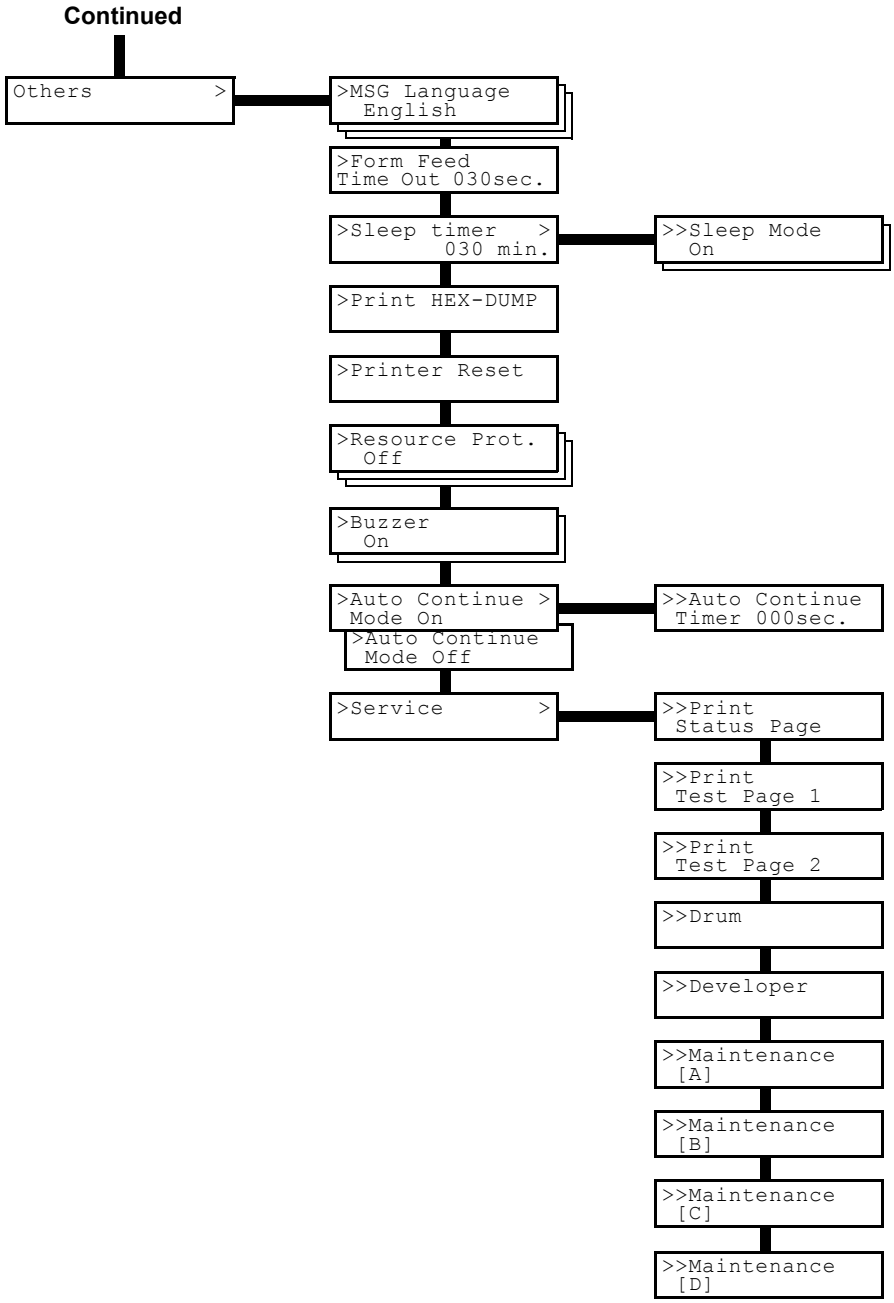



Continued
Interface > Parallel
Interface > Serial
Interface > Option 1
Interface > Option 2
>Parallel I/F Auto
>Baud rate 9600
>Data Bits 8
>Stop Bits 1
>Parity None
>Protocol DTR (pos.)&XON
>Barcode Mode Off
>NetWare Off
>NetWare > On
>>NetWare Frame Auto
>TCP/IP Off
>TCP/IP > On
>>DHCP OFF
>>IP Address
>>Subnet Mask
>>Gateway
>Ether Talk Off
>OPT. StatusPage Off
Emulation > PCL 5c
Emulation > KC-GL
Emulation > KPDL
Emulation > KPDL (AUTO)
>Code Set ISO-6 ASCII
>KC-GL Pen > Adjust Pen(1)
>>Pen(1) Width 01 dot(s)
>Pen(1) Color Black
>KC-GL Page Set [SPSZ]
>Print KPDL Errs Off
>Alt. Emulation PCL 5c
>Print KPDL Errs Off
Continued on the next page


Continued
Font >
>Font Select > Internal
>Font Select > Option
>List of Internal Fonts
>List of Option Fonts
>> I000
>>Courier Regular
>>Letter Gothic Regular
>>Size 012.00 point(s)
>>Pitch 10.00 cpi
Page Set >
>Copies 001
>Orientation Portrait
>Page Protect Auto
>LF Action LF only
>CR Action CR only
Print Quality >
>KIR Mode On
>EcoPrint Mode Off
>Tone Normal
>Gloss Mode Low
Opt. ROM >
>Read Data
>List of Partitions
Hard Disk >
>Read Data
>Write Data
>Delete Data
>List of Partition
Continued on the next page


Continued
RAM Disk Mode
Off
RAM Disk Mode >
On
>RAM Disk Size
>Read Data
>Write Data
>Delete Data
>List of
Partitions
Memory Card >
>Read Fonts
>Read Data
>Write Data
>Delete Data
>Format
>List of
Partitions
Paper Handling >
>MP Tray Mode
First
>MP Tray Size
A4
>MP Tray Type
Plain
>Cassette 1 Type
Plain
>Cassette 2 Type
Plain
>Feed Select
Cassette 1
>Duplex Mode
None
>Stack Select
Face-down tray
>Opt.StackerMode
None
>Override A4/LT
Off
>Type Adjust >
Custom 1
>Reset Type
Adjust
>>Paper weight
Normal
>>Fuser Mode
Low
>Duplex Path
Disable
Continued on the next page


Continued
Clolor Mode >
Color
>RGB Simulation
None
>Ink Simulation
None
>Color
Calibration
Life Counters >
>Total Print
>Oil Kit
>New Toner[C]
Installed
>New Toner[M]
Installed
>New Toner[Y]
Installed
>New Toner[K]
Installed
Continued on the next page


Continued
Others >
>MSG Language
English
>Form Feed
Time Out 030sec.
>Sleep timer >
030 min.
>>Sleep Mode
On
>Print HEX-DUMP
>Printer Reset
>Resource Prot.
Off
>Buzzer
On
>Auto Continue >
Mode On
>>Auto Continue
Timer 000sec.
>Auto Continue
Mode Off
>Service >
>>Print
Status Page
>>Print
Test Page 1
>>Print
Test Page 2
>>Drum
>>Developer
>>Maintenance
[A]
>>Maintenance
[B]
>>Maintenance
[C]
>>Maintenance
[D]

3.3 Menu Map and Status Pages

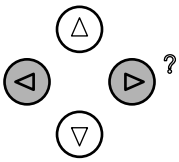
This section explains the procedure for printing the printer's internal information using the menu selection system. The menu map is usefull as a reference to guide yourself through the menu selection system.

The status page is a list of parameters and settings for most basic printer configurations. You may be required to produce a status page when requesting service to the printer.

3.3.1 Printing a Menu Map

The printer prints a full list of menu selection system — Menu Map. Note that menus shown in the list may vary depending on which optional units installed in the printer.

1 Press the **MENU** key.



2 Press the △ or ▽ key repeatedly until `Print Menu Map` appears.

```
Print
 Menu Map
```

3 Press the **ENTER** key. A question mark (`?`) appears.

```
Print
 Menu Map ?
```

If you wish to abort the printing of the menu map, press the **CANCEL** key.

4 Press the **ENTER** key. The message `Processing` appears and the printer prints a Menu Map.

An example Menu Map is shown on the next page.

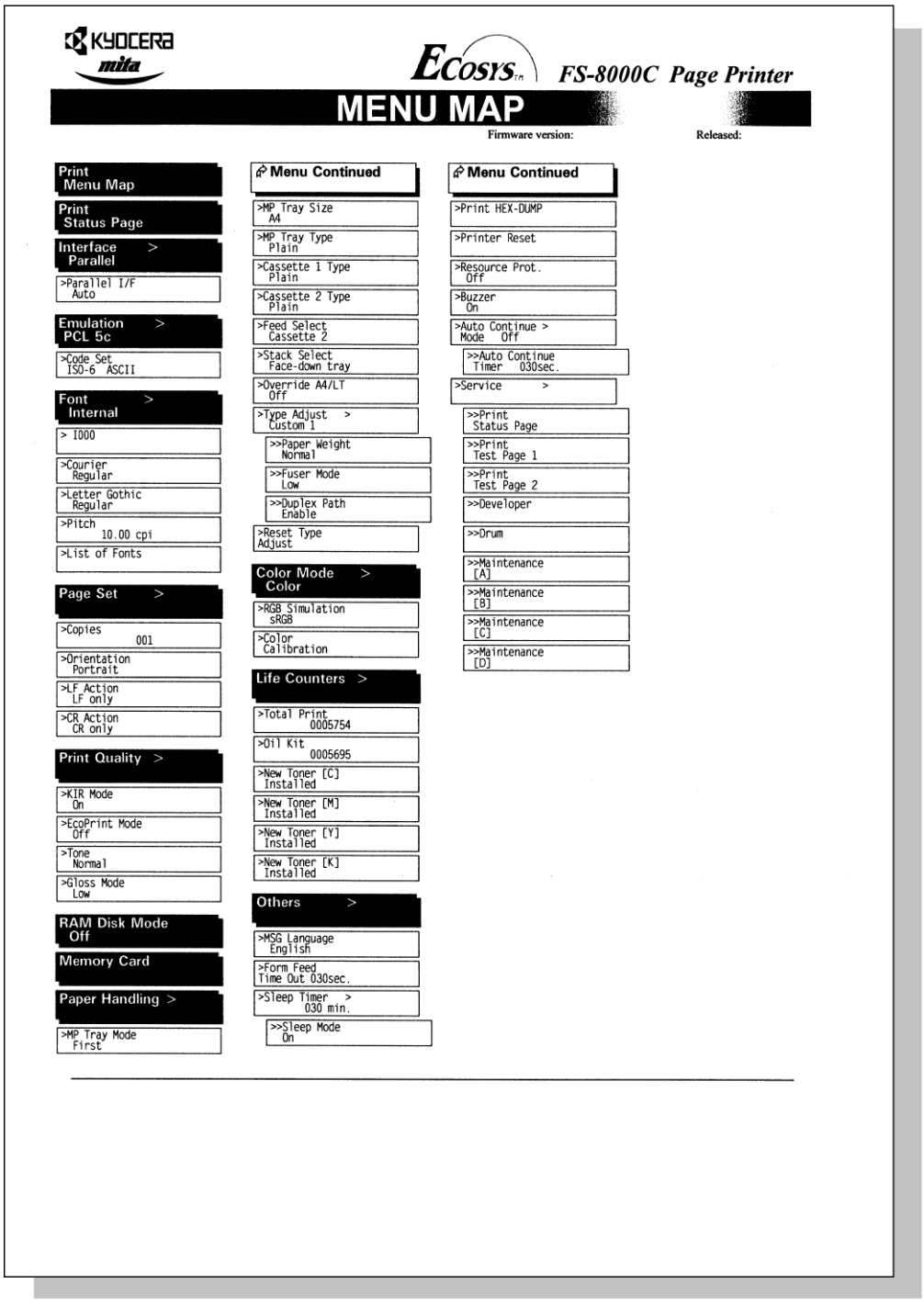
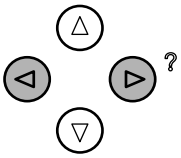

KYOCERA mita
ECOSYS
FS-8000C Page Printer
MENU MAP
Firmware version:
Released:
Print Menu Map
Print Status Page
Interface > Parallel
>Parallel I/F Auto
Emulation > PCL 5c
>Code Set ISO-6 ASCII
Font > Internal
> I000
>Courier Regular
>Letter Gothic Regular
>Pitch 10.00 cpi
>List of Fonts
Page Set >
>Copies 001
>Orientation Portrait
>LF Action LF only
>CR Action CR only
Print Quality >
>KIR Mode On
>EcoPrint Mode Off
>Tone Normal
>Gloss Mode Low
RAM Disk Mode Off
Memory Card
Paper Handling >
>MP Tray Mode First
Menu Continued
>MP Tray Size A4
>MP Tray Type Plain
>Cassette 1 Type Plain
>Cassette 2 Type Plain
>Feed Select Cassette 2
>Stack Select Face-down tray
>Override A4/LT Off
>Type Adjust > Custom 1
>>Paper Weight Normal
>>Fuser Mode Low
>>Duplex Path Enable
>Reset Type Adjust
Color Mode > Color
>RGB Simulation sRGB
>Color Calibration
Life Counters >
>Total Print 0005754
>Oil Kit 0005695
>New Toner [C] Installed
>New Toner [M] Installed
>New Toner [Y] Installed
>New Toner [K] Installed
Others >
>MSG Language English
>Form Feed Time Out 030sec.
>Sleep Timer > 030 min.
>>Sleep Mode On
Menu Continued
>Print HEX-DUMP
>Printer Reset
>Resource Prot. Off
>Buzzer On
>Auto Continue > Mode Off
>>Auto Continue Timer 030sec.
>Service >
>>Print Status Page
>>Print Test Page 1
>>Print Test Page 2
>>Developer
>>Drum
>>Maintenance [A]
>>Maintenance [B]
>>Maintenance [C]
>>Maintenance [D]

Figure 3-3

3.3.2 Printing a Status Page

You can check the printer's current status, including available memory space and option settings by printing a status page.

1 Press the **MENU** key.



2 Press the △ or ▽ key repeatedly until `Print Status Page` appears.

```
Print
 Status Page
```

3 Press the **ENTER** key. A question mark (`?`) appears.

```
Print
 Status Page ?
```

If you wish to abort printing of the status page, press the **CANCEL** key.

4 Press the **ENTER** key again. The message `Processing` appears and the printer prints a status page.

For a sample status page and its full description, see *Understanding the Status Page on page 3-17*.

Understanding the Status Page

The numbers in the following diagram refer the items explained below the diagram. The items and values on the status page may vary depending on the printer's firmware version.

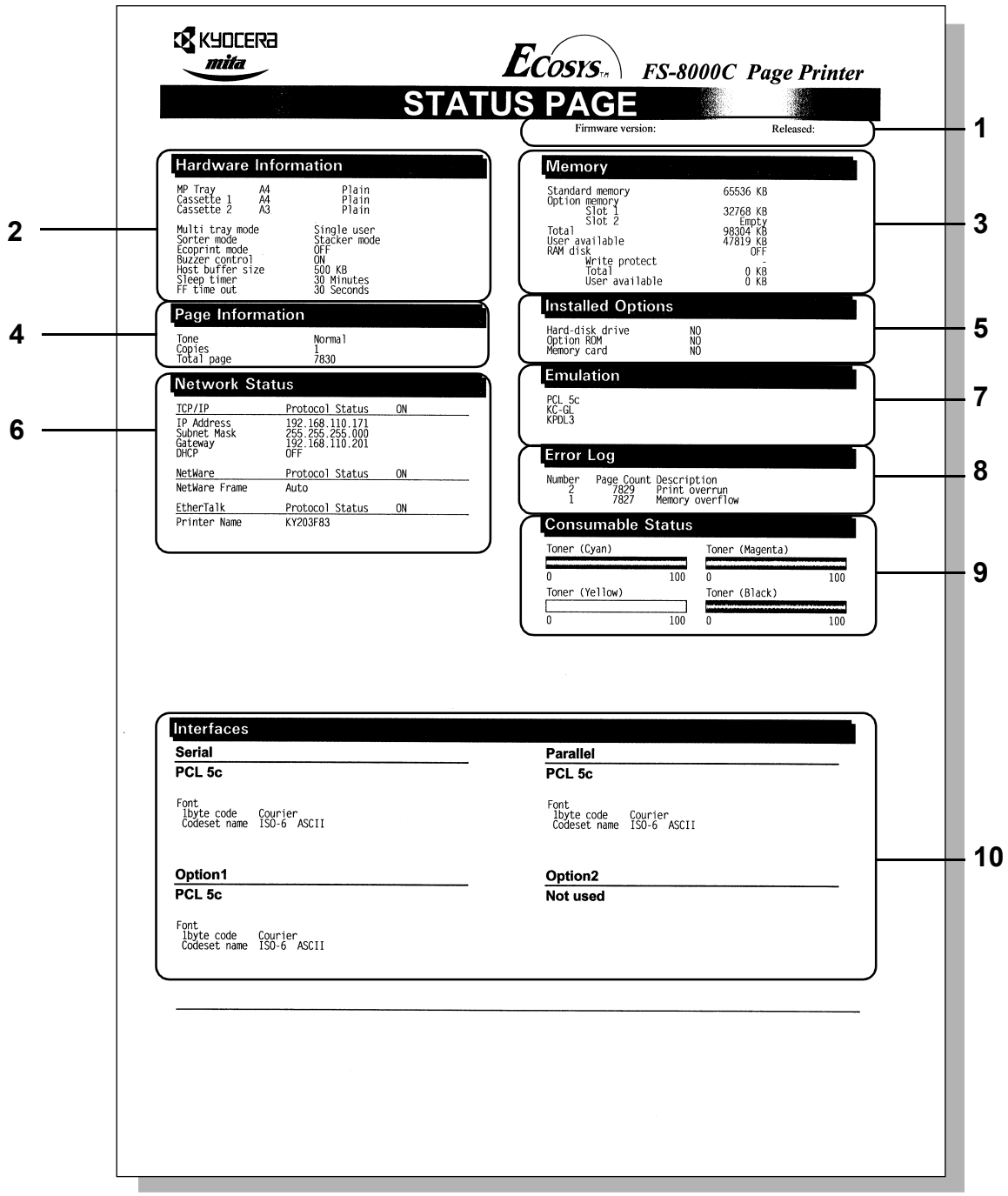


Figure 3-4

1 Software Version

This item shows the version and release date of the printer firmware.

2 Hardware Information

This item shows various printer settings for hardware-related items:

- MP tray paper size and type
- Paper cassette size and type
- Draft mode
- Buzzer control
- Host buffer size
- Sleep time timeout time
- Formfeed timeout time

3 Memory

This item shows:

- Standard memory in the printer (64 MB)
- Option memory slot status (Slots 1 and 2) in megabytes
- Total memory in the printer
- Current status of the RAM disk

4 Page Information

This item shows the page related items:

- Tone mode, Normal or Fine
- Number of copies, from 1 to 999
- Total page count

5 Installed Options

This item shows the options installed in the printer:

- Hard disk
- Option ROM
- Memory card

6 Network Status

This item shows the IP address, subnet mask address, and default gateway address for the network interface card in the printer.

7 Emulation

This item shows all available emulations of the printer. The PCL 5c emulation is set as default when the printer is shipped from the factory. The emulations are:

- PCL 5c
- KPDL3
- KC-GL

8 Error Log

This item shows the last three instances of the following four types of errors, listing them in the order of occurrence:

- KPDL (PostScript) errors
- Memory overflow
- Print overrun
- File-not-found

The most recent error is displayed on the topmost line of Error Log. Error information is cleared when the printer is powered off.

The error log information is intended for service purpose.

9 Consumable Status

This item shows the approximate level of remaining toner. When the value is 100, the toner container is full. The closer to 0, the smaller the amount of remaining toner.

10 Interface Information

This information shows the emulation and the default font for all interfaces installed in the printer.

3.4 e-MPS

e-MPS is an abbreviation for ‘enhanced-Multiple Printing System’ which implements the following functions that are available from the printer driver:

- Job Retention
- Job Storage

In either job mode, when printing a document, the print data is transferred from the computer to the printer then stored on the printer’s hard disk. Since copies of the document are printed using the stored data, printing is performed faster with less computer spooling time and less network traffic.

Note

To use the e-MPS system, an optional hard disk must be installed in the printer. (FS-8000CN is equipped with a hard disk as a standard feature.) For details, see *Appendix A Options*.

Job Retention

Job Retention has four modes as summarized below. These modes are selected when you choose on the printer driver through the application software:

Mode	Quick Copy	Proof-and-Hold	Private Print	Stored Job
Primary function	To later print additional copies	To proof the first copy before printing multiple copies	To hold the document in printer to prevent unauthorized access	To eletronically store documents such as fax cover pages
Start storing by	Printer driver	Printer driver	Printer driver	Printer driver
Retrieved by	Operator panel	Operator panel	Operator panel	Operator panel
Default number of copies printed at retrieval	Same as storing	One less	Same as storing	One
Maximum number of jobs stored†	32, expandable to 50	32, expandable to 50	Private jobs are deleted automatically once it is retrieved.	No limit
PIN security	No	No	Yes	Yes
Hard disk required††	Yes	Yes	Yes	Yes

Table 3-3

† Jobs in excess will cause the earlier ones to be deleted.
†† RAM disk does not work for e-MPS.

Job Storage

Job storage stores print jobs either temporarily or permanently, or in virtual mailboxes, as you click an appropriate radio button on the printer driver when printing from a computer. If you select Temporary or Permanent job storage, you can choose to have a unique number and barcode automatically assigned to each job as it is stored in the printer. This barcode appears on the printed document. The barcode reader can be used to reprint the document by reading

the barcode from the original document or from a List of Code Jobs. For details on this list, see *Printing a List of Code Jobs on page 3-29*.

Job storage requires a hard disk installed in the printer. However, printing barcoded job IDs on documents is possible using the RAM disk feature of the printer. On how to use the RAM disk, see *Section 3.9.1 Setting up the RAM Disk on page 3-69*.

Virtual Mailbox

Virtual mailbox is part of Job Storage, which stores print jobs on the hard disk without printing. It enables you to retrieve jobs later from the operator panel, the KM-NET Printer Disk Manager utility (in the CD-ROM), or the barcode reader.

Each mailbox may be used by an individual who desires to share the printer in this mode. By default, each mailbox is numbered from 'Tray 001,' 'Tray 002,' ... etc. To 'post' a job in one of these mailboxes, you assign a numbered or named mailbox on the printer driver when printing.

To retrieve the stored job for printing, see *Retrieving Jobs from Virtual Mailbox (VMB) on page 3-30*.

Note

The virtual mailbox can be used in PCL 5c emulation only.

3.4.1 Using Quick Copy

This mode enables you to print the requested number of copies of a job, simultaneously storing the job on the hard disk. When additional copies are required, you can reprint the required number of copies from the printer operator panel. To print a job as a quick copy job, see *Chapter 4 Printer Drivers and Utilities*.

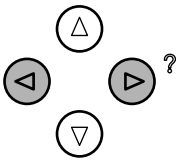
The default number of print jobs that can be stored on the hard disk is 32. This value can be increased to up to 50 from the **e-MPS Configuration** menu. For details, see *Section 3.4.7 Changing e-MPS Configuration on page 3-32*. When the number of jobs reaches the limit, the oldest job will be overwritten by the new one.

When the printer is turned off, all stored jobs will be deleted.

Printing Additional Copies using Quick Copy

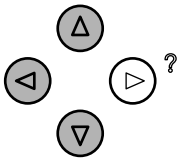
To print additional copies of a job stored in the printer:

1 Press the **MENU** key.

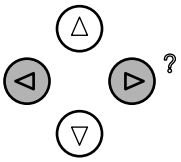


2 Press the △ or ▽ key repeatedly until `e-MPS >` appears.

```
e-MPS           >
```



3 Press the ▷ key.

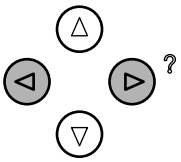


4 Press the △ or ▽ key repeatedly until `>Quick Copy` appears followed by the user name (`Harold`, in this example). The user name is assigned at printing using the printer driver.

```
>Quick Copy
 Harold
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears before the user name.

```
>Quick Copy
?Harold
```

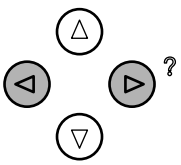


6 Press the △ or ▽ key to display the desired user name, `Arlen`, in this example.

```
>Quick Copy
?Arlen
```

7 Press the **ENTER** key. The job name entered in the printer driver (`Report`, in this example) appear with a blinking question mark (`?`) before the letters.

```
>Arlen
?Report
```



8 Press the △ or ▽ key to scroll to the desired job title.

9 Press the **ENTER** key. The number of copies to be printed can be set. To increase the copy count, press the △ key; to decrease the copy count, press the ▽ key.

```
>Report
 Copies      001
```

10 Press the **ENTER** key to finalize the copy count. The printer prints the specified number of copies for the job.

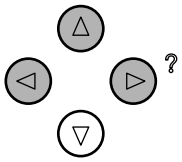
Deleting a Quick Copy Job

All quick copy jobs are automatically deleted when the printer is turned off. If you desire to explicitly delete a stored quick copy job, proceed as follows:

1 Follow steps 1 through 8 in the above section to let the title of the job to be deleted displayed.

2 When the title of the job to be deleted is displayed, e.g. `Report`, below, press the **ENTER** key. The cursor below the copy count starts to blink.

```
>Report
 Copies      001
```



3 Press the ▽ key repeatedly until Delete appears below the title.

```
>Report
 Delete
```

4 Press the **ENTER** key. The stored quick copy job is deleted.

3.4.2 Using Proof-and-Hold

When you print multiple copies, this mode first prints one copy so that you can proof it before continuing to print the remaining copies. Since you can proof the printouts before printing the remaining copies, wastage of paper can be reduced.

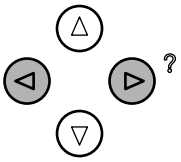
The printer prints one copy and, at the same time, saves the print job on the hard disk. You can also change the number of copies when resuming printing from the operator panel.

When the printer is turned off, all stored jobs will be deleted.

Printing Remaining Copies of a Proof and Hold Job

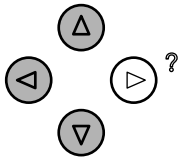
Printing a Proof-and-Hold job on the operator panel is similar to printing a quick copy job. To print remaining copies of a job held in the printer:

1 Press the **MENU** key.

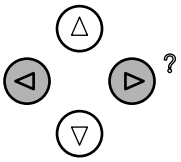


2 Press the △ or ▽ key repeatedly until `e-MPS >` appears.

```
e-MPS           >
```



3 Press the ▷ key.

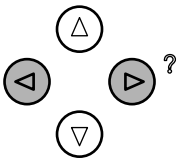


4 Press the △ or ▽ key repeatedly until `>Quick Copy` appears followed by the user name (`Harold`, in this example). The user name is assigned at printing using the printer driver.

```
>Quick Copy
 Harold
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears before the user name.

```
>Quick Copy
?Harold
```

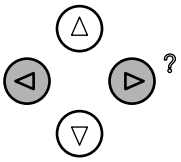


6 Press the △ or ▽ key to display the desired user name, `Arlen`, in this example.

```
>Quick Copy
?Arlen
```

7 Press the **ENTER** key. The job name entered in the printer driver (`Report`, in this example) appear with a blinking question mark (`?`) before the letters.

```
>Arlen
?Report
```



8 Press the △ or ▽ key to scroll to the desired job title.

9 Press the **ENTER** key. The number of copies to be printed can be set. To increase the copy count, press the △ key; to decrease the copy count, press the ▽ key.

```
>Report
 Copies      001
```

10 Press the **ENTER** key to finalize the copy count. The printer prints the specified number of copies for the job.

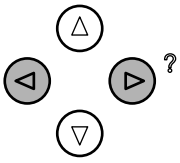
3.4.3 Printing a Private Job

In private printing, you can specify that a job is not printed until you release the job from the operator panel. At sending the job from the application software, you should specify a 4-digit access code in the printer driver. The job is released for printing by entering the access code on the operator panel. Thus, this function ensures confidentiality of the print job.

When the printer is turned off, all the print jobs will be deleted.

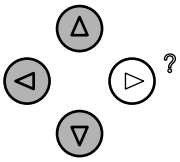
Releasing a Private Job

1 Press the **MENU** key.

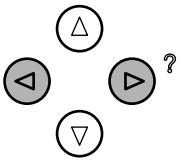


2 Press the △ or ▽ key repeatedly until `e-MPS >` appears.

```
e-MPS           >
```



3 Press the ▷ key.

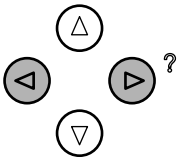


4 Press the △ or ▽ key repeatedly until `>Private/Stored` appears. The name entered in the printer driver (`Harold`, in this example) also appears.

```
>Private/Stored
 Harold
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears before the user name.

```
>Private/Stored
?Harold
```

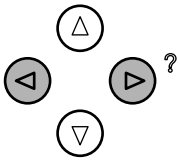


6 Press the △ or ▽ key to display the desired user name (`Arlen`, in this example).

```
>Private/Stored
?Arlen
```

7 Press the **ENTER** key. The user name and the job name (`Agenda`, in this example) entered in the printer driver appear with a blinking question mark (`?`).

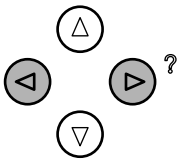
```
>Arlen
?Agenda
```



8 Press the △ or ▽ key to display the desired job title.

9 Press the **ENTER** key. The ID input line appears. Enter the four-digit access code entered in the printer driver and press the **ENTER** key. To enter the ID, press the ◁ or ▷ key to move the cursor to the number to be changed and then enter the correct number by pressing the △ or ▽ key.

```
>Agenda
 ID          0000
```



10 You can set the number of copies to be printed. To increase the copy count, press the △ key; to decrease the copy count, press the ▽ key.

```
>Agenda
 Copies      001
```

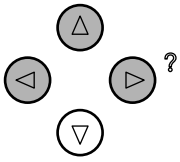
11 Press the ENTER key to finalize the copy count. The printer prints the specified number of copies for the job.

Deleting a Private Job

1 Follow steps 1 through 8 in the above section.

2 When the title of the job to be printed is displayed (`Agenda`, in this example), press the **ENTER** key. Enter the four-digit access code entered in the printer driver and press the **ENTER** key.

```
>Agenda
 Copies      001
```



3 Press the ▽ key repeatedly until `Delete` appears for the number of copies.

```
>Agenda
 Delete
```

4 Press the **ENTER** key. The private job is deleted from the hard disk.

3.4.4 Storing a Print Job

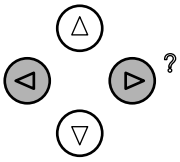
You can download a job to the hard disk without printing it. This allows you to store print jobs that are frequently needed such as fax cover pages, check lists, and order forms, for printing at any later time using the operator panel.

When the printer is turned off, all the print jobs will be deleted.

Releasing a Stored Job

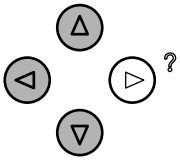
To print a stored job through the operator panel:

1 Press the **MENU** key.

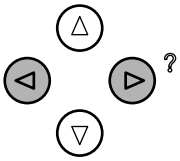


2 Press the △ or ▽ key repeatedly until `e-MPS >` appears.

```
e-MPS           >
```



3 Press the ▷ key.

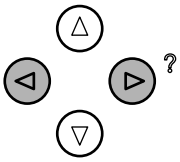


4 Press the △ or ▽ key repeatedly until `>Private/Stored` appears. The name entered for User Name in the printer driver (`Harold`, in this example) also appears.

```
>Private/Stored
 Harold
```

5 Press the **ENTER** key. A blinking question mark (`?`) before a user name appears.

```
>Private/Stored
?Harold
```

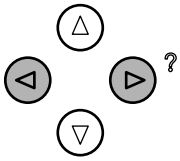


6 Press the △ or ▽ key to display the desired user name (`Arlen`, in this example).

```
>Private/Stored
?Arlen
```

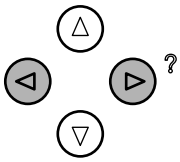
7 Press the **ENTER** key. The user name and the job name entered in the printer driver (`Agenda`, in this example) appear with a blinking question mark (`?`) before the letter.

```
>Arlen
?Agenda
```



8 Press the △ or ▽ key to display the desired job title.

9 Press the **ENTER** key. If you entered an access code for the printer driver, the ID input line appears. Enter the four-digit access code entered in the printer driver and press the **ENTER** key. To enter the ID, press the ◁ or ▷ key to move the cursor to the number to be changed and then enter the correct number by pressing the △ or ▽ key.



10 You can specify the number of copies to print. To increase the copy count, press the △ key; to decrease the ▽ key.

```
>Agenda
 Copies      001
```

11 Press the **ENTER** key to finalize the copy count. The printer prints the specified number of copies for the job.

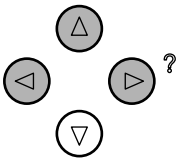
```
>Agenda
?Copies      001
```

Deleting a Stored Job

1 Follow steps 1 through 8 in the above section.

2 When the title of the job to be printed is displayed (`Agenda`, in this example), press the **ENTER** key. If you entered an access code for the printer driver, enter the four-digit access code and press the **ENTER** key.

```
>Agenda
 Copies      001
```



3 Press the ▽ key repeatedly until `Delete` appears for the number of copies.

```
>Agenda
 Delete
```

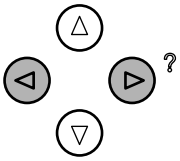
4 Press the **ENTER** key. The stored job is deleted from the hard disk.

3.4.5 Printing a List of Code Jobs

If you select Permanent Job Storage on the printer driver, you can have a List of Code Job printed using the operator panel. The List of Code Job may be used to read the barcode assigned for the stored job you want to reprint by using a barcode scanner. See *Appendix A Options*.

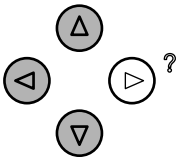
A sample Code Job List is shown in *Figure 3-5 on page 3-30*.

1 Press the **MENU** key.

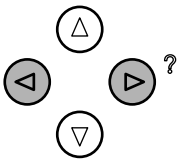


2 Press the △ or ▽ key repeatedly until `e-MPS >` appears.

```
e-MPS           >
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>List of Code JOB` appears.

```
>List of
 Code JOB
```

5 Press the **ENTER** key. A question mark (`?`) appears.

```
>List of
 Code JOB ?
```

6 Press the **ENTER** key again. The printer prints a Code Job list as shown in *Figure 3-5* below.

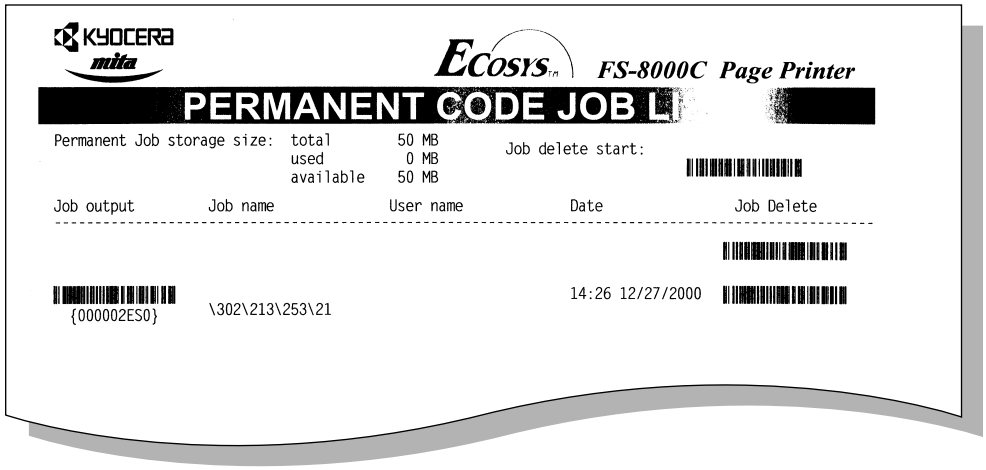
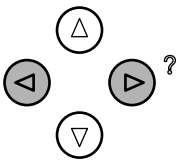


Figure 3-5

3.4.6 Retrieving Jobs from Virtual Mailbox (VMB)

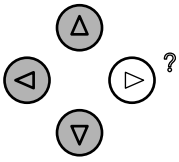
To retrieve the jobs posted in the virtual mailbox, proceed as follows.

1 Press the **MENU** key.

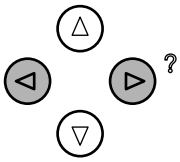


2 Press the △ or ▽ key repeatedly until `e-MPS >` appears.

```
e-MPS           >
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>Print VMB Data` appears. The virtual mailbox number will also appear.

```
>Print VMB Data
Tray001:
```

If you have named the virtual mailbox with an alias on the printer driver, the alias (`Richard`, in this example) will follow the number:

```
>Print VMB Data
Tray001:Richard
```

5 Press the **ENTER** key. A blinking question mark (?) appears.

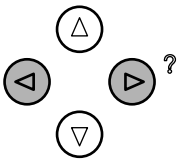
```
>Print VMB Data
Tray001?
```

6 Press the **ENTER** key. The document in the mailbox is printed and automatically deleted from the mailbox.

Printing a List of VMB

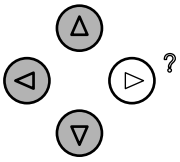
A Virtual Mailbox list includes the jobs currently stored in the mailboxes.

1 Press the **MENU** key.

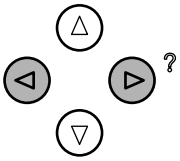


2 Press the △ or ▽ key repeatedly until `e-MPS >` appears.

```
e-MPS           >
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>List of VMB` appears.

```
>List of VMB
```

5 Press the **ENTER** key. A question mark (?) appears.

```
>List of VMB ?
```

6 Press the **ENTER** key again. The printer prints a list of jobs currently posted in the virtual mailboxes as shown in *Figure 3-6* below.

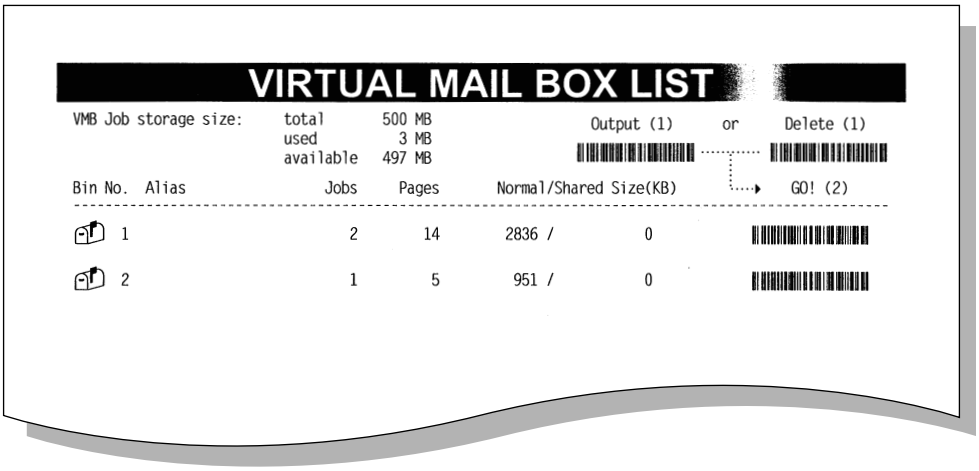


Figure 3-6

3.4.7 Changing e-MPS Configuration

You can change the following parameters for e-MPS operation:

- Maximum number of Quick Copy/Proof-and-Hold jobs
- Maximum space assigned to temporary code jobs
- Maximum space assigned to permanent code jobs
- Maximum space assigned to virtual mailboxes

Note

The total amount of storage areas specified must not exceed the total size of the hard disk. Otherwise, you may only be able to accommodate print jobs of a smaller amount of print jobs than specified.

Changing the Maximum Number of Quick Copy/Proof-and-Hold Jobs

This changes maximum number of Quick Copy/Proof-and-Hold jobs from 0 to 50. The default is 32.

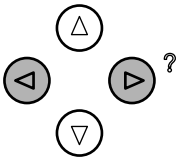
MENU

1 Press the **MENU** key.

2 Press the △ or ▽ key repeatedly until `e-MPS >` appears.

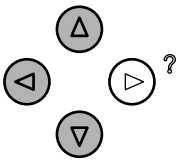
```
e-MPS              >
```

3 Press the ▷ key.

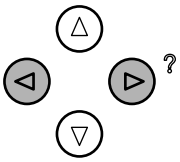


4 Press the △ or ▽ key repeatedly until `>e-MPS Configuration >` appears.

```
>e-MPS          >
 Configuration
```



5 Press the ▷ key.

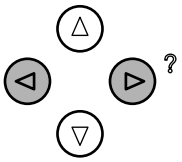


6 Press the △ or ▽ key repeatedly until `>>Quick Copy` appears.

```
>>Quick Copy
               32
```

7 Press the **ENTER** key. A blinking cursor (_) appears.

```
>>Quick Copy
               32
```



8 Press the △ or ▽ key to increase or decrease the value at the blinking cursor. The value can be set between 0 and 50. Use the ▷ and ◁ keys to move the cursor right and left.

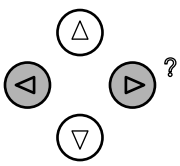
9 When the desired maximum number of jobs is set, press the **ENTER** key.

10 Press the **MENU** key. The display returns to `Ready`.

Maximum Space Assigned to Temporary Code Jobs

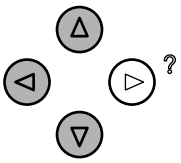
This changes the hard disk space that holds temporary code jobs. You can change the maximum space from 0 to 9999 (megabytes). The actual maximum size depends on the size of free hard disk space, however. The default size is 1/6 of the total hard disk space, rounded off in unit of 50 MB. For example, if the total hard disk space is 3.2 GB, the default size is 500 MB.

1 Press the **MENU** key.

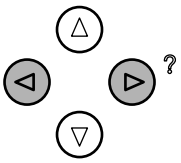


2 Press the △ or ▽ key repeatedly until `e-MPS >` appears.

```
e-MPS           >
```

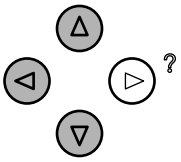


3 Press the ▷ key.

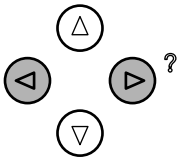


4 Press the △ or ▽ key repeatedly until `>e-MPS Configuration >` appears.

```
>e-MPS          >
 Configuration
```



5 Press the ▷ key.

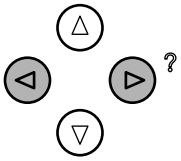


6 Press the △ or ▽ key repeatedly until `>>Temp. Code JOB Size` appears.

```
>>Temp. Code JOB
 Size       050MB
```

7 To change the maximum disk space, press the **ENTER** key. A blinking cursor (_) appears.

```
>>Temp. Code JOB
 Size       050MB
```



8 Press the △ or ▽ key to increase or decrease, respectively, the value at the blinking cursor. Use the ▷ and ◁ keys to move the cursor right and left.

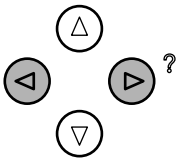
9 When the desired size is displayed, press the **ENTER** key.

10 Press the **MENU** key. The display returns to `Ready`.

Maximum Space Assigned to Permanent Code Jobs

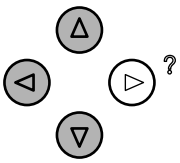
This changes the hard disk space that holds permanent code jobs. You can change the maximum space from 0 to 9999 (megabytes). The actual maximum size depends on the size of free hard disk space, however. The default size is 1/6 of the total hard disk space, rounded off in unit of 50 MB. For example, if the total hard disk space is 3.2 GB, the default size is 500 MB.

1 Press the **MENU** key.

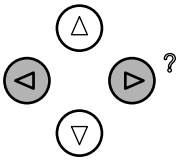


2 Press the △ or ▽ key and select `e-MPS >`.

```
e-MPS          >
```

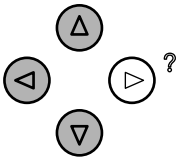


3 Press the ▷ key.

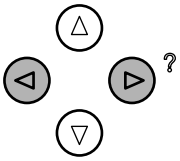


4 Press the △ or ▽ key and select `>e-MPS Configuration >`.

```
>e-MPS         >
 Configuration
```



5 Press the ▷ key.

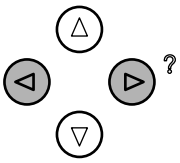


6 Press the △ or ▽ key and select `>>Perm. Code JOB Size`.

```
>>Perm. Code JOB
 Size      050MB
```

7 Press the **ENTER** key, the message display shows a blinking cursor (_).

```
>>Perm. Code JOB
 Size      050MB
```



8 Press the △ or ▽ key to increase or decrease, respectively, the value at the blinking cursor. Use the ▷and ◁ keys to move the cursor right and left.

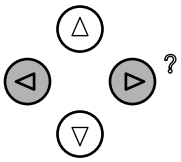
9 When the desired size is displayed, press the **ENTER** key.

10 Press the **MENU** key and the message display returns to `Ready`.

Maximum Space Assigned to Virtual Mailboxes (VMB)

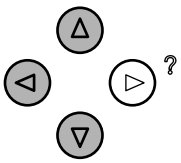
This changes the hard disk space for virtual mailboxes. You can change the maximum space from 0 to 9999 (megabytes). The actual maximum size depends on the size of free hard disk space, however. The default size is 1/6 of the total hard disk space, rounded off in unit of 50 MB. For example, if the total hard disk space is 3.2 GB, the default size is 500 MB.

1 Press the **MENU** key

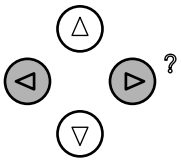


2 Press the △ or ▽ key and select `e-MPS >`.

```
e-MPS           >
```

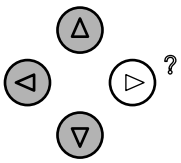


3 Press the ▷ key.

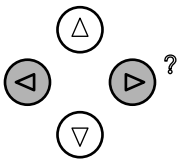


4 Press the △ or ▽ key and select `>e-MPS Configuration >`.

```
>e-MPS          >
 Configuration
```



5 Press the ▷ key.

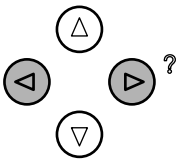


6 Press the △ or ▽ key and select `>>VMB Size`.

```
>>VMB Size
           050MB
```

7 To change the maximum size, press the **ENTER** key. The message display shows a blinking cursor (_).

```
>>VMB Size
           050MB
```



8 Press the △ or ▽ key to increase or decrease, respectively, the value at the blinking cursor. Use the ▷ and ◁ keys to move the cursor right and left.

9 When the desired size is displayed, press the **ENTER** key.

10 Press the **MENU** key to exit the menu selection.

3.5 Changing the Interface Parameters

Communication parameters for the printer interfaces can be adjusted as explained below.

The FS-8000CN has an network interface card installed at the factory. For information on how to remotely change parameters for the network interface card, refer to the documentation supplied with the printer.

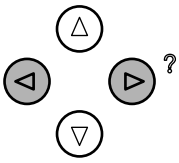
3.5.1 Changing Parallel Interface Mode

The parallel interface supports a bi-directional/high-speed mode according to IEEE standards. You can select from the following:

- Auto (default)
- Nibble/high speed
- Normal
- High speed

In order for the change to take place, you must turn printer power once off then on.

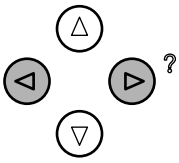
1 Press the **MENU** key.



2 Press the △ or ▽ key repeatedly until `Interface >` appears.

3 If the interface is other than parallel, press the **ENTER** key. A blinking question mark (`?`) appears.

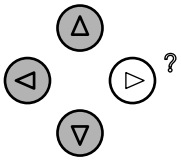
```
Interface
? Serial
```



4 Press the △ or ▽ key repeatedly until `Parallel` appears.

```
Interface
? Parallel
```

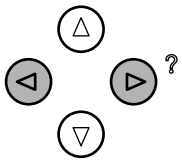
5 Press the **ENTER** key again. The question mark disappears.



6 To change the parallel interface mode, press the ▷ key. The current communication mode appears.

7 To change the communication mode, press the **ENTER** key. A blinking question mark (?) appears.

```
>Parallel I/F
? Auto
```



8 Press the △ or ▽ key to scroll through the following communication modes:

```
Auto
Nibble (high)
Normal
High Speed
```

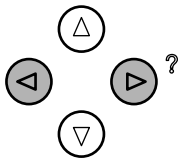
9 When the desired communication mode is displayed, press the **ENTER** key.

10 Press the **MENU** key to exit the menu selection.

3.5.2 Changing Serial Interface Parameters

You can confirm or change the serial interface parameters including baud rate, data bits, stop bits, parity, and protocol. These parameters must match those of the computer's serial interface.

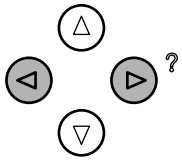
1 Press the **MENU** key.



2 Press the △ or ▽ key repeatedly until `Interface >` appears.

3 If the interface is other than serial, press the **ENTER** key. A blinking question mark (?) appears.

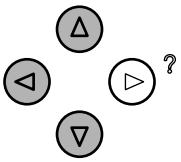
```
Interface
? Parallel
```



4 Press the △ or ▽ key repeatedly until `Serial` appears.

```
Interface
? Serial
```

5 Press the **ENTER** key again.



6 Press the ▷ key. One of the following serial parameters is indicated (`Baud rate` for example).

Pressing the △ or ▽ key toggles through the serial parameters as follows. To change the serial parameter, press the **ENTER** key. Use the △ or ▽ key to change the value or selection.

	Range
>Baud rate 9600	1200, 2400, 4800, 9600 (Default), 19200, 38400, 57600, 115200
>Data bits 8	7 or 8 (Default)
>Stop bits 1	1 (Default) or 2
>Parity None	None (Default), Odd, Even, or Ignore
>Protocol DTR(pos.)&XON	DTR (pos.) & Xon (Default), DTR (positive), DTR (negative), Xon/Xoff, ETX/ACK
>Barcode Mode Off	Off (Default) or On †

† Barcode mode is used when the option barcode reader is connected to the printer to support reading document IDs (barcodes). Note that Barcode Mode appears in the menu only when a hard disk option is installed.

For example, to change baud rate from 9600 to 115200, display the baud rate menu following the above procedure. When the display shows baud rate, 9600 (bps), press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Baud Rate
?   9600
```

Press the △ or ▽ key to scroll through values. When `115200` is displayed, press the **ENTER** key. Press the **MODE** key to exit the menu selection.

Note

Some computers may not be able to handle a baud rate of 115200 bps. If you set the baud rate to 115200 and encounter communication problems, select a lower baud rate.

3.5.3 Changing Network Interface Parameters

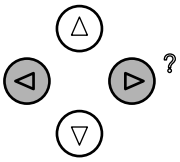
This section applies to the FS-8000C series printers having the network interface card installed. The FS-8000CN comes equipped with a network interface card as a standard accessory. For details concerning network issues when using the FS-8000CN, refer to the supplied manual for the network interface card.

Using the operator panel, you can:

- Activate or deactivate TCP/IP, NetWare, and AppleTalk
- Activate or deactivate DHCP
- Enter IP address, subnet mask address, and default gateway address
- Determine whether to print a network status page when the printer is turned on

To confirm or change network card parameters, proceed as follows:

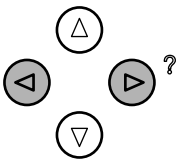
1 Press the **MENU** key.



2 Press the △ or ▽ key repeatedly until `Interface >` appears.

3 If the current interface is other than option, press the **ENTER** key. A blinking question mark (`?`) appears.

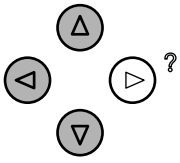
```
Interface      >
? Parallel
```



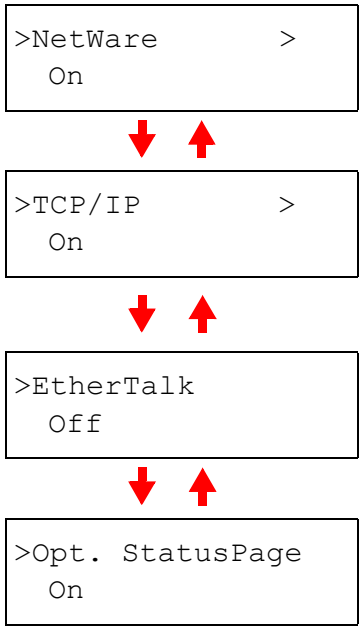
4 Press the △ or ▽ key repeatedly until `Option` appears.

```
Interface      >
? Option 1
```

5 Press the **ENTER** key again.



6 Press the ▷ key. One of the following menus is indicated. To change settings for the item, press the **ENTER** key. Use the △ or ▽ key to change the value or selection.



Range

Set this item to On when you connect to a network using NetWare. In submenu (>), frame mode can be selected from Auto, Ethernet, 802.2, and 802.3.

Set this item to On when you connect to a network using TCP/IP. Submenu (>) has items including DHCP, IP address, subnet mask address, and gateway address. To resolve IP address for the network card, see *3.5.4 Resolving IP Address* below.

EtherTalk must be activated (On) for networking with Macintosh computers.

When the item is set to On, the printer prints out a network status page when it prints the printer status.

7 Activate the appropriate protocol that is required to connect the printer to the network. To activate a protocol, let the protocol displayed, press the **ENTER** key, press the △ or ▽ key to change from Off to On, and press the **ENTER** key.

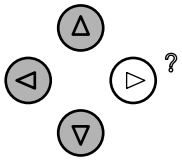
8 Press the **MENU** key. The display returns to Ready. You can print a network status page to confirm that the IP address, subnet mask address, and the gateway address have been properly set. To print a network status page, see *Printing a Network Interface Card Status Page on page 3-44* which follows.

3.5.4 Resolving IP Address

To connect the printer to the network using TCP/IP protocol, you must set the IP address on the printer. The IP address must be unique to the printer and should be obtained from your network administrator.

1 Activate TCP/IP protocol in the manner described above.

```
>TCP/IP          >
  On
```



2 Enter the submenu by pressing the ▷ key. Each time you press the △ or ▽ key, the selection changes as shown below.

```
>>DHCP
  Off
```

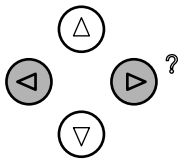
```
>>IP Address
 000.000.000.000
```

```
>>Subnet Mask
 000.000.000.000
```

```
>>Gateway
 000.000.000.000
```

3 When `>>IP Address` is displayed, press the **ENTER** key. A bliking cursor (_) appears at the last digit.

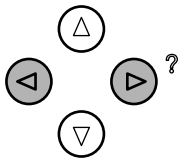
```
>>IP Address
 000.000.000.000
```



4 Press the △ or ▽ key to increase or decrease, respectively, the value at the blinking cursor. Use the ▷ and ◁ keys to move the cursor right and left.

5 When the IP address is entered, press the **ENTER** key.

6 Press the △ or ▽ key to move to `Subnet Mask`. Perform the same procedure to complete entering the subnet mask address.



7 Then, press the △ or ▽ key to move to `Gateway`. Perform the same procedure to complete entering the subnet mask address.

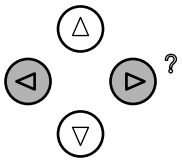
8 Press the **MENU** key. The display returns to `Ready`. You can print a network status page to confirm that the IP address, subnet mask address, and the gateway address have been properly set. To print a network status page, see *Printing a Network Interface Card Status Page* which follows.

Printing a Network Interface Card Status Page

You can have your printer print out a network status page when the printer prints the status page. The network status page shows the network addresses, and other information under various network protocols about the network interface card. The default setting is `On` (print).

A sample network status page is shown on *Figure 3-7 on page 3-46*.

1 Press the **MENU** key.

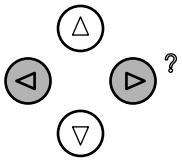


2 Press the **ENTER** key repeatedly until `Interface >` appears.

```
Interface      >
  Parallel
```

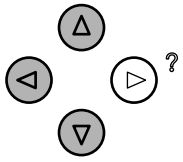
3 If the interface is other than Option, press the **ENTER** key. A blinking question mark (`?`) appears.

```
Interface
? Parallel
```



4 Press the △ or ▽ key repeatedly until `Option` appears. Press the **ENTER** key.

```
Interface
? Option 1
```

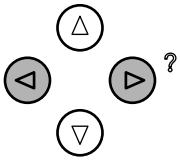


5 Press the ▷ key and then press the △ or ▽ key repeatedly until the display shows `>Opt. StatusPage`.

```
>Opt. StatusPage
  On
```

6 The default setting is `On`. If it is set to `Off`, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Opt. StatusPage
? Off
```

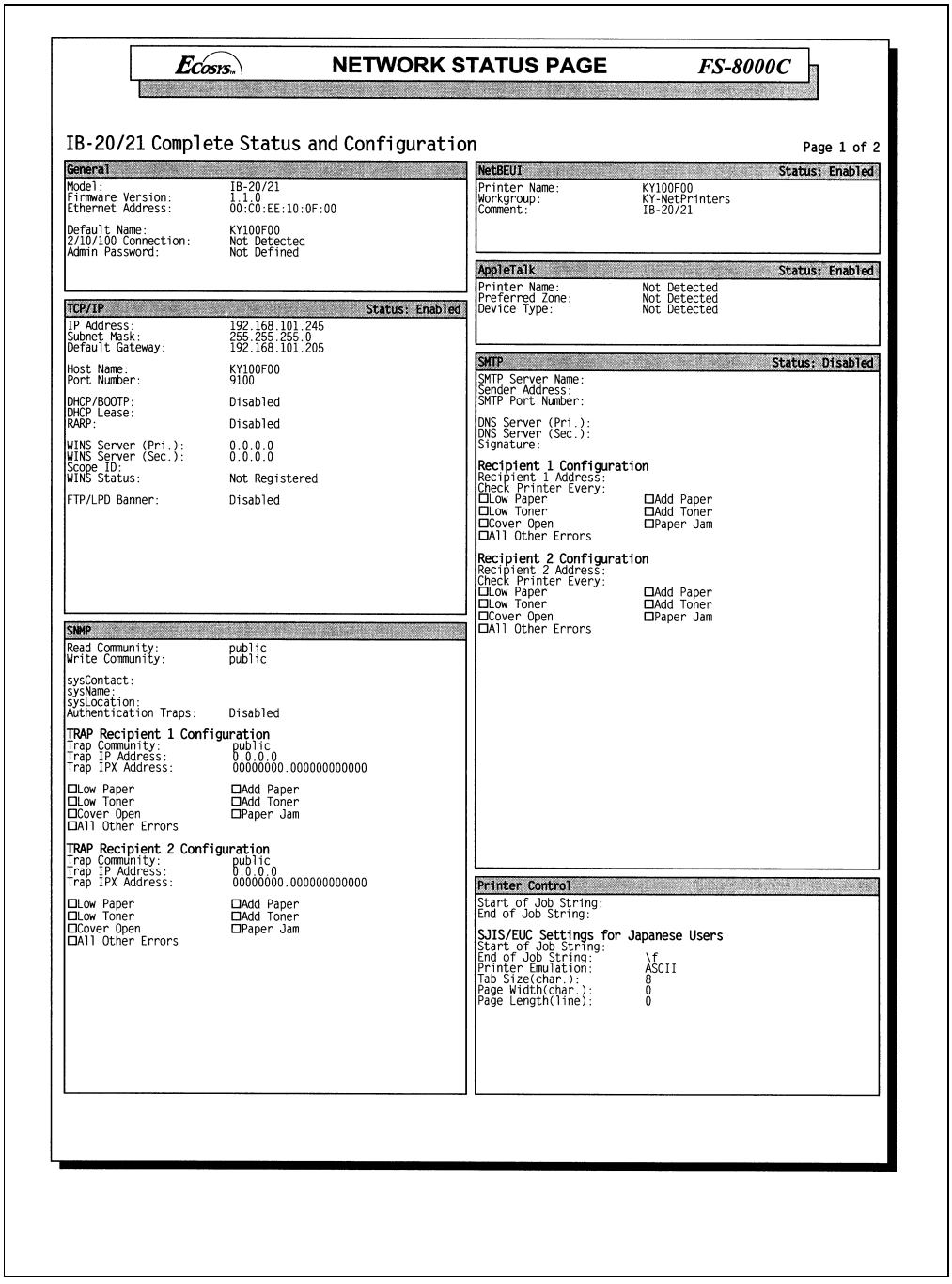


7 Press the △ or ▽ key to select `On`.

```
>Opt. StatusPage
? On
```

8 Press the **ENTER** key again.

9 Press the **MENU** key. The display returns to `Ready`. The printer prints a network status page as an example shown in *Figure 3-7* below.



NETWORK STATUS PAGE

FS-8000C

IB-20/21 Complete Status and Configuration

Page 1 of 2

General

Model:	IB-20/21
Firmware Version:	1.1.0
Ethernet Address:	00:C0:EE:10:0F:00
Default Name:	KY100F00
2/10/100 Connection:	Not Detected
Admin Password:	Not Defined

TCP/IP Status: Enabled

IP Address:	192.168.101.245
Subnet Mask:	255.255.255.0
Default Gateway:	192.168.101.205
Host Name:	KY100F00
Port Number:	9100
DHCP/BOOTP:	Disabled
DHCP Lease:	
RARP:	Disabled
WINS Server (Pri.):	0.0.0.0
WINS Server (Sec.):	0.0.0.0
Scope ID:	
WINS Status:	Not Registered
FTP/LPD Banner:	Disabled

SNMP

Read Community:	public
Write Community:	public
sysContact:	
sysName:	
sysLocation:	
Authentication Traps:	Disabled

TRAP Recipient 1 Configuration

Trap Community:	public
Trap IP Address:	0.0.0.0
Trap IPX Address:	00000000.000000000000

☐Low Paper ☐Add Paper
☐Low Toner ☐Add Toner
☐Cover Open ☐Paper Jam
☐All Other Errors

TRAP Recipient 2 Configuration

Trap Community:	public
Trap IP Address:	0.0.0.0
Trap IPX Address:	00000000.000000000000

☐Low Paper ☐Add Paper
☐Low Toner ☐Add Toner
☐Cover Open ☐Paper Jam
☐All Other Errors

NetBEUI Status: Enabled

Printer Name:	KY100F00
Workgroup:	KY-NetPrinters
Comment:	IB-20/21

AppleTalk Status: Enabled

Printer Name:	Not Detected
Preferred Zone:	Not Detected
Device Type:	Not Detected

SMTP Status: Disabled

SMTP Server Name:	
Sender Address:	
SMTP Port Number:	
DNS Server (Pri.):	
DNS Server (Sec.):	
Signature:	

Recipient 1 Configuration

Recipient 1 Address:
Check Printer Every:
☐Low Paper ☐Add Paper
☐Low Toner ☐Add Toner
☐Cover Open ☐Paper Jam
☐All Other Errors

Recipient 2 Configuration

Recipient 2 Address:
Check Printer Every:
☐Low Paper ☐Add Paper
☐Low Toner ☐Add Toner
☐Cover Open ☐Paper Jam
☐All Other Errors

Printer Control

Start of Job String:
End of Job String:

SJIS/EUC Settings for Japanese Users

Start of Job String:	
End of Job String:	\f
Printer Emulation:	ASCII
Tab Size(char.):	8
Page Width(char.):	0
Page Length(line):	0

Figure 3-7

3.6 Making Default Settings

Using the operator panel, you can set the default for the following items. Note default settings made using the operator panel may be overridden by the printer driver settings and application software.

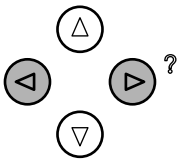
3.6.1 Default Emulation

You can change the emulation mode and character code set for the current interface. The printer is capable of the following emulation modes:

- HP PCL 5c (HP Color LaserJet 8550)
- KC-GL (HPGL 7550A)
- KPDL3 (PostScript 3 Version 3011)

The printer can automatically switch between HP PCL 5c and KPDL3 depending on the print job that is received from the computer. To do this, select `KPDL (AUTO)` in the following procedure.

1 Press the **MENU** key.

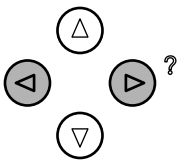


2 Press the △ or ▽ key repeatedly until `Emulation >` appears on the message display. One of the emulation modes appears, indicating the emulation currently in use.

`PCL 5c` (default)
`KC-GL`
`KPDL`
`KPDL (AUTO)`

3 To change the default emulation, press the **ENTER** key. A blinking question mark (`?`) appears.

```
Emulation
?PCL 5c
```



4 Press the △ or ▽ key repeatedly until the desired emulation mode is displayed.

5 If you have selected PCL 5c as the default emulation, you can change the character code set. (Default is `IBM PC-8`.) Otherwise, press the **ENTER** key and go to step 6.

To change the character code set of the PCL 5c emulation mode, press the ▷ key. The `>Code set` submenu is displayed.

```
>Code Set
 IBM PC-8
```

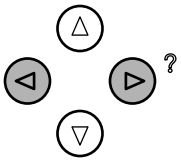
6 Press the **ENTER** key. Press the △ or ▽ key repeatedly until the desired character code set appears. Press the **ENTER** key again to finalize setting.

7 Press the **MENU** key. The display returns to `Ready`.

3.6.2 KC-GL Pen Width and Color

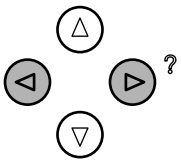
The KC-GL emulation mode enables you to set the pen widths in dots, individual pen colors for pen numbers 1 to 8, and the KC-GL page size.

1 Press the **MENU** key.



2 Press the △ or ▽ key repeatedly until `Emulation` appears on the message display.

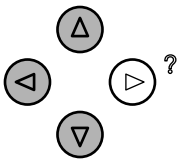
3 If the current emulation is other than KC-GL, press the **ENTER** key. A blinking question mark (`?`) appears.



4 Press the △ or ▽ key repeatedly until `KC-GL` appears.

5 Press the **ENTER** key.

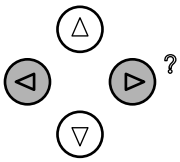
```
Emulation       >
 KC-GL
```



6 Press the ▷ key to move to the `>KC-GL Pen Adjust>` submenu.

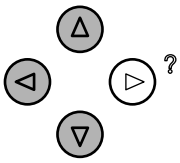
7 To change the pen width and/or pen color, press the **ENTER** key. A blinking question mark (?) appears.

```
>KC-GL Pen     >
Adjust ? Pen (1)
```



8 Press the △ or ▽ key repeatedly until the desired pen number of 1 to 8 appears.

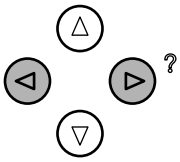
9 When the desired pen number is displayed, press the **ENTER** key.



10 To change the pen width, press the ▷ key, then press the **ENTER** key. A blinking cursor appears at the width value.

```
>>Pen(1) Width
          02dot(s)
```

Press the △ or ▽ key repeatedly until the desired pen width in dots (00 to 99) appears. When the desired pen width is displayed, press the **ENTER** key.



11 To set the pen color, press the △ or ▽ key. To change the pen color, press the **ENTER** key. A blinking question mark (?) appears.

```
>>Pen(1) Color
? Black
```

Press the △ or ▽ key repeatedly until the desired pen color (Black, Red, Green, Yellow, Blue, Magenta, Cyan, White) appears. When the desired pen color is displayed, press the **ENTER** key.

12 To set the KC-GL page size, press the ◁ key twice, then Press the △ or ▽ key until >KC-GL Page Set is displayed.

13 To change the page size, press the **ENTER** key. A blinking question mark (?) appears.

```
>KC-GL Page Set
? [A2]
```

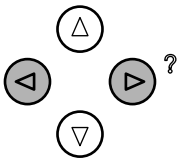
Press the △ or ▽ key repeatedly until the desired page size (A2, A1, A0, B3, B2, B1, B0, and SPSZ) appears. The SPSZ command sets the paper edge limits to the dimensions of a standard paper size. See this command explained in the Programming Manual in the CD-ROM. Press the **ENTER** key to set the page set you just selected.

14 Press the **MENU** key. The display returns to Ready.

3.6.3 Alternative Emulation for KPDL Emulation

The auto KPDL (KPDL (AUTO)) emulation enables the printer to automatically change the emulation mode according to the print job received. The emulation mode the printer switches alternatively can be selected using the operator panel. The default alternative emulation is HP PCL 5c.

1 Press the **MENU** key.

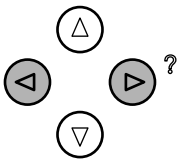


2 Press the △ or ▽ key repeatedly until Emulation > appears.

```
Emulation      >
 PCL 5c
```

3 Press the **ENTER** key. A blinking question mark (?) appears.

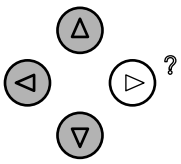
```
Emulation
?PCL 5c
```



4 Press the △ or ▽ key repeatedly until KPDL (AUTO) appears.

```
Emulation
?KPDL (AUTO)
```

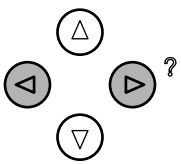
5 Press the **ENTER** key.



6 Press the ▷ key. Press the △ or ▽ key until >Alt. Emulation is displayed. The alternative emulation currently selected also appears — PCL 5c or KC-GL.

7 To change the alternative emulation, press the **ENTER** key. A blinking question mark (?) appears.

```
>Alt. Emulation
?PCL 5c
```



8 Press the △ or ▽ key until the desired alternative emulation appears.

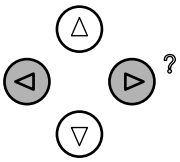
9 Press the **ENTER** key.

10 Press the **MENU** key. The message display returns to `Ready`.

3.6.4 Printing KPDL Errors

The printer can print error descriptions when printing error occurs during KPDL emulation. The default is `Off` — the printer does not print KPDL errors.

1 Press the **MENU** key.

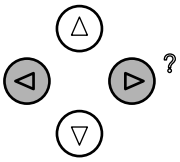


2 Press the △ or ▽ key repeatedly until `Emulation >` appears.

```
Emulation      >
 PCL 5c
```

3 Press the **ENTER** key. A blinking question mark (`?`) appears.

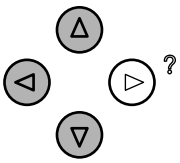
```
Emulation      >
?PCL 5c
```



4 Select `KPDL` or `KPDL (AUTO)` using the △ or ▽ key.

```
Emulation
?KPDL
```

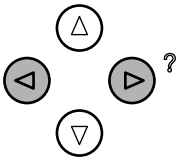
5 Press the **ENTER** key.



6 Press the ▷ key. Press the △ or ▽ key until `>Print KPDL Errs` (errors) appears.

```
>Print KPDL Errs
  Off
```

7 Press the **ENTER** key. A blinking question mark (`?`) appears.



8 Select `On` using the △ or ▽ key.

```
>Print KPDL Errs
? On
```

9 Press the **ENTER** key.

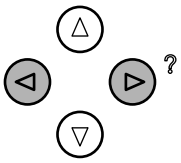
10 Press the **MENU** key. The display returns to `Ready`.

3.6.5 Default Font

You can select the default font for the current interface. The default font can be one of the internal fonts or a font that is downloaded to the printer memory or stored on memory card or hard disk.

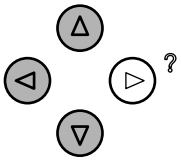
In this menu, you can also set the type and pitch for Courier and Letter Gothic; as well as to print a font list.

1 Press the **MENU** key.



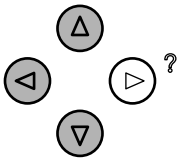
2 Press the △ or ▽ key repeatedly until `Font >` appears.

```
Font              >
```



3 Press the ▷ key. Press the △ or ▽ key until `>Font Select >` appears.

```
>Font Select  >
  Internal
```



4 To select an internal font, make sure that `Internal` is displayed and press the ▷ key. The display changes as shown below. If `Internal` is not displayed, Press the **ENTER** key, then press the △ or ▽ key until it appears.

```
>> I000
```

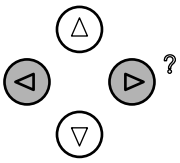
To select an optional font, press the **ENTER** key while `>Font Select >` is displayed. Press the △ or ▽ key repeatedly until `Option` appears and then press the **ENTER** key. Press the ▷ key next to display the font selection shown above. You can perform this operation only when optional fonts are installed in the printer.

The letter before the number indicates the location of the font, as shown below:

`I`	Internal font
`S`	Soft (downloaded) font
`M`	Fonts in optional memory card
`H`	Fonts in RAM disk or optional hard disk
`O`	Fonts in optional ROM (API)

5 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>>?I000
```



6 Press the △ or ▽ key repeatedly until the desired font number appears. For font numbers of the internal fonts, see *Printing Lists of Fonts on page 3-56*.

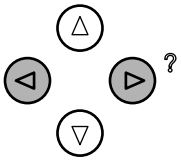
7 When the desired font is displayed, press the **ENTER** key.

8 Press the **MENU** key. The message display returns to `Ready`.

Selecting Regular or Dark Courier/Letter Gothic

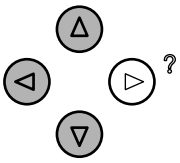
Courier or Letter Gothic font thickness can be selected as Regular or Dark. In the procedure below, it is assumed that Courier is selected. The procedure is the same for Letter Gothic.

1 Press the **MENU** key.



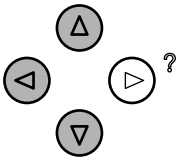
2 Press the △ or ▽ key repeatedly until `Font >` appears.

```
Font              >
```

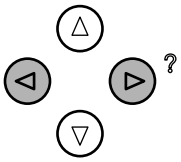


3 Press the ▷ key. Press the △ or ▽ key until `>Font Select >` appears.

```
>Font Select  >
  Internal
```



4 Make sure that `Internal` is displayed and press the ▷ key.

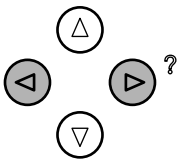


5 Press the △ or ▽ key repeatedly until `>>Courier` appears.

```
>>Courier
  Regular
```

6 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>>Courier
? Regular
```



7 Select `Regular` or `Dark` using the △ or ▽ key.

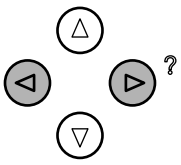
8 Press the **ENTER** key.

9 Press the **MENU** key. The display returns to `Ready`.

Changing the Default Font Size

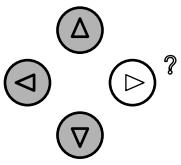
You can change the size of the default font. If you selected a proportional font, the character size can also be changed.

1 Press the **MENU** key.



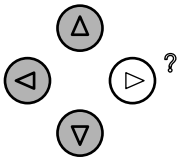
2 Press the △ or ▽ key repeatedly until `Font >` appears.

```
Font           >
```

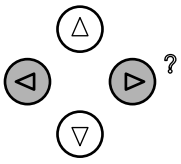


3 Press the ▷ key. Press the △ or ▽ key until `>Font Select >` appears.

```
>Font Select  >
  Internal
```



4 Make sure that `>Font Select >` is displayed and press the ▷ key.

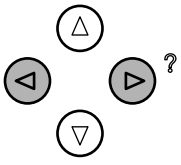


5 Press the △ or ▽ key repeatedly until `>>Size` appears.

```
>>Size
 012.00 point(s)
```

6 Press the **ENTER** key. A blinking cursor (_) appears.

```
>>Size
 012.00 point(s)
```



7 Press the △ or ▽ key to increase or decrease the value at the blinking cursor. The font size can be set between 4 and 999.75 points, in 0.25-point increments. Use the ▷ or ◁ key to move the cursor right and left.

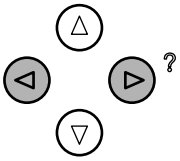
8 When the desired size is displayed, press the **ENTER** key.

9 Press the **MENU** key. The display returns to `Ready`.

Character Pitch for Courier/Letter Gothic

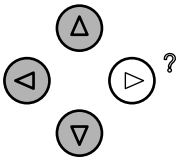
You can set the character pitch for fixed fonts when the default font is Courier or Letter Gothic.

1 Press **MENU** key.



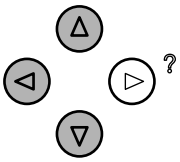
2 Press the △ or ▽ key repeatedly until `Font >` appears.

```
Font            >
```

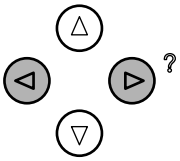


3 Press the ▷ key. Press the △ or ▽ key until `>Font Select >` appears.

```
>Font Select  >
  Internal
```



4 Make sure that `Internal` is displayed and press the ▷ key.

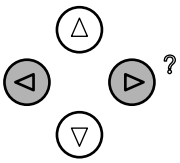


5 Press the △ or ▽ key repeatedly until `>>Pitch` appears.

```
>>Pitch
      10.00 cpi
```

6 Press the **ENTER** key. A blinking cursor (_) appears.

```
>>Pitch
      10.00 cpi
```



7 Press the △ or ▽ key to increase or decrease the value at the blinking cursor. The character pitch can be set between 0.44 and 99.99 characters per inch, in 0.01 character-per-inch increments. Use the ▷ or ◁ key to move the cursor right and left.

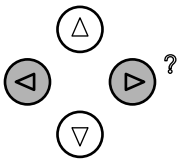
8 When the desired size is displayed, press the **ENTER** key.

9 Press the **MENU** key. The display returns to `Ready`.

Printing Lists of Fonts

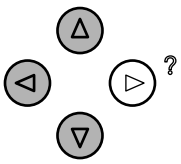
To help you decide in selecting a font, you can printout lists of the internal fonts or the optional fonts including downloaded fonts. Samples for font lists are shown in *Figure 3-8 on page 3-57*.

1 Press the **MENU** key.

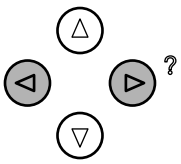


2 Press the △ or ▽ key repeatedly until `Font >` appears.

```
Font              >
```



3 Press the ▷ key.



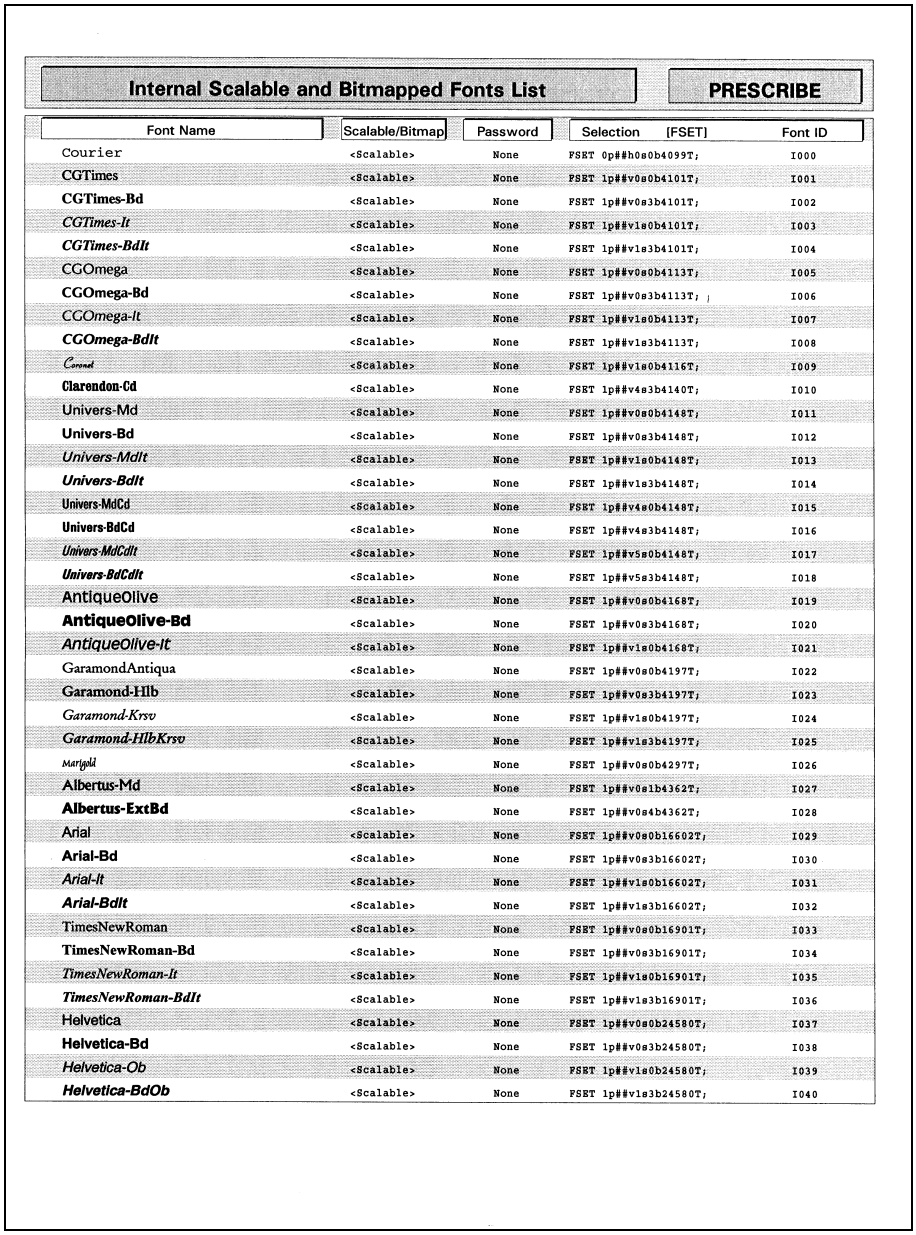
4 Press the △ or ▽ key repeatedly until `>List of Internal Fonts` or `>List of Option Fonts` appears.

```
>List of
 Internal Fonts
```

5 Press the **ENTER** key. A question mark (`?`) appears.

```
>List of
 Internal Fonts?
```

6 Press the **ENTER** key again. `Processing` appears, then `Ready`. The printer prints out a list of fonts with a sample and font ID (number) for each of them. Sample lists of fonts are shown in *Figure 3-8* on the next page.



Internal Scalable and Bitmapped Fonts List — PRESCRIBE

Font Name	Scalable/Bitmap	Password	Selection [FSET]	Font ID
Courier	<Scalable>	None	FSET 0p##h0s0b4099T;	I000
CGTimes	<Scalable>	None	FSET 1p##v0s0b4101T;	I001
CGTimes-Bd	<Scalable>	None	FSET 1p##v0s3b4101T;	I002
CGTimes-It	<Scalable>	None	FSET 1p##v1s0b4101T;	I003
CGTimes-BdIt	<Scalable>	None	FSET 1p##v1s3b4101T;	I004
CGOmega	<Scalable>	None	FSET 1p##v0s0b4113T;	I005
CGOmega-Bd	<Scalable>	None	FSET 1p##v0s3b4113T;	I006
CGOmega-It	<Scalable>	None	FSET 1p##v1s0b4113T;	I007
CGOmega-BdIt	<Scalable>	None	FSET 1p##v1s3b4113T;	I008
Garamond	<Scalable>	None	FSET 1p##v1s0b4116T;	I009
Clarendon-Cd	<Scalable>	None	FSET 1p##v4s3b4140T;	I010
Univers-Md	<Scalable>	None	FSET 1p##v0s0b4148T;	I011
Univers-Bd	<Scalable>	None	FSET 1p##v0s3b4148T;	I012
Univers-MdIt	<Scalable>	None	FSET 1p##v1s0b4148T;	I013
Univers-BdIt	<Scalable>	None	FSET 1p##v1s3b4148T;	I014
Univers-MdCd	<Scalable>	None	FSET 1p##v4s0b4148T;	I015
Univers-BdCd	<Scalable>	None	FSET 1p##v4s3b4148T;	I016
Univers-MdCdIt	<Scalable>	None	FSET 1p##v5s0b4148T;	I017
Univers-BdCdIt	<Scalable>	None	FSET 1p##v5s3b4148T;	I018
AntiqueOlive	<Scalable>	None	FSET 1p##v0s0b4168T;	I019
AntiqueOlive-Bd	<Scalable>	None	FSET 1p##v0s3b4168T;	I020
AntiqueOlive-It	<Scalable>	None	FSET 1p##v1s0b4168T;	I021
GaramondAntiqua	<Scalable>	None	FSET 1p##v0s0b4197T;	I022
Garamond-Hlb	<Scalable>	None	FSET 1p##v0s3b4197T;	I023
Garamond-Krsv	<Scalable>	None	FSET 1p##v1s0b4197T;	I024
Garamond-HlbKrsv	<Scalable>	None	FSET 1p##v1s3b4197T;	I025
Marigold	<Scalable>	None	FSET 1p##v0s0b4297T;	I026
Albertus-Md	<Scalable>	None	FSET 1p##v0s1b4362T;	I027
Albertus-ExtBd	<Scalable>	None	FSET 1p##v0s4b4362T;	I028
Arial	<Scalable>	None	FSET 1p##v0s0b16602T;	I029
Arial-Bd	<Scalable>	None	FSET 1p##v0s3b16602T;	I030
Arial-It	<Scalable>	None	FSET 1p##v1s0b16602T;	I031
Arial-BdIt	<Scalable>	None	FSET 1p##v1s3b16602T;	I032
TimesNewRoman	<Scalable>	None	FSET 1p##v0s0b16901T;	I033
TimesNewRoman-Bd	<Scalable>	None	FSET 1p##v0s3b16901T;	I034
TimesNewRoman-It	<Scalable>	None	FSET 1p##v1s0b16901T;	I035
TimesNewRoman-BdIt	<Scalable>	None	FSET 1p##v1s3b16901T;	I036
Helvetica	<Scalable>	None	FSET 1p##v0s0b24580T;	I037
Helvetica-Bd	<Scalable>	None	FSET 1p##v0s3b24580T;	I038
Helvetica-Ob	<Scalable>	None	FSET 1p##v1s0b24580T;	I039
Helvetica-BdOb	<Scalable>	None	FSET 1p##v1s3b24580T;	I040

Figure 3-8

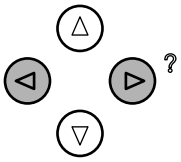
3.7 Pagination

In Page Set menus, you can set the number of copies, page orientation, and other settings regarding pagination.

3.7.1 Number of Copies

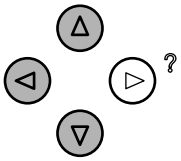
You can set the number of copies of each page to be printed for the current interface. The number of copies can be set between `1` and `999`.

1 Press the **MENU** key.

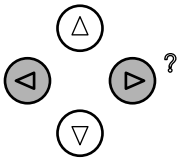


2 Press the △ or ▽ key repeatedly until `Page Set >` appears.

```
Page Set       >
```



3 Press the ▷ key.

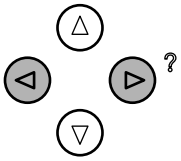


4 Press the △ or ▽ key repeatedly until `>Copies` appears.

```
>Copies
               001
```

5 Press the **ENTER** key. A blinking cursor (_) appears.

```
>Copies
               001
```



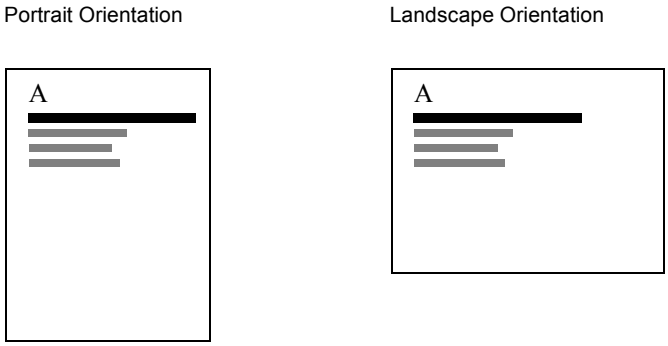
6 Press the △ or ▽ key to increase or decrease, respectively, the value at the blinking cursor. Use the ▷ and ◁ keys to move the cursor right and left.

7 When the desired size is displayed, press the **ENTER** key.

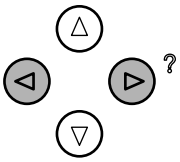
8 Press the **MENU** key. The display returns to `Ready`.

3.7.2 Print Orientation

You can select portrait (upright) or landscape (sideways) page orientation.

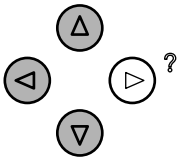


1 Press the **MENU** key.

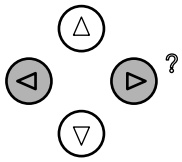


2 Press the △ or ▽ key repeatedly until `Page Set >` appears.

```
Page Set       >
```



3 Press the ▷ key.

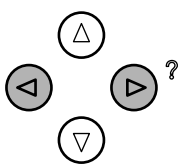


4 Press the △ or ▽ key repeatedly until `>Orientation` appears.

```
>Orientation
  Portrait
```


5 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Orientation
? Portrait
```



6 Select `Portrait` or `Landscape` using the △ or ▽ key.

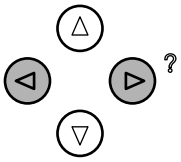
7 Press the **ENTER** key.

8 Press the **MENU** key. The message display returns to `Ready`.

3.7.3 Page Protect Mode

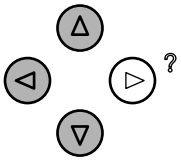
The Page Protect Menu does not normally appear, however, `Page Protect` will be forcibly set to On if a print overrun error occurs due to insufficient printer memory. When this has happened, be sure to reset `Page Protect` to `Auto` (default) in order to maintain the optimum use of printer memory.

1 Press the **MENU** key.

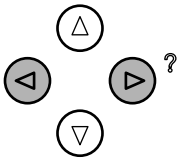


2 Press the △ or ▽ key repeatedly until `Page set >` appears.

```
Page set       >
```



3 Press the ▷ key.

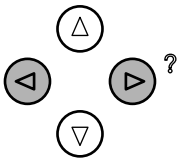


4 Press the △ or ▽ key repeatedly until `>Page Protect` appears.

```
>Page Protect
  On
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Page Protect
? On
```



6 Press the △ or ▽ key repeatedly until `Auto` appears.

```
>Page Protect
? Auto
```

7 Press the **ENTER** key.

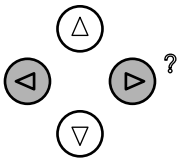
8 Press the **MENU** key. The message display returns to `Ready`.

3.7.4 Linefeed (LF) Action

This procedure instructs the printer what to do when it receives a linefeed code (0AH).

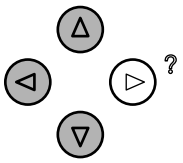
- LF Only
  Linefeed is performed (Default).
- CR and LF
  A linefeed and carriage return are performed.
- Ignore LF
  The linefeed is ignored.

1 Press the **MENU** key.

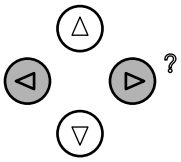


2 Press the △ or ▽ key repeatedly until `Page Set >` appears.

```
Page Set       >
```



3 Press the ▷ key.

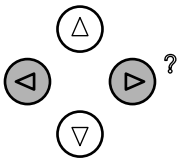


4 Press the △ or ▽ key repeatedly until `>LF Action` appears.

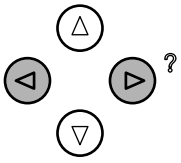
```
>LF Action
  LF only
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>LF Action
? LF only
```



6 Press the △ or ▽ key repeatedly until the desired linefeed action appears.



7 When the desired action is displayed, press the **ENTER** key.

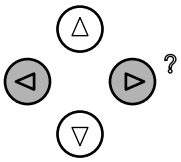
8 Press the **MENU** key. The display returns to `Ready`.

3.7.5 Carriage-Return (CR) Action

This procedure instructs the printer what to do when it receives a carriage-return code (0DH).

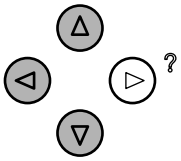
- CR Only
  A carriage-return is performed (Default).
- CR and LF
  A linefeed and carriage return are performed.
- Ignore CR
  The carriage-return is ignored.

1 Press the **MENU** key.



2 Press the △ or ▽ key repeatedly until `Page Set >` appears.

```
Page Set       >
```



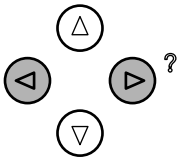
3 Press the ▷ key.

4 Press the △ or ▽ key repeatedly until `>CR Action` appears.

```
>CR Action
  CR only
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>CR Action
 ?CR only
```



6 Press the △ or ▽ key repeatedly until the desired carriage-return action appears.

7 When the desired action is displayed, press the **ENTER** key.

8 Press the **MENU** key. The message display returns to `Ready`.

3.8 Setting Print Quality

The printer features the Print Quality menu which lets you select:

- KIR (Kyocera Image Refinement) mode (smoothing function, for monochrome printing only)
- EcoPrint mode (toner saver, for monochrome printing only)
- Tone mode (Normal and Fine)
- Gloss mode (Low and High)

3.8.1 KIR

KIR is the Kyocera's smoothing function. It refines appearance of printed characters that have jagged or uneven edges. Note that KIR is effective for monochrome printing only.

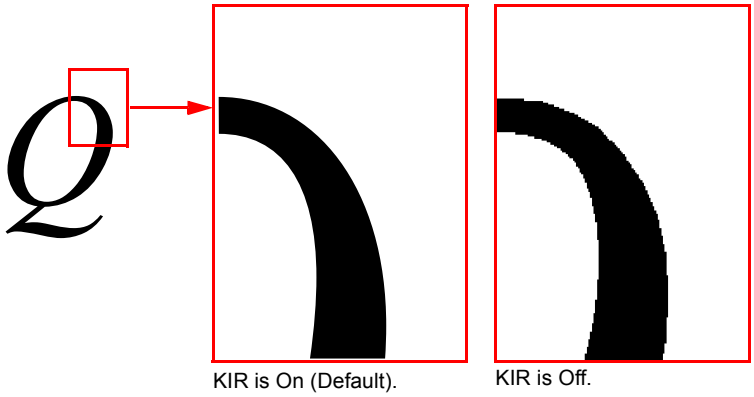


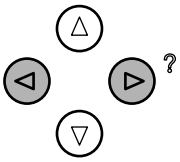
Figure 3-9

Note

The above diagram is an approximate presentation of KIR.

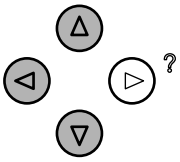
By default, KIR is activated. To confirm the KIR status or deactivate KIR, proceed as follows:

1 Press the **MENU** key.

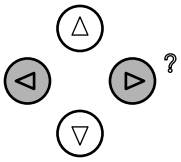


2 Press the △ or ▽ key repeatedly until `Print Quality >` appears.

```
Print Quality  >
```



3 Press the ▷ key.

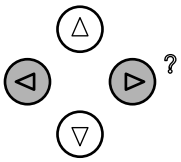


4 Press the △ or ▽ key repeatedly until `>KIR Mode` appears.

```
>KIR Mode
  On
```

5 To deactivate KIR, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>KIR Mode
? On
```



6 Press the △ or ▽ key to set KIR `Off`.

7 Press the **ENTER** key to finalize the selection.

8 Press the **MENU** key. The display returns to `Ready`.

3.8.2 EcoPrint

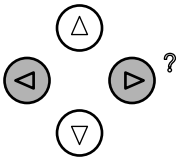
EcoPrint enables the printer to consume less toner for a page to save your printing costs. When EcoPrint mode setting is `On`, the printing image becomes lighter, but readable.The EcoPrint setting has no effect on the print speed.

EcoPrint is Off. EcoPrint is On.

Figure 3-10

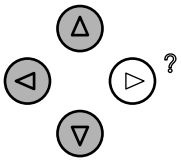
The above diagram is an approximate presentation of EcoPrint. The default is Off. To confirm or activate EcoPrint, proceed as follows:

1 Press the **MENU** key.

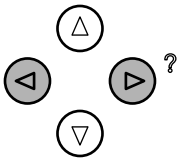


2 Press the △ or ▽ key repeatedly until `Print Quality >` appears.

```
Print Quality  >
```



3 Press the ▷ key.

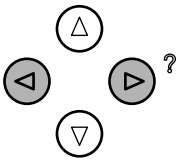


4 Press the △ or ▽ key repeatedly until `>EcoPrint Mode` appears.

```
>EcoPrint Mode
  Off
```

5 To activate EcoPrint, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>EcoPrint Mode
? Off
```



6 Press the △ or ▽ key to change from `Off` to `On`.

7 Press the **ENTER** key.

8 Press the **MENU** key. The display returns to `Ready`.

3.8.3 Tone Mode

The Tone Mode selects the way the printer handles a pixel for representing the color and halftoning for each pixel — Normal or Fine. The Fine tone mode uses four-bit smooth halftone for photographs, image, etc.; and the Normal tone mode uses a one-bit halftone for text, solid objects, etc. Either of these tone modes consistently affects all objects on a page.

The Fine tone mode provides the print quality better than Normal, but the printing speed is slower and more memory is required. A summary of memory requirement depending on the tone mode follows:

Paper size	Simplex/ Duplex	Normal		Fine	
		Color	Mono.	Color	Mono.
A4/Letter	Simplex	64 MB	64 MB	64 MB	64 MB
	Duplex	64 MB	64 MB	96 MB	64 MB
A3/B4	Simplex	64 MB	64 MB	96 MB	64 MB
	Duplex	96 MB	64 MB	160 MB	64 MB

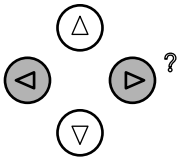
Table 3-4

Note

The amount of memory actually required may vary depending on the data to print.

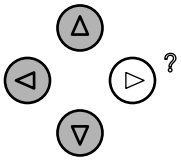
The default tone mode is Normal. To confirm and change the tone mode, proceed as follows:

1 Press the **MENU** key.

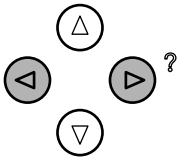


2 Press the △ or ▽ key repeatedly until `Print Quality >` appears.

```
Print Quality  >
```



3 Press the ▷ key.

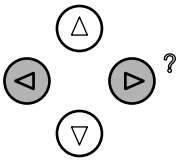


4 Press the △ or ▽ key repeatedly until `>Tone` appears.

```
>Tone
  Normal
```

5 To change the toner mode, press the **ENTER** key. A blinking question mark (?) appears.

```
>Tone
?Normal
```



6 Press the △ or ▽ key to change to `Fine`.

7 Press the **ENTER** key to finalize the tone mode.

8 Press the **MENU** key. The display returns to `Ready`.

3.8.4 Gloss Mode

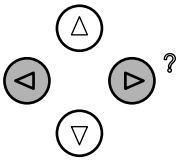
The gloss mode, when set to High, increases the effect of glossiness in printing by reducing the printing speed by half. The gloss mode cannot be used for duplex printing. The gloss mode is effective for the following paper types:

```
Plain
Recycled
Vellum
Color
Prepunched
```

Depending on the paper used, printing in gloss mode may cause wrinkle in paper. To reduce wrinkle,try using thicker paper.

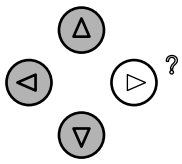
The default gloss mode is Low. To confirm or change the gloss mode, proceed as follows:

1 Press the **MENU** key.

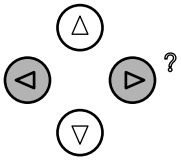


2 Press the △ or ▽ key repeatedly until `Print Quality >` appears.

```
Print Quality  >
```



3 Press the ▷ key.

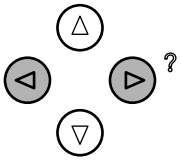


4 Press the △ or ▽ key repeatedly until `>Gloss Mode` appears.

```
>Gloss Mode
  Low
```

5 To change the gloss mode, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Gloss Mode
? Low
```



6 Press the △ or ▽ key to change from `Low` to `High`.

7 Press the **ENTER** key to finalize the selection.

8 Press the **MENU** key. The display returns to `Ready`.

3.9 Operating the Storage Device

The printer supports the following storage device:

- RAM disk (shared in the printer memory)
- Memory card (Option)
- Hard disk (Option)

3.9.1 Setting up the RAM Disk

The RAM disk is a memory space shared within the printer memory that can temporarily store print jobs for electronic sorting. The stored print job can then be used to print multiple copies of the job reducing the total amount of period required to print the whole job. It acts similar to the option hard disk except that the data is effective only during the printer is powered up.

To set up the RAM disk, the option hard disk must not be installed.

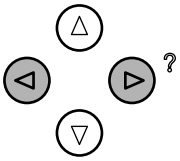
To use the RAM disk, activate and enter the desired size of the RAM disk in the manner described below. The maximum RAM disk size can be calculated as follows:

Maximum RAM size = Total printer memory - 48 MB

For example, if the total memory installed in your printer is 64 MB (Default), you can set 16 MB of RAM disk. If you attempt to set the RAM disk size beyond this restriction, the printer automatically round it down so that the size is always 48 MB less than the total printer memory. Once the RAM disk size is set, the printer must be reset.

By default, the RAM disk is not activated (`Off`). To confirm the RAM disk size or activate the RAM disk, proceed as follows:

1 Press the **MENU** key.

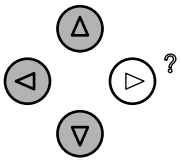


2 Press the △ or ▽ key repeatedly until `RAM Disk Mode >` appears.

```
RAM Disk Mode  >
  Off
```

3 To activate the RAM disk, press the **ENTER** key. A blinking question mark (`?`) appears. Press the △ or ▽ key to change `Off` to `On`. Press the **ENTER** key.

```
RAM Disk Mode
? Off
```



4 Press the ▷ key to display >RAM Disk Size.

```
>RAM  Disk Size
       0055 Mbyte
```

5 Press the **ENTER** key again and change the RAM disk size using the △ or ▽ key. The value for the RAM disk is between 0001 and 1024 depending on the available printer memory.

6 When the desired RAM disk size is displayed, press the **ENTER** key.

7 Press the **MENU** key to exit the menu selection. Restart the printer. The setting will be effective after restarting.

3.9.2 Reading/Writing to an Option Storage Device

The printer can be equipped with a memory card and a hard disk. For more information about handling a memory card, see *Appendix A Options, section A.3.1 Memory Card on page A-7*.

The operator panel provides the following operations for the memory card and the hard disk.

- Reading fonts, macros, data, programs
- Writing data
- Deleting data, fonts, programs, macros
- Formatting a memory card or hard disk (See Note below)
- Printing a list of partitions

The following procedure assumes use of a memory card. The similar procedure can be applied when using a hard disk.

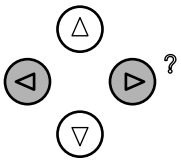
You can format the hard disk using the operator panel when the first time you installed a new hard disk. About formatting a new hard disk, see also the Installation Guide of the hard disk for details.

Reading Fonts

Fonts in a memory card are automatically read into the printer when the memory card is installed in the printer slot when the printer is turned on.

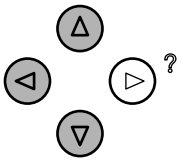
To re-read fonts from a memory card, or to read fonts from the hard disk, use the following procedure:

1 Press the **MENU** key.

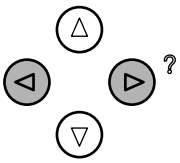


2 Press the △ or ▽ key repeatedly until Memory Card > or Hard Disk > appears.

```
Memory Card    >
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>Read Fonts` appears.

```
>Read Fonts
```

5 Press the **ENTER** key. A question mark (`?`) appears.

```
>Read Fonts ?
```

6 Press the **ENTER** key. The message display shows `Processing` as the fonts are read from the memory card or the hard disk.

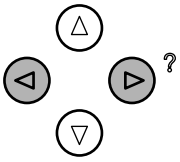
7 When the fonts have been read, the display returns to `>Read Fonts`.

8 Press the **MENU** key. The display returns to `Ready`.

Reading Data

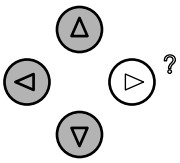
To read data on a memory card or the hard disk, use the following procedure:

1 Press the **MENU** key.

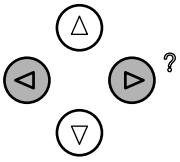


2 Press the △ or ▽ key repeatedly until `Memory Card >` or `Hard disk >` appears.

```
Memory Card    >
```



3 Press the ▷ key.

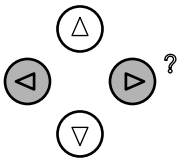


4 Press the △ or ▽ key repeatedly until `>Read Data` appears. The name of the first data in the storage device also appears (`DataS001` in this example).

```
>Read Data
 DataS001
```

5 To select a data to read, press the **ENTER** key. A blinking question mark (?) appears before the data name.

```
>Read Data
?DataS002
```



6 Press the △ or ▽ key to scroll through the data in the storage device.

7 When the desired data is indicated, press the **ENTER** key. The message display shows `Processing` as the data is read from the storage device.

Writing Data to a memory card or the hard disk

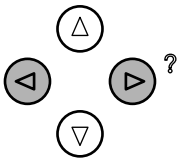
You can write data to a memory card or the hard disk using the operator panel. When writing data to the storage device, a name is automatically assigned to the data. The memory card or the hard disk must be formatted. Otherwise, the `>Write Data` message explained below will not appear on the display. To format a memory card or the hard disk, see *Formatting a Storage Device on page 3-75*.

You can format the hard disk using the operator panel when the first time you installed a new hard disk. About formatting a new hard disk, see also the Installation Guide of the hard disk for details.

After writing is complete, you can print a list of data stored in the storage device for confirmation. See *Printing a Partition List on page 3-76*.

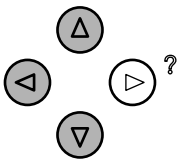
To write data to a memory card or the hard disk, proceed as follows:

1 Press the **MENU** key.

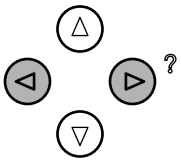


2 Press the △ or ▽ key repeatedly until `Memory Card >` or `Hard disk >` appears.

```
Memory Card    >
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>Write Data` appears.

```
>Write Data
```

ENTER

5 Press the **ENTER** key. A question mark (?) appears.

```
>Write Data ?
```

ENTER

6 Press the **ENTER** key. The message display shows `Processing`, then `Waiting`. If you wish to abort writing, press the **CANCEL** key.

7 While the message display indicates `Waiting`, send the data to write from the computer to the printer.

For example, to write data '`TEST.TXT`' you can use the DOS COPY command as:

```
COPY TEST.TXT PRN
```

The data is written to the memory card or hard disk with a unique partition name which the printer automatically assigns in a sequence as follows:

DataS001 (first data), DataS002 (second data), DataS003 (third data),...DataS127 (last data)

In the example above, data '`TEST.TXT`' is renamed and stored as 'DataS001' in the storage device.

8 As the printer receives data, the message display shows `Processing`, soon followed by `Waiting`. Press the **GO** key. The printer automatically prints a Write Information page as shown below:

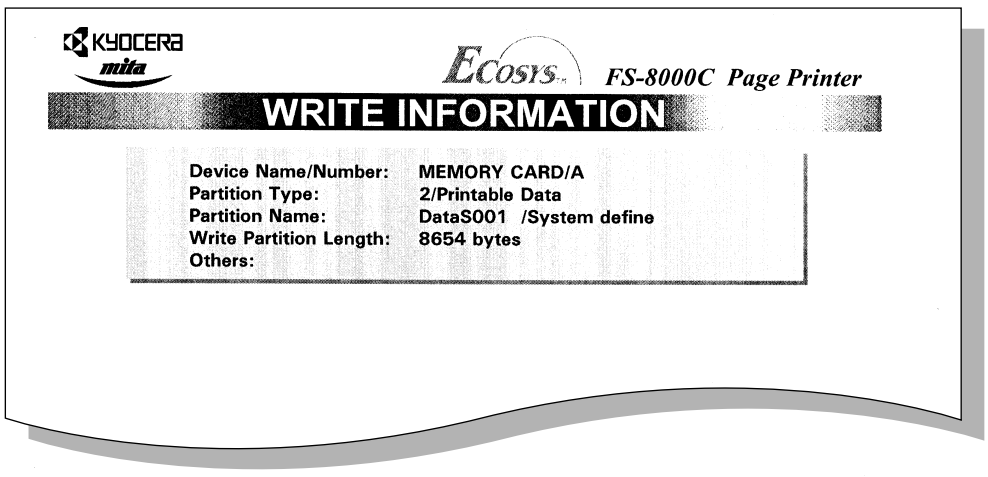


Figure 3-11

This page provides the following information that are automatically generated by the printer while the data is written:

- Partition Type
  Type of data written (only type 2 is supported at the present time)
- Partition Name
  Name of data written
- Write Partition Length
  Length (size) of the data written
- Others
  Additional information, such as error information

After the Write Information page is printed, the display returns to `Ready`.

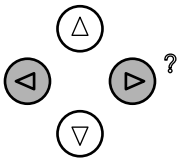
If writing was not successfull, the message display displays an error code. For details, see *Chapter 5 Troubleshooting, section 5.3.2 Storage Error Codes on page 5-11*. If this happens, press the **GO** key. The message display returns to `Ready`.

9 Repeat the above steps until you have written all required data to the storage device. Each time you finish writing data, a Write Information page is printed showing the information about the data just written. Data contained in the storage device can be printed anytime by following the procedure described in *Printing a Partition List on page 3-76*.

Deleting Data

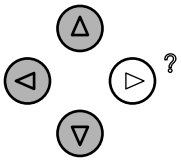
You can use the printer's operator panel to delete data from a memory card or the hard disk.

1 Press the **MENU** key.

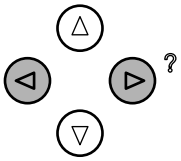


2 Press the △ or ▽ key repeatedly until `Memory Card >` or `Hard Disk >` appears.

```
Memory Card    >
```



3 Press the ▷ key.

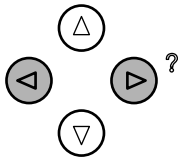


4 Press the △ or ▽ key repeatedly until `> Delete Data` appears. The name of the first data in the storage device also appears (`DataS001` in this example).

```
>Delete Data
 DataS001
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears before the data name.

```
>Delete Data
?data name
```



6 Press the △ or ▽ key to scroll through data in the storage device.

7 When the data you desire to delete is displayed, press the **ENTER** key. The message displays shows `Processing` and the data is deleted from the storage device.

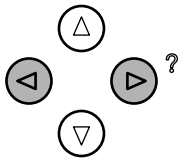
Formatting a Storage Device

A new memory card or hard disk must be formatted before it can be used in the printer. You can format the storage device using the printer operator panel.

- **Formatting will destroy any existing data on a storage device.**
- **You can format the hard disk using the operator panel when the first time you installed a new hard disk. About formatting a new hard disk, see also the Installation Guide of the hard disk for details.**

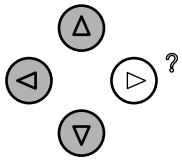
To format a memory card or the hard disk, use the following procedure:

1 Press the **MENU** key.

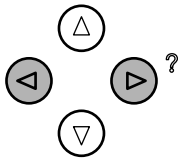


2 Press the △ or ▽ key repeatedly until `Memory Card >` or `Hard Disk >` appears.

```
Memory Card    >
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>Format` appears.

```
>Format
```

5 Press the **ENTER** key. A question mark (`?`) appears.

```
>Format ?
```

6 Press the **ENTER** key. The message display shows `Processing` while the storage device is formatted. If you wish to cancel formatting, press the **CANCEL** key now.

If formatting of the memory card was successfull, the printer automatically prints a Format Information page as shown below:

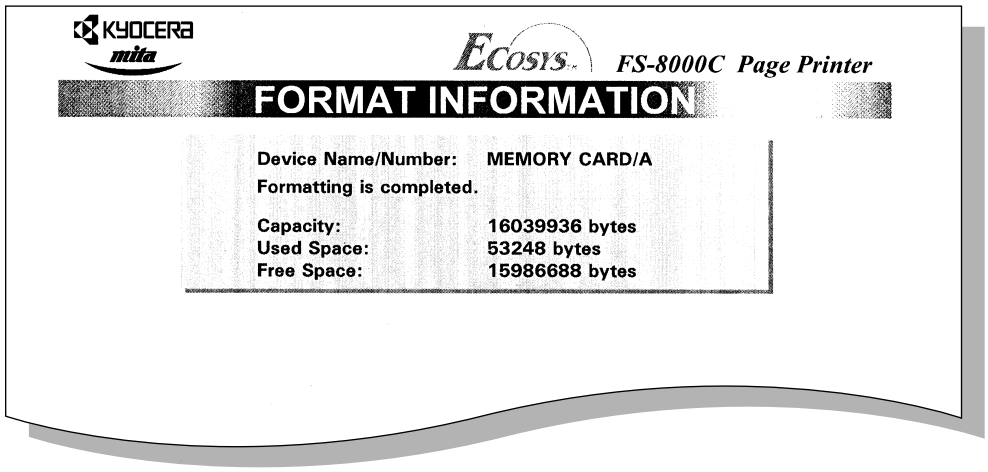


Figure 3-12

This page provides the following information that are automatically generated by the printer while the memory card is formatted:

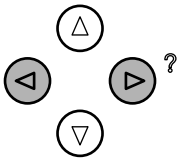
- Capacity
  Total size of the memory card formatted
- Used Space
  The space used by the printer for its file system
- Free Space
  The space remaining in the memory card for storing data

When the Format Information is printed, the display returns to `Ready`.

Printing a Partition List

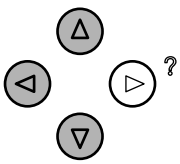
By following the procedure below, the printer prints a list of all data (referred to as partitions) stored in a storage device for reference. If a font card is inserted in the printer slot, a list of fonts in the font card is printed.

1 Press the **MENU** key.

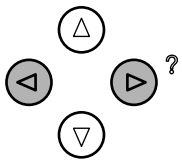


2 Press the △ or ▽ key repeatedly until `Memory Card >` or `Hard Disk >` appears.

```
Memory Card    >
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>List of Partitions` appears.

```
>List of
 Partitions
```

5 Press the **ENTER** key. A question mark (?) appears.

```
>List of
 Partitions ?
```

6 To print a Partition List, press the **ENTER** key. A Partition List is printed as exampled below. Sample list of fonts are shown in *Figure 3-13* below.

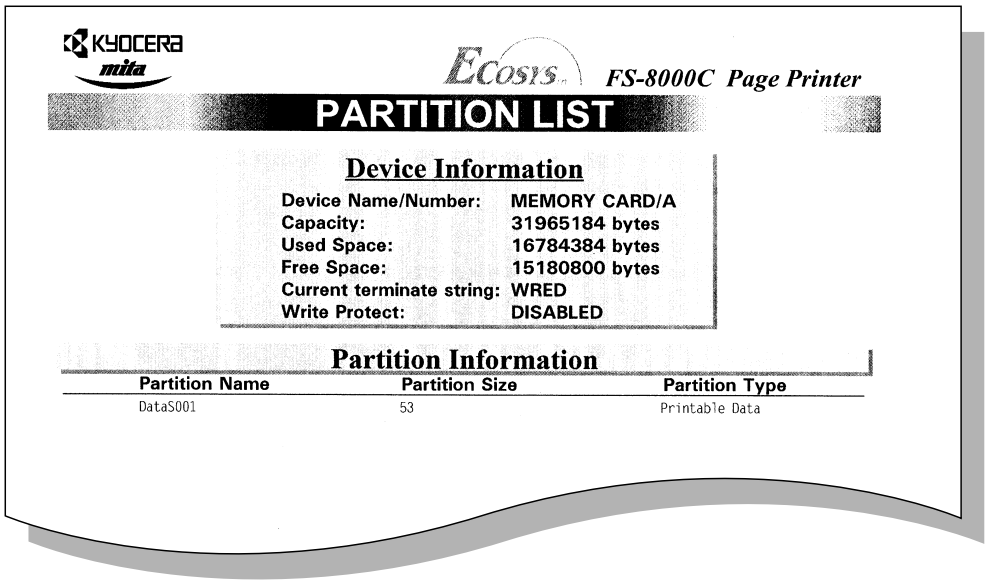


Figure 3-13

The list provides the following information that are automatically generated by the printer about data currently stored in the storage device:

- Device Name/Number
  Description for the storage device. For example, 'MEMORY CARD/A' is indicated for a memory card.
- Capacity
  Total capacity of the storage device in bytes.
- Used Space
  The total space used for data stored in the storage device in bytes.
- Free Space
  The space remaining in the storage device for storing more data, including the memory space required by the printer for its file system.
- Partition Name
  The name assigned automatically by the printer for written data.

- Partition Size
  Size of the written data in bytes.
- Partition Type
  The type identifying the written data, i.e., whether it is host data (Data) or font data (Font).

When the list of file names (partition list) for the memory card is printed, the display returns to `Ready`.

3.10 Paper Handling

This section explains how to change mode for the MP (multi-purpose) tray, the paper size and type for each paper source, mode for the option sorter, and how to select the paper source and paper destinations.

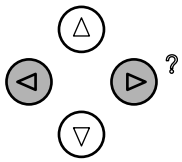
3.10.1 MP Tray Mode

The MP tray can be used in either of two modes — `first` or `cassette`. The MP tray feed paper differently depending on the mode:

- First Mode
  The MP tray automatically feeds paper placed on the MP tray overriding another paper source that is selected on the printer driver. After all paper sheets in the MP tray have been used up (approximately 150 sheets), paper will be fed from the paper source originally selected. This mode is convenient to feed paper of special size or type without reloading the current paper source. However, the MP tray must be kept empty if you desire to feed paper from the intended paper source.
- Cassette Mode
  This is the default mode. The MP tray acts in the same manner as other paper source. The printer can correctly feed paper from any paper source as you command on the printer driver. The cassette mode provides a faster printing speed than the first mode.

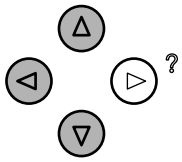
To switch the MP tray to Cassette mode, proceed as follows:

1 Press the **MENU** key.

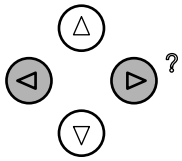


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



3 Press the ▷ key.

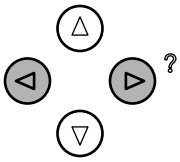


4 Press the △ or ▽ key repeatedly until `>MP Tray Mode` appears.

```
>MP Tray Mode
  First
```

5 Press the **ENTER** key. A blinking question mark (?) appears.

```
>MP Tray Mode
? First
```



6 Press the △ or ▽ key to change `First` to `Cassette`.

7 Press the **ENTER** key. The MP tray mode is changed.

8 To exit the menu selection, press the **MENU** key.

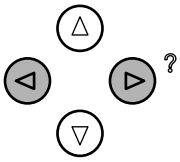
3.10.2 Setting MP Tray Paper Size

When you use the MP tray in cassette mode, you should set the MP tray size to the paper size that is used to format the job to print. If the sizes do not match, printing will not be performed on the correct size paper. The default setting is `Letter` size for the U.S. and Canada and `A4` for other countries.

For more information about the paper sizes that you can feed from the MP tray, see *Chapter 2 Handling Paper*.

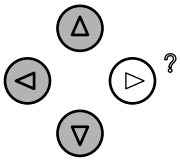
Feeding the paper having a paper size which does not match the current paper size from the MP tray can cause paper jam.

1 Press the **MENU** key.

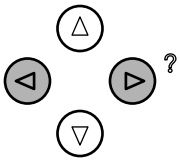


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



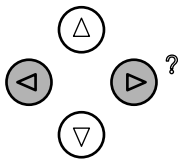
3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>MP Tray Size` appears. In this example, the current MP tray paper size is A4.

```
>MP Tray Size
  A4
```

5 To change the paper size, press the **ENTER** key. A blinking question mark (?) appears.



6 Press the △ or ▽ key to display the desired paper size. The message display toggles through the following paper sizes:

```
A4
Executive
Letter-R
Letter
Legal
Ledger
A3
B4
Custom
C4
Hagaki
Oufukuhagaki
Monarch
Business
Comm. #9
Comm. #6 3/4
DL
C5
A6
B6
A5
B5
ISO B5
A4-R
```

7 When the desired paper size is displayed, press the **ENTER** key. The paper size is set for the MP tray.

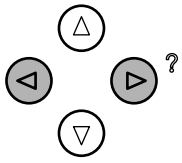
8 To exit the menu selection, press the **MENU** key.

3.10.3 Setting the MP Tray Paper Type

By setting a paper type (plain, recycled, etc.) to the MP tray, you can select the paper on the MP tray according to the paper type you command on the printer driver. The default setting is plain paper.

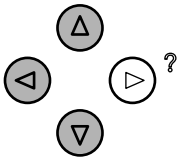
For more information about paper types that can be fed from the MP tray, see *Chapter 2 Handling Paper*.

1 Press the **MENU** key.

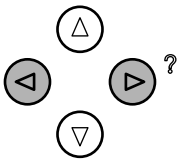


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



3 Press the ▷ key.

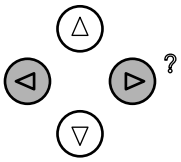


4 Press the △ or ▽ key repeatedly until `>MP Tray Type` appears.

```
> MP Tray Type
  Plain
```

5 To change paper type, press the **ENTER** key. A blinking question mark (`?`) appears.

```
> MP Tray Type
? Plain
```



6 Press the △ or ▽ key to display the desired paper type. The message display toggles through the following paper types:

```
Plain
Transparency
Preprinted
Labels
Bond
Recycled
Vellum
Rough
Letterhead
Color
Prepunched
Envelope
Cardstock
Coated
2nd side
Custom 1( to 8)
```

7 When the desired paper type is displayed, press the **ENTER** key. The paper type is set to the MP tray.

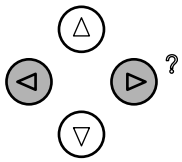
8 To exit the menu selection, press the **MENU** key.

3.10.4 Setting the Cassette Paper Type

By setting a paper type (plain, recycled, etc.) to the paper cassette, you can automatically select the paper in the paper cassette according to the paper type you command on the printer driver. The default setting is plain paper for all paper cassettes.

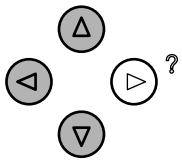
For more information about paper types that you can feed from the paper cassette, see *Chapter 2 Handling Paper*.

1 Press the **MENU** key.

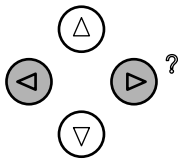


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



3 Press the ▷ key.

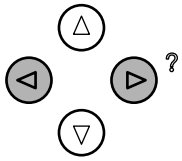


4 Press the △ or ▽ key repeatedly until `>Cassette # Type` appears.

```
>Cassette 1 Type
  Plain
```

5 To change paper type, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Cassette 1 Type
? Plain
```



6 Press the △ or ▽ key to display the desired paper type. The message display toggles through the following paper types:

```
Plain
Preprinted
Recycled
Vellum
Rough
Letterhead
Color
Prepunched
2nd Side
Custom 1 (to 8)
```

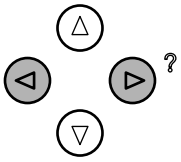
7 When the desired cassette type is displayed, press the **ENTER** key.

8 To exit the menu selection, press the **MENU** key.

3.10.5 Selecting the Paper Feed Source

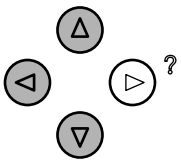
You can select the paper source using the operator panel, from which the printer feeds paper as the default. If an optional paper feeder(s) is installed, it is also available for the default paper source.

1 Press the **MENU** key.

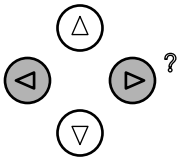


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



3 Press the ▷ key.

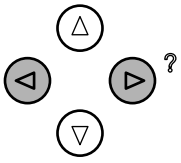


4 Press the △ or ▽ key repeatedly until `>Feed Select` appears.

```
>Feed Select
  Cassette 1
```

5 To change the current paper feed source, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Feed Select
? Cassette 1
```



6 Press the △ or ▽ key to display the desired paper feed source. The message display toggles through the following paper feed sources, depending on the installed optional paper feeders (from the top most paper cassette to the bottom paper cassette):

```
MP tray
Cassette 1
Cassette 2
Cassette 3
Cassette 4
Cassette 5
Cassette 6
```

Cassettes 3 and 4 are available for selection when an optional paper feeder is installed. Cassettes 5 and 6 are available for selection when two optional feeders are installed. The FS-8000CD is equipped with the PD-30 duplex unit as a standard feature, whose Casette 1 is occupied by the duplexer. Terefore, Cassette 1 is not available for the FS-8000CD.

7 When the desired paper source displayed, press the **ENTER** key.

8 To exit the menu selection, press the **MENU** key.

3.10.6 Duplex Printing (FS-8000CD)

The FS-8000CD is equipped with the PD-30 duplex unit as a standard feature. The Paper Handling menu on the operator panel provides you with activating the duplexer for printing both sides of paper. You can also select the direction the duplex printed pages are bound — short or long edge binding. See *Figure 3-14* below.

Duplex printing is available for the following paper types:

```
Plain
Prepunched
Recycled
Letterhead
Color
Prepunched
Vellum
```

The procedure in this section will activate the duplexer as default. Even without following this procedure, you can conveniently activate or deactivate duplex printing using the printer driver.

Activating the duplexer on the operator panel is done by selecting either short edge or long edge binding mode.

Duplex printing can be also performed from the Multi-Purpose (MP) tray. When the MP tray is set to First Mode (“First”), the paper size and paper type will be the same as those of the paper cassette currently set at the paper feed source. If the paper to be fed from the MP tray does not match the paper size and paper type of the current paper feed source cassette, a paper jam may occur.

Binding Modes

Binding refers to the manner in which printed pages of paper are joined together (by gluing, stitching, etc.) in book form. The two possible types of binding are: long-edge binding, in which pages are joined together along their long edge; and short-edge binding, in which they are joined together along their short edge. In selecting a binding type, you must also consider the orientation of the printed page. You can use long-edge or short-edge binding with either landscape or portrait printing.

Depending on the binding type and print orientation, the duplexer provides four types of binding. These are: (1) portrait, long-edge, (2) portrait, short edge, (3) landscape, long-edge, and (4) landscape, short-edge. The figure below shows these binding methods.

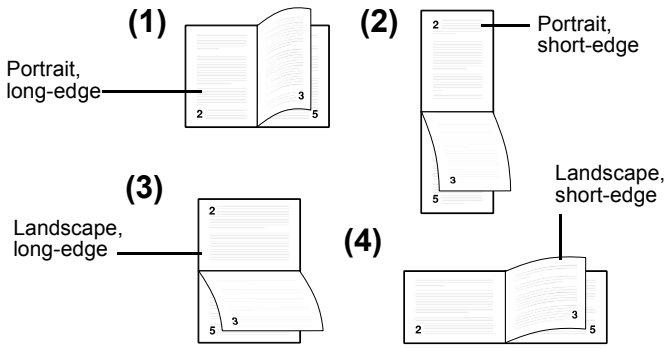
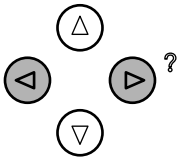


Figure 3-14

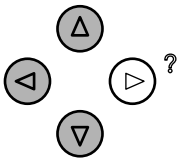
To select duplex printing and binding from the operator panel, use the following procedure:

1 Press the **MENU** key.

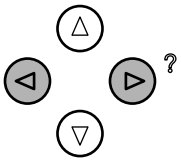


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



3 Press the ▷ key.

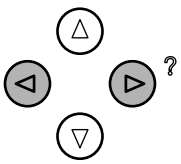


4 Press the △ or ▽ key repeatedly until `>Duplex Mode` appears.

```
>Duplex mode
 None
```

5 To activate duplex printing, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Duplex mode
?None
```



6 Press the △ or ▽ key to display the desired binding mode. The message display toggles through the following:

```
None (default)
Short edge bind
Long edge bind
```

7 When the desired binding mode is displayed, press the **ENTER** key. The binding mode is set.

8 To exit the menu selection, press the **MENU** key.

Note on Duplex Printing from the MP Tray

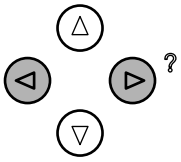
- You cannot select the MP tray, when it is set to ‘cassette’ mode, to perform duplex printing. To perform duplex printing, select a paper cassette.
- It is possible to duplex-print using the MP tray if it is set in ‘first’ mode. (See *Section 3.10.1 MP Tray Mode on page 3-79*.) However, be sure to set the MP tray paper size and paper type to the same paper size and paper type as those of the current paper cassette. If the paper size or type differs, a paper jam may occur.

3.10.7 Overriding Difference between A4 and Letter

When the `Override A4/LT` is turned on using the operator panel, the printer ignores the difference between A4 and Letter paper sizes. Printing is performed without an error message even if the actual paper size in the current cassette differs from the paper size formatting the job.

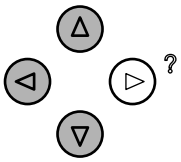
By default, this feature is off. To confirm and turn on the `Override A4/LT`, proceed as follows:

1 Press the **MENU** key.

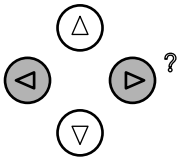


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



3 Press the ▷ key.

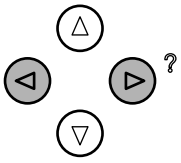


4 Press the △ or ▽ key repeatedly until `>Override A4/LT` appears.

```
>Override A4/LT
  Off
```

5 To change overriding mode, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Override A4/LT
? Off
```



6 Press the △ or ▽ key to change `Off` to `On`.

7 Press the **ENTER** key. The overriding mode is set.

8 To exit the menu selection, press the **MENU** key.

3.10.8 Creating Custom Paper Types

The Type Adjust menu on the operator panel may be used to create a user-defined paper type for the printer. Custom paper types allow you to optimize printing parameters such as the fuser temperature best suited for the paper property. It also enables the printer to automatically select the paper cassette in which the custom paper is loaded as commanded by the printer driver

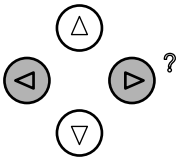
Up to eight custom user settings may be registered on the operator panel. Creating a custom paper type using the operator panel is a 4-step job:

- selecting one of eight custom setting positions (Custom 1 through 8)
- selecting the paper weight
- selecting the fuser temperature
- enabling or disabling duplexing for the paper type

Custom paper types can be reset afterwards by following the steps in *Section 3.10.9 Resetting the Custom Paper Type on page 3-92*.

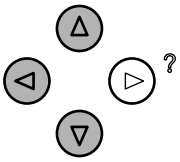
Step 1. Selecting the Custom Type Position

1 Press the **MENU** key.

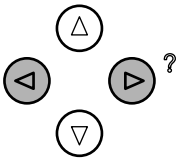


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



3 Press the ▷ key.

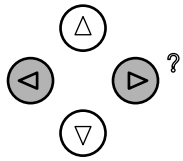


4 Press the △ or ▽ key repeatedly until `>Type Adjust >` appears. The first custom setting is displayed.

```
>Type Adjust   >
  Custom 1
```

5 If you want to change to other custom setting position (Custom 2 to 8), press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Type Adjust
? Custom 1
```

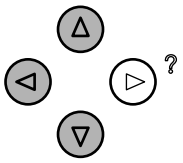


6 Press the △ or ▽ key to scroll to the other custom position.

```
Custom 1
Custom 2
Custom 3
Custom 4
Custom 5
Custom 6
Custom 7
Custom 8
```

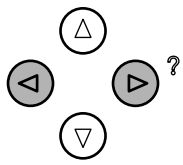
7 When the paper type to be customized is displayed, press the **ENTER** key. Proceed to the next procedure.

Step 2. Selecting the Paper Weight



1 Complete **Step 1**. above.

2 Press the ▷ key.

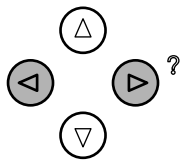


3 Press the △ or ▽ key repeatedly until `>>Paper Weight` appears.

```
>>Paper Weight
  Normal
```

4 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>>Paper Weight
? Normal
```



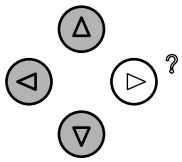
5 Press the △ or ▽ key to display the desired paper thickness from the following:

```
Normal
Heavy (Thick)
Extra Heavy
```

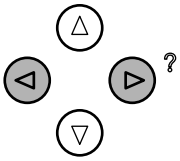
6 When the desired paper thickness is displayed, press the **ENTER** key. Proceed to the next procedure.

Step 3. Selecting the Fuser Mode

1 Complete **Step 2.** above.



2 Press the ▽ key.

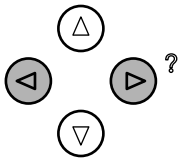


3 Press the △ or ▽ key repeatedly until `>>Fuser Mode` appears.

```
>>Fuser Mode
  Middle
```

4 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>>Fuser Mode
? Middle
```



5 Press the △ or ▽ key to display the desired fuser mode from the following:

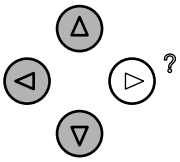
```
Low
Middle
```

6 When the desired fuser mode is displayed, press the **ENTER** key. Proceed to the next step.

Enabling or Disabling Duplex Printing for Custom Paper Type

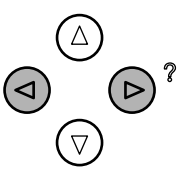
This parameter is valid for the FS-8000CD printer which is equipped with the duplexer as a standard feature. When this parameter is disabled for a Custom type, the printer does not duplex print when the custom size is selected for the paper type in a print job.

By default, duplex printing is enabled for custom paper types. To confirm and change this, proceed as follows:



1 Complete **Step 1.** above.

2 Press the ▷ key.

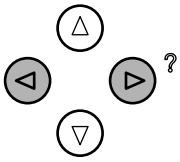


3 Press the △ or ▽ key repeatedly until `>>Duplex path` appears.

```
>>Duplex path
  Enable
```

4 To change duplex printing, press the **ENTER** key. A blinking question mark (?) appears.

```
>>Duplex path
? Enable
```



5 Press the △ or ▽ key to change from `Enable` to `Disable`.

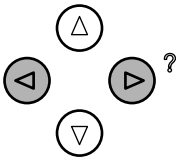
6 Press the **ENTER** key. The duplex printing capability is changed.

7 To exit the menu selection, press the **MENU** key.

3.10.9 Resetting the Custom Paper Type

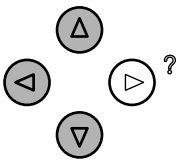
If you want to reset all custom paper type settings (1 to 8) to the factory default, proceed as follows:

1 Press the **MENU** key.

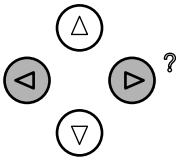


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>Reset Type Adjust` appears.

```
>Reset Type
Adjust
```

5 To reset all custom paper types, press the **ENTER** key. A question mark (?) appears.

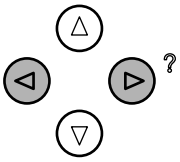
```
>Reset Type
Adjust ?
```

6 Press the **ENTER** key. All customized paper types, including weight and duplex printing capability, will be reset to the default. The message display returns to `Ready`.

3.10.10 Selecting the Output Stack

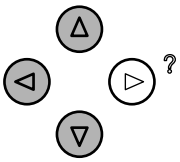
The Stack Select menu on the operator panel allows you to select either the face-down tray or the face-up tray for the output stack. If an optional output device such as the sorter, document finisher, or bulk stacker, is installed, it can also be selected as an output stack.

1 Press the **MENU** key.

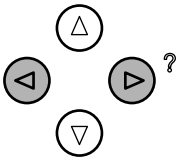


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



3 Press the ▷ key.

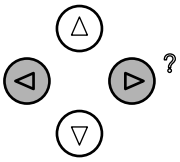


4 Press the △ or ▽ key repeatedly until `>Stack Select` appears.

```
>Stack Select
  Face-down tray
```

5 To change the output stack, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Stack Select
? Face-down tray
```



6 Press the △ or ▽ key to toggle through the following output stacks:

```
Face-down tray
Face-up tray
```

The output stacks change to include the following when an optional bulk stacker or document finisher is installed:

```
Face-down tray
Opt.stacker[FU]  (Option face-up tray required)
Opt.stacker[FD]  (Option face-down tray required)
```

The output stacks change to include the following when an optional sorter is installed:

```
Face-down tray
```

```
Opt.stacker[FU]
Opt.stacker
```

ENTER

7 When the desired output stack is displayed, press the **ENTER** key.

MENU

8 To exit the menu selection, press the **MENU** key.

3.10.11 Selecting the Option Sorter Mode

If you install an option mailbox/sorter, you can have your printouts automatically sorted in three different ways when printing multiple copies. The three methods are:

- Sorter mode
  The sorter receives a complete set of a document starting from the top tray.
- Collator mode
  The sorter receives all copies of the same page in each tray starting from the top tray.
- Mailbox mode
  The sorter receives all copies of the same page in each tray starting from the bottom tray.

These modes are depicted in *Table 3-5* which follows:

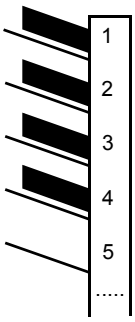
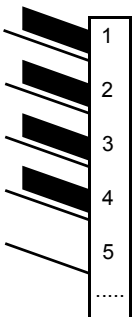
Mode	Description
Sorter mode Copy 1 (1-50 pages) Copy 2 (1-50 pages) Copy 3 (1-50 pages) Copy 4 (1-50 pages) 	The sorter mode sorts the output pages by copy as shown in the example. This mode is useful when you need several independent copies of a document. The maximum number of copies is 9. If a tray becomes full (approximately 200 pages), the printer pauses and indicates the `Option tray # paper full` message. You will need to remove all the printed pages from the tray indicated by # in the message. In the example, four copies of a document of 50 pages long are printed, and each copy is stacked in trays 1, 2, 3, and 4, respectively.
Collator mode 200 copies of page 1 200 copies of page 2 200 copies of page 3 200 copies of page 4 	The collator mode sorts the output pages by page as shown in the example. When multiple copies of a file are printed, all copies of a single page are delivered together to a single tray. A typical use of this mode is in printing material to be distributed at a meeting. The maximum number of copies is 200. If a tray becomes full (200 pages), the printer pauses and indicates the `Option tray # paper full` message. Then, you will need to remove all the printed pages from the tray indicated by # in the message. In the example, we make 200-copy stacks of each page of an 4-page long document.

Table 3-5

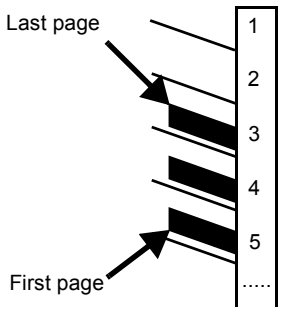
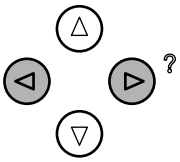
Mode	Description
Mailbox mode 	The mailbox mode simply stacks the printed pages into the sorter's trays without sorting the pages in any way, starting from the bottom tray and going to the top tray. When the top tray becomes full, the printer indicates the `Option tray # paper full` message and pauses until you remove all the pages in the tray indicated by # in the message. In this way, you can print a large job up to approximately 1,000 pages without interrupting the printing process. The example shows the sorter having received approximately 600 pages in the mailbox mode.

Table 3-5 (Continued)

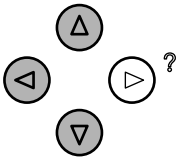
To select one of the stacker modes above from the operator panel, use the following procedure.

1 Press the the **MENU** key key.

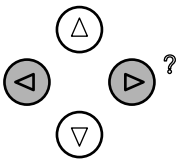


2 Press the △ or ▽ key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```



3 Press the ▷ key.

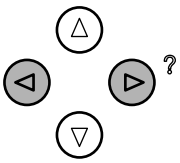


4 Press the △ or ▽ key repeatedly until `>Opt.StackerMode` appears.

```
>Opt.StackerMode
  Sorter
```

5 To change mode, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Opt.StackerMode
? Sorter
```



6 Press the △ or ▽ key to display the desired sorter mode. The message display toggles through the following:

```
Sorter
Collator
Mail box
```

7 When the desired sorter mode is displayed, press the **ENTER** key. The sorter mode is changed.

8 To exit the menu selection, press the **MENU** key.

3.11 Color Control

This section covers how to use the operator panel for controlling parameters pertaining to color printing.

3.11.1 Selecting Monochrome or Color Printing

You can use the Color Mode menu on the operator panel to select the Monochrome or Color printing mode. It also allows you to perform adjustments on color. The Color Mode menu has the following sub-menus:

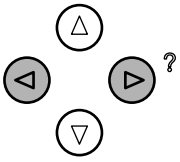
- RGB simulation
  Prints using colors close to those projected on a monitor.
- Ink simulation
  Used for setting the type of colors to be used, such as SWOP. Ink simulation can be used only when `KPDL` and `KPDL(AUTO)` is chosen as the emulation.
- Color calibration
  Executes manually the color calibration System for the optional color reproduction performance.

Selecting Monochrome or Color Printing

By default, the printer is set to print in color mode. To change it to monochrome mode, proceed as follows:

```
Color Mode      >
  Color
```

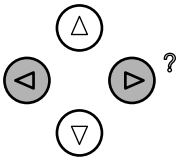
1 Press the the **MENU** key.



2 Press the △ or ▽ key repeatedly until `Color Mode` appears. The current color mode appear under Color Mode.

3 To change color mode, press the **ENTER** key. A blinking question mark (`?`) appears.

```
Color Mode
? Color
```



4 Press the △ or ▽ key to change color mode — Monochrome or Color.

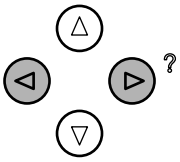
5 When the desired color mode is displayed, press the **ENTER** key. Color mode is changed.

6 To exit the menu selection, press the **MENU** key.

3.11.2 Matching Colors to Monitor (RGB Simulation)

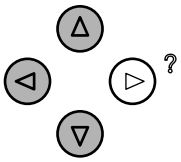
Computer monitors use three colors of RGB (Red, Green, and Blue) to reproduce all colors. If you wish to print data using RGB simulation for color reproduction, use the following procedure. The printer does not use RGB simulation by default but can be set to use sRGB for simulation.

1 Press the **MENU** key.

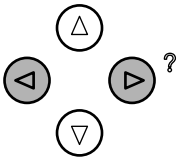


2 Press the △ or ▽ key repeatedly until `Color Mode` appears.

```
Color Mode      >
  Color
```



3 Press the ▷ key.

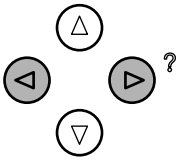


4 Press the △ or ▽ key repeatedly until `>RGB Simulation` appears.

```
>RGB Simulation
  None
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>RGB Simulation
? None
```



6 Press the △ or ▽ key repeatedly until the desired RGB type — `sRGB` is displayed.

7 When the desired RGB simulation mode is displayed, press the **ENTER** key.

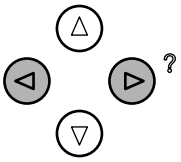
8 To exit the menu selection, press the **MENU** key.

3.11.3 Using Ink Simulation

The ink simulation delivers the color results closest to the industry-standard color management systems. These include:

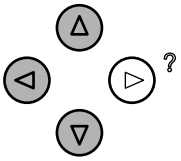
- SWOP
- Euro-scale

1 Press the **MENU** key.

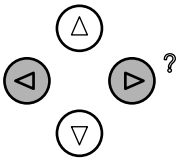


2 Press the △ or ▽ key repeatedly until `Color Mode` appears.

```
Color Mode      >
  Color
```



3 Press the ▷ key.

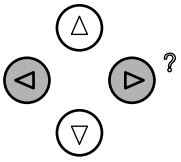


4 Press the △ or ▽ key repeatedly until `>Ink Simulation` appears.

```
>Ink Simulation
  None
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Ink Simulation
?None
```



6 Press the △ or ▽ key repeatedly until the desired type of ink simulation appears.

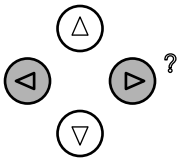
7 Press the **ENTER** key. The ink simulation is set.

8 To exit the menu selection, press the **MENU** key.

3.11.4 Color Calibration

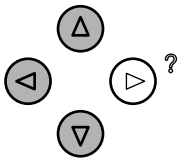
The printer maintains the optimal color reproduction performance using the Color Calibration system. This function is performed automatically each time you power on the printer or when the printer reverts to normal operation from sleep mode. You can also use the following procedure to execute this function even after the printer has been powered on.

1 Press the **MENU** key.

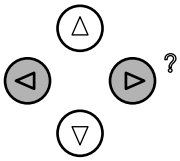


2 Press the △ or ▽ key repeatedly until `Color Mode >` appears.

```
Color Mode      >
  Color
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>Color Calibration` appears.

```
>Color
 Calibration
```

5 To let the printer perform color calibration, press the **ENTER** key. A question mark (`?`) appears to let you confirm the execution of calibration.

```
>Color
 Calibration ?
```

6 Press the **ENTER** key. The message display shows `Please wait (Calibrating)` and calibration will start.

```
Please wait
(Calibrating)
```

7 When calibration is finished, the display returns to `Ready`.

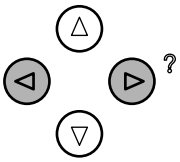
3.12 Reading Life Counters

You can display the total number of pages printed by your printer whenever it is necessary. The total number of printed pages can also be checked on the status page. See *Section 3.3.2 Printing a Status Page on page 3-16* . For proper maintenance scheduling, you need to reset the toner counter using this menu each time a new toner container is installed.

3.12.1 Displaying the Total Printed Pages

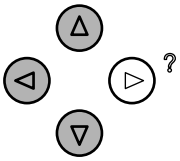
This procedure displays the total number of printed pages. You cannot change the displayed value.

1 Press the **MENU** key.

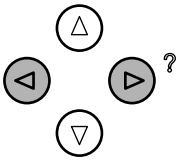


2 Press the △ or ▽ key repeatedly until `Life Counters >` appears.

```
Life Counters  >
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>Total Print` appears and the latest total print count is shown.

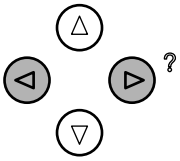
```
>Total Print
         0123456
```

5 To exit the menu selection, press the **MENU** key.

3.12.2 Displaying the Oil Unit Life

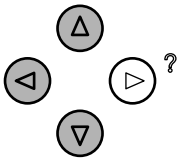
This procedure displays the total number of printed pages the oil unit has been used since its previous replacement.

1 Press the **MENU** key.

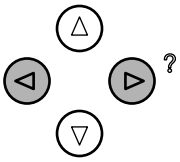


2 Press the △ or ▽ key repeatedly until `Life Counters >` appears.

```
Life Counters  >
```



3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>Oil Kit` appears. The latest oil unit life is displayed.

```
>Oil Kit
         0123456
```

5 To exit the menu selection, press the **MENU** key.

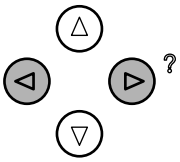
3.12.3 Resetting the Toner Counter

The toner containers must be replaced when the printer displays the `Low toner` or `Replace toner` message which will be given depending on the color of toner. The `Low toner` message will be shown as a pre-warning that the toner is running out and the printer will soon stop, at that time showing `Replace toner`. If you replace the toner container before `Replace toner` is displayed, you must manually reset the toner counter as explained below.

Note that if you reset the toner counter before the toner container is replaced, the subsequent toner warnings will not be indicated correctly.

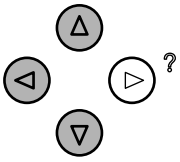
1 Replace the toner container according to the message given on the message display. To replace the toner containers, see *Chapter 6 Maintenance, section 6.1 Toner Container Replacement on page 6-2*.

2 Press the **MENU** key.

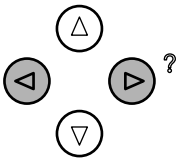


3 Press the △ or ▽ key repeatedly until `Life Counters >` appears.

```
Life Counters  >
```



4 Press the ▷ key.



5 Press the △ or ▽ key repeatedly until the message display shows the toner container of the color you replaced — [C]yan, [M]agenta, [Y]ellow, or blac[K]. For example, to reset the Cyan toner counter, display `>New Toner [C] Installed`.

6 Press the **ENTER** key. A question mark (`?`) appears.

```
>New Toner [C]
 Installed ?
```

7 Press the **ENTER** key. The toner counter is reset.

8 To exit the menu selection, press the **MENU** key.

3.13 Other Modes

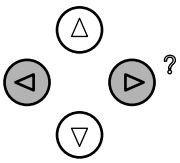
The following modes can be accessed in the `Others` submenu:

- Message Language
- Automatic Form Feed Timeout Setting
- Sleep Timer Setting
- Received Data Dumping
- Printer Resetting
- Resource Setting
- Alarm (Buzzer) Setting
- Auto Continue Setting
- Service Menu (for service personnel)

3.13.1 Selecting the Message Language

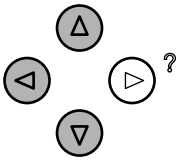
You can select the language of the messages on the message display by following the procedure given below. You can optionally download messages in other languages. Contact your Kyocera Mita dealer for information.

1 Press the **MENU** key.

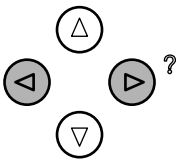


2 Press the △ or ▽ key repeatedly until `Others >` appears.

```
Others          >
```



3 Press the ▷ key.

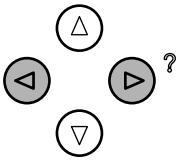


4 Press the △ or ▽ key repeatedly until `>MSG Language` appears. The default message language is English.

```
>MSG Language
  English
```

5 To change the language, press the **ENTER** key. A blinking question mark (`?`) appears.

```
>MSG Language
? English
```



6 Press the △ or ▽ key. The display cycles through the available selection in the following order:

```
English
Francais
Deutsch
Italiano
Nederlands
Dansk
Español
Svenska
```

If you want to abandon the setting procedure, press the **CANCEL** key.

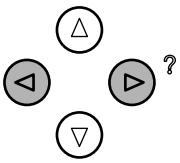
7 Press the **ENTER** key.

8 Press the **MENU** key. The message display returns to `Ready`.

3.13.2 Automatic Form Feed Timeout Setting

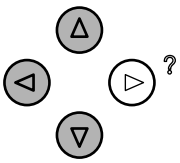
If the printer receives no data for a certain period, it will time out and release the current interface. It prints whatever data it has in its buffer and feeds out the page. The default form feed timeout time is 30 seconds. You can adjust the time-out time as follows:

1 Press the **MENU** key.

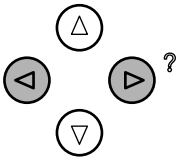


2 Press the △ or ▽ key repeatedly until `Others >` appears.

```
Others          >
```



3 Press the ▷ key.

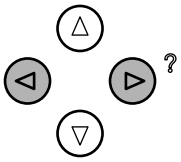


4 Press the △ or ▽ key repeatedly until `>Form Feed Time Out` appears.

```
>Form Feed
Time Out 030sec.
```

5 To change the timeout time, press the **ENTER** key. A blinking cursor (_) appears.

```
>Form Feed Time.
Time Out 030sec.
```



6 Press the △ or ▽ key to increase or decrease the value at the blinking cursor and set the desired time. The timeout time can be between 0 and 495 seconds, in 5-second increments. Use the ▷ and ◁ keys to move the cursor right and left.

7 When the desired timeout time is displayed, press the **ENTER** key.

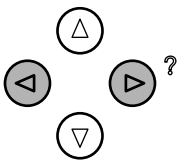
8 To exit the menu selection, press the **MENU** key.

3.13.3 Setting the Sleep Timer

The printer has a sleep timer that is used to conserve power when the printer is not printing, processing, or receiving data.

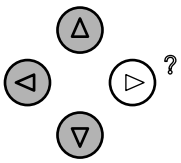
You can turn off or on the sleep timer function using the following procedure.

1 Press the **MENU** key.

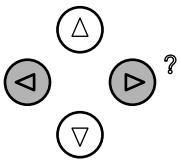


2 Press the △ or ▽ key repeatedly until `Others >` appears.

```
Others          >
```

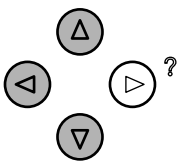


3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>Sleep Timer >` appears.

```
>Sleep Timer    >
        030 min.
```

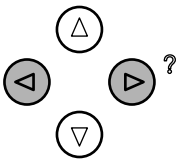


5 Press the ▷ key and display `>>Sleep Mode`.

```
>>Sleep Mode
  On
```

6 To turn off the sleep timer, press the **ENTER** key. A blinking question mark (?) appears.

```
>>Sleep Mode
? On
```



7 Press the △ or ▽ key to change `On` to `Off`.

```
>>Sleep Mode
? Off
```

8 Press the **ENTER** key. The sleep timer is turned off.

9 To exit the menu selection, press the **MENU** key.

Sleep Timer Timeout Time

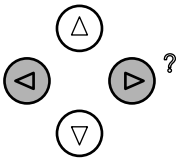
You can adjust the timer timeout time, the length of time the printer waits before entering sleeping mode in the absence of data. The default sleep timer timeout time is 30 minutes.

The printer reverts to normal operation mode when the printer receives a print job, the operator panel is operated, or one of the exterior covers is opened.

Color calibration is automatically executed before the printer reverts to normal operation mode.

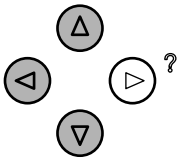
To confirm and change the timeout time, proceed as follows:

1 Press the **MENU** key.

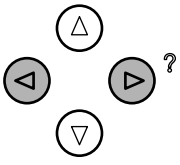


2 Press the △ or ▽ key repeatedly until `Others >` appears.

```
Others          >
```



3 Press the ▷ key.

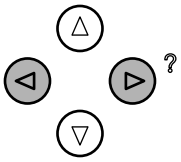


4 Press the △ or ▽ key repeatedly until `>Sleep Timer >` appears.

```
>Sleep Timer   >
         030min
```

5 To change the timeout time, press the **ENTER** key. A blinking cursor (_) appears.

```
>Sleep Timer   >
        030min.
```



6 Press the △ or ▽ key to increase or decrease the value at the blinking cursor and set the desired time. The timer can be set between 5 and 240 min, in 5-minute increments. Use the ▷ and ◁ keys to move the cursor right and left.

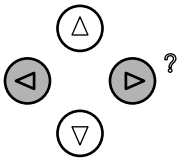
7 When the desired timeout time is displayed, press the **ENTER** key.

8 To exit the menu selection, press the **MENU** key.

3.13.4 Received Data Dump

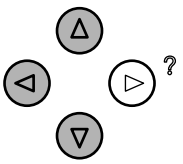
You can print data received by the printer as hexadecimal code for debugging programs and files.

1 Press the **MENU** key.

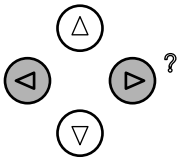


2 Press the △ or ▽ key repeatedly until `Others >` appears.

```
Others          >
```



3 Press the ▷ key.



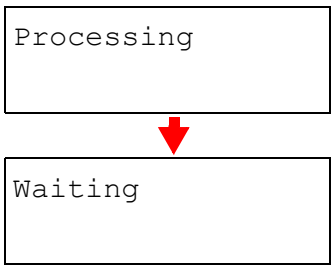
4 Press the △ or ▽ key repeatedly until `> Print HEX-DUMP` appears.

```
>Print HEX-DUMP
```

5 Press the **ENTER** key. A question mark (?) appears.

```
>Print HEX-DUMP?
```

6 Press the **ENTER** key again. The message `Processing` appears for a second, followed by `Waiting`.



7 While the message display is indicating `Waiting` (for 30 seconds by default), send data to be hex-dumped to the printer. The message display indicates `Processing` while the data is being received.

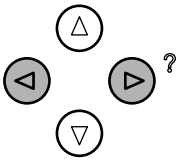
You can cancel printing of any more dump data by pressing the **GO** key and then the **CANCEL** key.

8 Once all data has been received, the message `Waiting` will appear. Press the **GO** key to finish hex-dump printing.

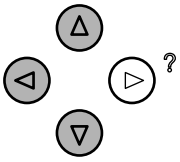
3.13.5 Printer Resetting

The procedure described below resets the printer's temporary conditions, such as the current unit of measurement, page orientation, font, character code set, margins, etc., set by commands to their default values. Downloaded fonts and macros are deleted from the printer's memory.

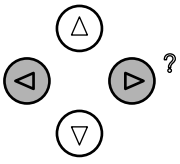
1 Press the **MENU** key.



2 Press the △ or ▽ key repeatedly until `Others >` appears.



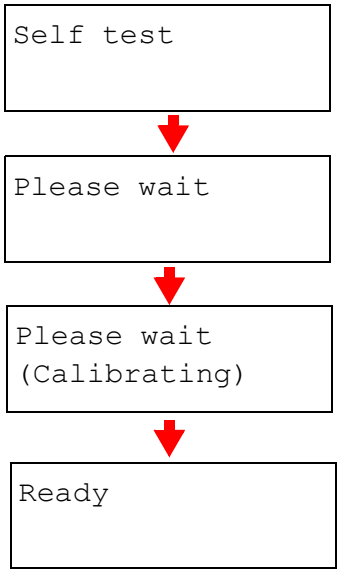
3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `>Printer Reset` appears.

5 To reset the printer, press the **ENTER** key. A question mark (?) appears.

6 Press the **ENTER** key again. `Self test` appears while the printer is resetting itself, followed by `Please wait` and then `Ready`.



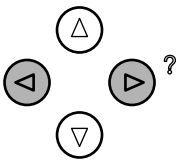
3.13.6 Resource Protection

By default, when you switch from the PCL 5c emulation to another, all downloaded fonts and macros will be lost. Resource protection preserves these PCL resources in memory so that they remain intact even when you have switched back in PCL 5c.

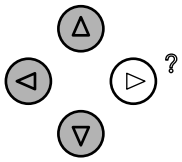
Resource protection requires extra memory to store the downloaded fonts and macros. The total size of the printer memory recommended for using the resource protection option is affected by several factors. See *Appendix A Options*.

By default, resource protection is deactivated. To activate resource protection, proceed as follows:

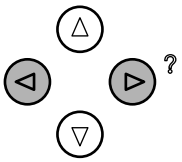
1 Press the **MENU** key.



2 Press the △ or ▽ key repeatedly until `Others >` appears.



3 Press the ▷ key.

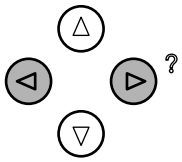


4 Press the △ or ▽ key repeatedly until `>Resource Prot.` appears.

```
>Resouce Prot.
  Off
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Resouce Prot.
? Off
```



6 Press the △ or ▽ key to select Permanent or Permanent/Temporary for resource protection.

```
Permanent
Perm / Temp
```

7 When the desired resource protection is displayed, press the **ENTER** key.

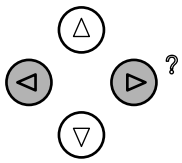
8 To exit the menu selection, press the **MENU** key.

3.13.7 Alarm (Buzzer) Setting

You can set an alarm sound in addition to the message displayed when the paper supply is exhausted, or when paper jamming occurs. This setting is useful, for example, when the printer is located some distance from the user.

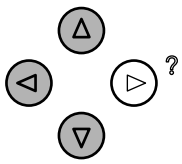
The audio alarm is set to `On` when leaving the factory. If the alarm is set to `Off`, it will not sound.

1 Press the **MENU** key.

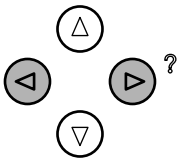


2 Press the △ or ▽ key repeatedly until `Others >` appears.

```
Others          >
```



3 Press the ▷ key.

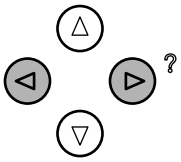


4 Press the △ or ▽ key repeatedly until `Buzzer` appears.

```
>Buzzer
  On
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Buzzer
? On
```



6 Select `On` or `Off` using the △ or ▽ key.

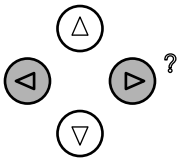
7 Press the **ENTER** key.

8 To exit the menu selection, press the **MENU** key.

3.13.8 Auto Continue Setting

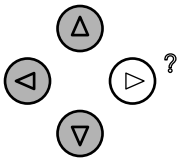
If you encounter an error that still allows you to continue printing (`Memory overflow Press GO`, `Print overrun Press GO`, `KPDL error Press GO`, and `File not found Press GO`), the next received data is automatically printed after a preset period of time elapses. For example, if the printer is shared over a network and one person causes one of the above errors, the data sent from the next person is printed after the set period of time elapses.

1 Press the **MENU** key.

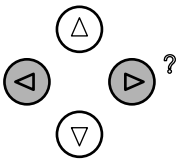


2 Press the △ or ▽ key repeatedly until `Others >` appears.

```
Others          >
```



3 Press the ▷ key

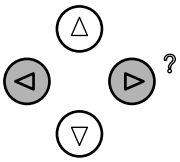


4 Press the △ or ▽ key repeatedly until `Auto Continue >` appears.

```
>Auto Continue >
 Mode    On
```

5 Press the **ENTER** key. A blinking question mark (`?`) appears.

```
>Auto Continue
 Mode ? On
```



6 Select `On` or `Off` using the △ or ▽ key.

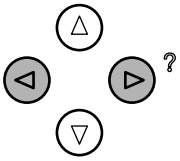
7 Press the **ENTER** key.

8 To exit the menu selection, press the **MENU** key. The display returns to `Ready`.

3.13.9 Setting the Auto Continue Recovery Time

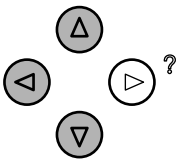
Follow the procedure given below to change the recovery time for Auto Continue.

1 Press the **MENU** key.

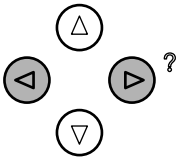


2 Press the △ or ▽ key repeatedly until `Others >` appears.

```
Others          >
```

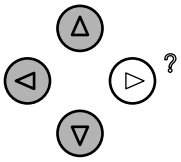


3 Press the ▷ key.



4 Press the △ or ▽ key repeatedly until `Auto Continue Mode >` appears.

```
>Auto Continue >
 Mode    On
```

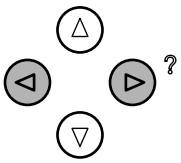


5 Press the ▷ key and display `>> Auto Continue Timer`.

```
>>Auto Continue
 Timer   000sec.
```

6 Press the **ENTER** key. A blinking cursor (_) appears.

```
>>Auto Continue
 Timer   000sec.
```



7 Press the △ or ▽ key to increase or decrease the value at the blinking cursor and set the desired time. The time must be set between 000 and 495 seconds, in 5-second increments. If set to `000`, printing will be continued immediately without any time interval. You can use the ▷ and ◁ keys to move the cursor right and left.

If you wish to abort the setting procedure, press the **CANCEL** key.

8 Display the desired time and press the **ENTER** key.

9 Press the **MENU** key. The display returns to `Ready`.

3.13.10 Service Menu

The service menu is used for maintenance operations to be performed by service personnel. The following sub-menus are displayed:

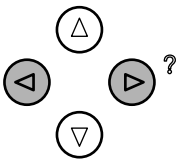
```
Print Status Page
Print Test Page 1
Print Test Page 2
Drum
Maintenance [A]
Maintenance [B]
Maintenance [C]
Maintenance [D]
```

This section provides only the instruction on how to print a service status page. Other sub-menus are for use with service personnel only.

Printing the Service Status Page

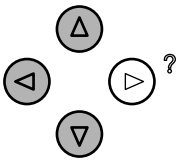
The service status page contains printer settings information that is more detailed than the standard status page and is therefore mostly for service purposes. However, since there is a great deal of information on the service status page that may be useful to you, the procedure for printing it out is given below.

1 Press the **MENU** key.

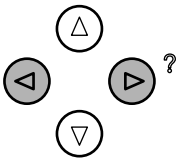


2 Press the △ or ▽ key repeatedly until `Others >` appears.

```
Others          >
```

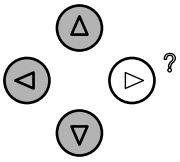


3 Press the ▷ key.

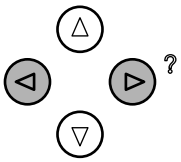


4 Press the △ or ▽ key repeatedly until `>Service >` appears.

```
>Service        >
```



5 Press the ▷ key.



6 Press the △ or ▽ key repeatedly until `>>Print Status Page` appears.

```
>>Print
 Status Page
```

7 Press the **ENTER** key. A question mark (`?`) appears.

```
>>Print
 Status Page ?
```

8 Press the **ENTER** key. The display indicates `Processing` and printing starts.

Chapter 4 Printer Drivers and Utilities

This chapter contains the following information:

- How to install the printer driver
- Printing from applications
- Configuring optional units

This chapter provides basic information that let you learn how to setup and run the printer driver. Further detailed information can be obtained by the printer driver's online help. To read the online help, use the **Help** button on each of the dialog boxes of the printer driver.

Note

For improvement purpose, the user interface design and functionalities of the printer driver may vary depending on the version. The diagrams used throughout this chapter are only for examples.

4.1 Printer Drivers and Utilities

The printer is supplied with the printer drivers and other printer utilities in the CD-ROM as listed below.† The latest drivers and utilities are also available on the Internet at http://www.kyocera.com/w2k.

Operating System	Software Name	Description
Windows	PCL printer drivers	HP PCL 5c compatible printer drivers, Windows 95/98/Me, Windows NT 4.0/2000
	KPDL printer drivers	Adobe PostScript level 3 language compatible printer drivers (including PPD files), Windows 95/98/Me, Windows NT 4.0/2000
	KX printer drivers	Both KPDL and PCL compatible printer drivers, recommended for most users, Windows 95/98/Me, Windows NT 4.0/2000
	IC Link	Writes data in an external storage device, e.g. a memory card.
	KM-NET VIEWER	Remotely monitors printers in the network.
	KM-NET VIEWER for Web Edition	An administrator version of KM-NET VIEWER that runs on a web server.
	NDPS Gateway	Implements the Novell Distributed Print Services gateway needed for NDPS support of Kyocera Mita printers.
	KM-NET Printer Disk Manager	Helps administor/print jobs in the hard disk in the printer.
	Printer Deleter	Deletes an installed printer with its associated dependent files and registry entries.
	TrueType screen fonts	Includes model dependent fonts available for all Kyocera Mita printers.
	Online documents	Supplements the paper documentation supplied with the printer
	Adobe Acrobat Reader	To read online documents
Macintosh	PostScript Printer Description (PPD) files	For Kyocera Mita printers
	ColorSync profiles	Adds support for Kyocera Mita Color printers, placing them into the Color Sync folder.
	TrueType screen fonts	Includes model dependent fonts available for all Kyocera Mita printers.
	Online documents	Supplements the paper documentation supplied with the printer
	Adobe Acrobat Reader	To read online documents

Table 4-1

† The contents of the CD-ROM may vary depending on the CD-ROM version. Also, the version of the CD-ROM supplied with the printer may differ.

4.2 Printer Driver

The printer driver provides you with control of the various printer features from most application software. In general, you can access to the printer driver from an application software by selecting **File**, **Print**, then **Properties**.

4.2.1 Installing the Printer Driver

Use the following procedure to install the driver on your operating system.

Windows 95/98/Me or Windows NT 4.0/2000

1. Set the CD-ROM in your PC's CD-ROM drive.
2. Click the Windows **Start** button, then select **Run**.
3. Type [CD drive letter]**:**`\setup`.
4. Press **Enter**. After several moments, the main screen appears.

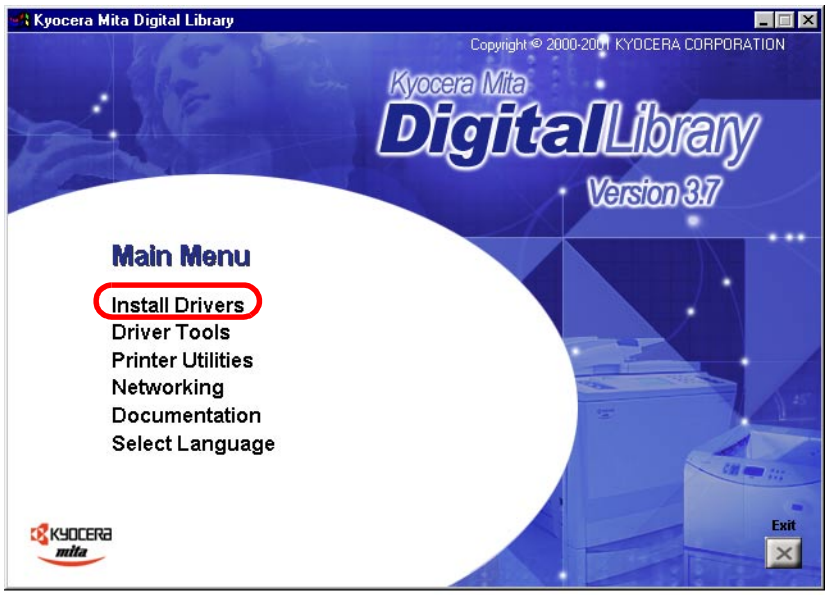


Figure 4-1

Note

The main screen will automatically appear if your Windows installation is set to support CD-ROM auto insert notification.

5. Click **Install Drivers**. Follow the rest of the wizard and finish the driver installation.

Macintosh

1. Set the CD-ROM in your Macintosh computer's CD drive.
2. Double click the CD-ROM icon on the desktop.
3. Press **Enter**. After several moments, the main screen appears.
4. Double click the Installer. Follow the instructions on the screen and finish the installation.

4.3 Configuring the Printer Properties

Configuring the printer allows you:

- Access the option devices (such as the extra paper feeders, duplexer [standard for model FS-8000CD], sorter, etc.) across all application software
- Assign the default output device
- Change the default paper source

The following section describes how to configure these basic items using the printer properties. To configure the printer properties, you must access the printer **Properties** dialog as described below.

The printer driver online help will describe the printer settings in more detail.

4.3.1 Printer Properties

Open the **Properties** dialog to configure the option settings as follows:

1. Click Windows **Start**, point to **Settings**, and click **Printers**.
2. Right-click the printer icon (**FS-8000C KX**) and click **Properties**. The **Properties** dialog will open.

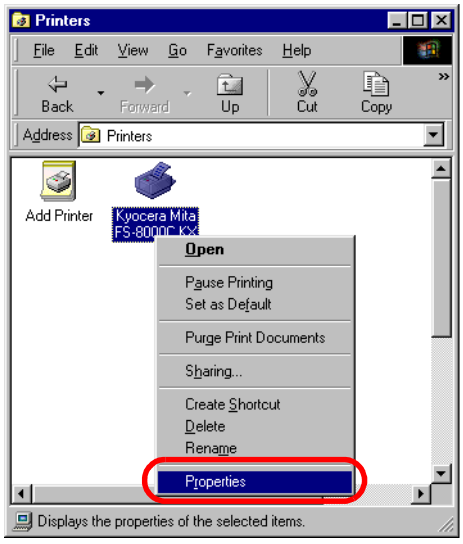


Figure 4-2

Option Devices

The following procedure will enable the installed option device(s) that are accessible from the application software.

1 Click the **Device Settings** tab.

2 Click the checkboxes for the option devices that are installed for your printer.

The following example tells the printer driver that the printer has two extra paper feeders, a hard disk, and a document finisher installed.

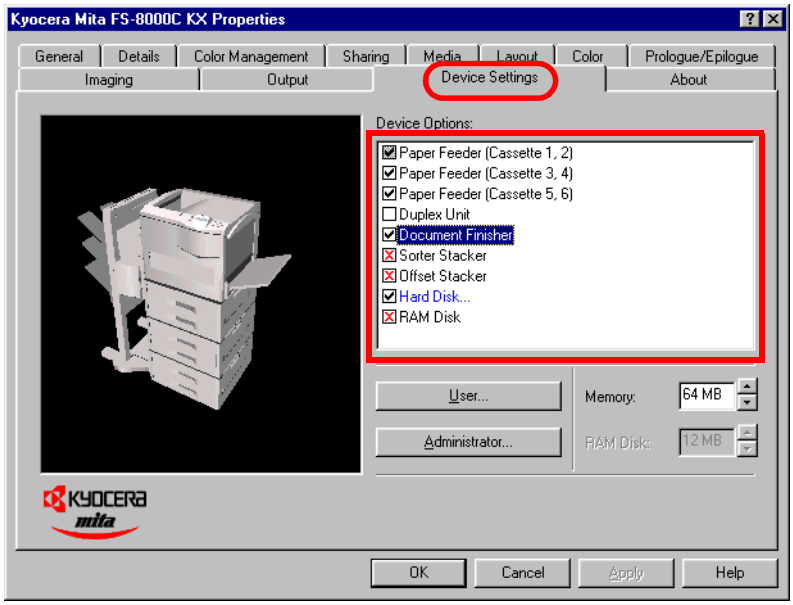


Figure 4-3

3 Click **OK**.

Selecting the Default Output Destination

The **Output** tab allows you to select the output destination, such as a document finisher, sorter, bulk stacker, etc., which will receive the printed pages in all application software. Before this selection, you must configure the available devices using the previous procedure.

You can temporarily change the default output destination to another from within the application software.

1 Click the **Output** tab.

To reach the Output tab under Windows NT 4.0/2000, Click Windows Start, point to Settings, and click Printers. Right click the printer icon, then click Document Defaults (Windows NT 4.0) or *Printing Preferences* (Windows 2000).

2 Click and scroll down the **Output to** drop down list and select the desired output destination.

Printer Default delivers the printed pages into the output destination that you set using the printer's operator panel (**MENU**>**Paper Handling**>**Stack Select**).

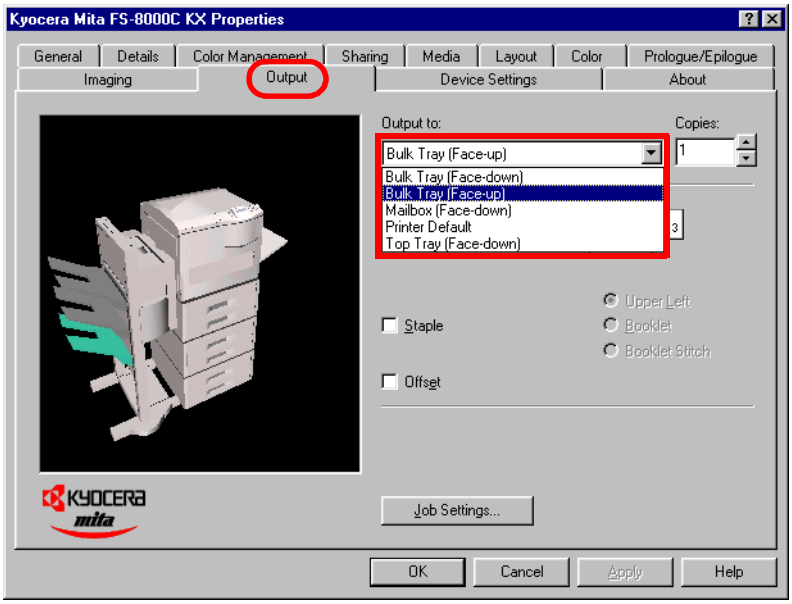


Figure 4-4

3 Click **OK**.

Selecting the Default Paper

The default, paper size for the printer driver is Letter size for the U.S. and Canada, and A4 for other countries. To change the default paper size, proceed as follows:

1 Click the **Media** tab.

To reach the Media tab under Windows NT 4.0/2000, Click Windows Start, point to Settings, and click Printers. Right click the printer icon, then click Document Defaults (Windows NT 4.0) or Printing Preferences (Windows 2000).

2 Click and scroll down the **Page Size** drop down list and select the paper size that you desire to use for all application software.

You may want to leave **Print Size** as **Same as Page Size** for printing jobs in normal (100 %) size. Changing **Print Size** to any other size that differs from the **Page Size** will force the printer to automatically enlarge or reduce the page so that it fits on the paper.

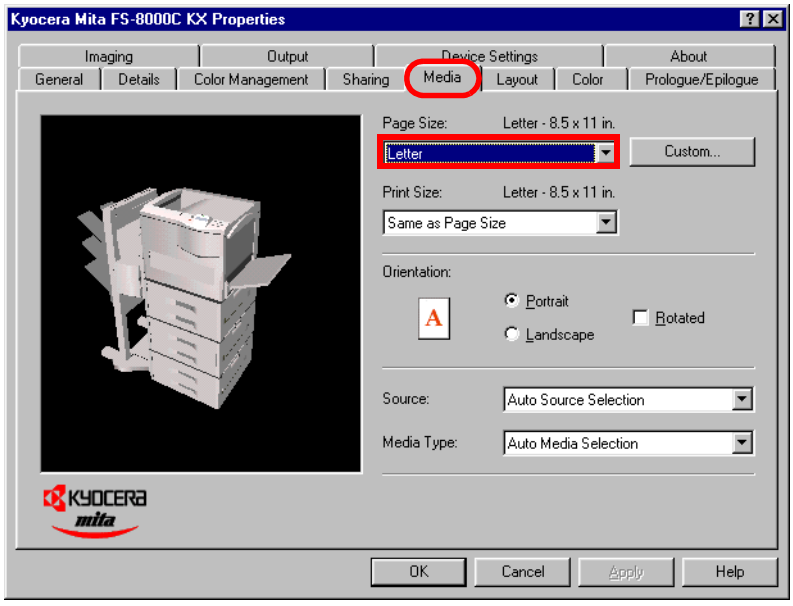


Figure 4-5

3 Click **OK**.

4.4 Printing Using the Printer Driver

This section explains how to proceed with printing using the printer driver. The explanation below allows you to select the paper source, select the output device, etc., temporarily overriding the default settings explained in the previous section.

The printer driver online help will describe the printer settings in more detail.

4.4.1 Basic Printing Task

To start printing your document, open the **Print** dialog (below) from the application software (**File**>**Print**). Then, perform the following:

1. Click the **Name** drop down list and select the **Kyocera Mita FS-8000C KX** printer.
2. Select the range of the pages you want to print in the document. To print the whole document, select **All**.
3. Specify the number of copies you want to print in the **Number of Copies** combo box.
4. Click **OK**. Printing begins when the printer is ready to print.

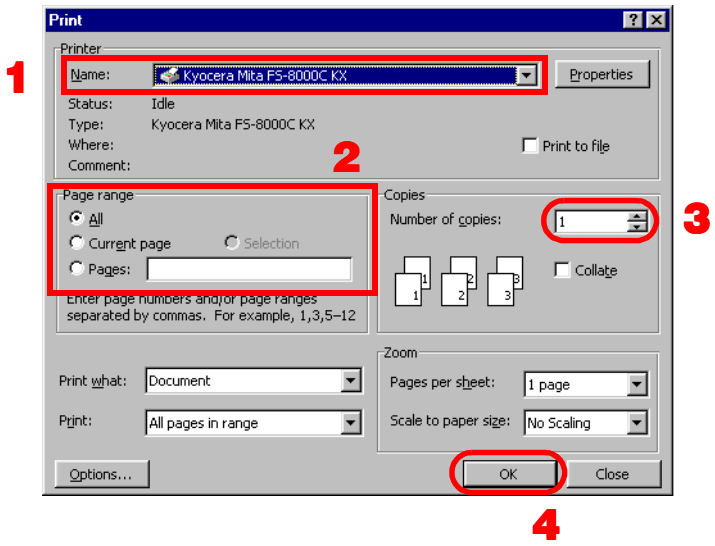


Figure 4-6

4.4.2 Advanced Printing Tasks

To take full advantage from the printer's many features, you can change the default settings on the fly from within the application software. This allows you to:

- Select the paper source and paper (media) type
- Select the destination of the printed pages
- Select how to handle TrueType fonts sent to the printer
- Adjust color using RGB levels or hue, saturation, and lightness.
- Select N-up

To perform these advanced tasks, open printer **Properties** from within the application software. Then, click the tab on the dialog as instructed below.

Accessing Printer 'Properties' from the Application Software

To access the printer **Properties** from the application software, select **Print** from the **File** menu. Then, click **Properties**.

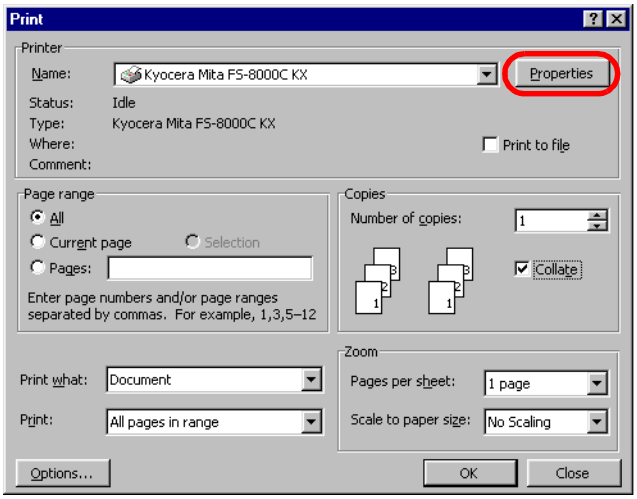


Figure 4-7

Selecting the Paper Source

The default printer paper size is Letter for the U.S. and Canada, and A4 for other countries. If you want to temporarily print using a different paper size, select the paper size in the **Media** tab.

Click the **Media** tab. Select the paper size that matches the document to print in the **Page Size** drop down list.

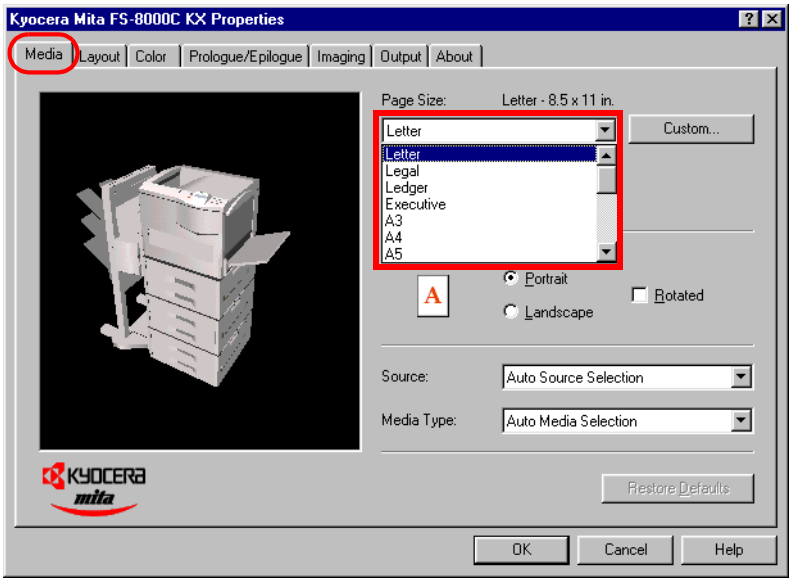


Figure 4-8

Selecting the Output Destination

To specify the output destination for particular print job, select the output destination in the **Output** tab. Available output destinations are dependent on the optional output devices attached to the printer and their configuration in the **Device Settings** tab.

If your printer has an optional output device such as document finisher or sorter stacker, you can select mailbox or bulk stacker as the output destination in **Output to** drop down list. And you can also select **Finishing Options**. If the sorter has been installed and configured, these checkboxes allows you to select sorter mode. For details on sorter mode, refer to *page 3-94*.

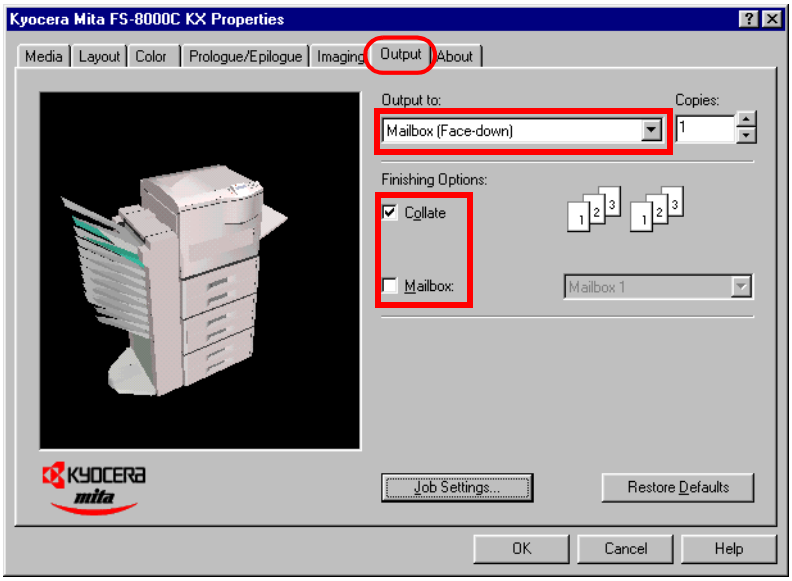


Figure 4-9

Handling TrueType Fonts

The **TrueType Fonts** in the **Imaging** tab specifies how TrueType fonts are sent to the printer. You may wish to use this function if you encounter problems in printing fonts.

Download TrueType fonts as outline	This option sends the font outlines of TrueType fonts to the printer. This is the default for handling TrueType fonts. You may wish to use one of the other selections below if you encounter problems in printing TrueType fonts.
Download TrueType fonts as bitmap	This option will designate TrueType fonts to be downloaded to the printer as bitmap fonts.

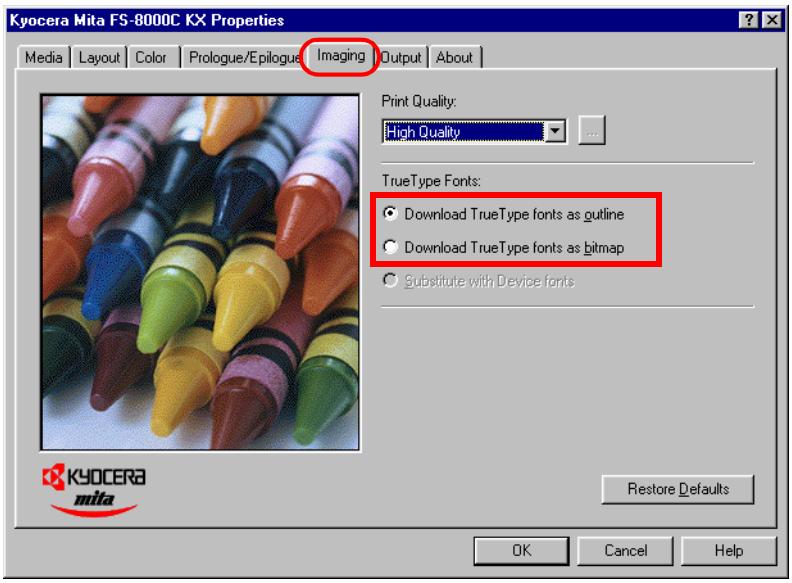


Figure 4-10

Color Mode, Color Correction, and Color Adjustment

The printer automatically optimizes the color and halftoning based on the ambient conditions when it is powered up (Color calibration). Therefore, you do not have to adjust the printer's color features unless you desire to customize your color printing jobs.

You can customize color features of the printer and store it in different **Custom** settings for later recall.

Following items are available in the **Color** tab.

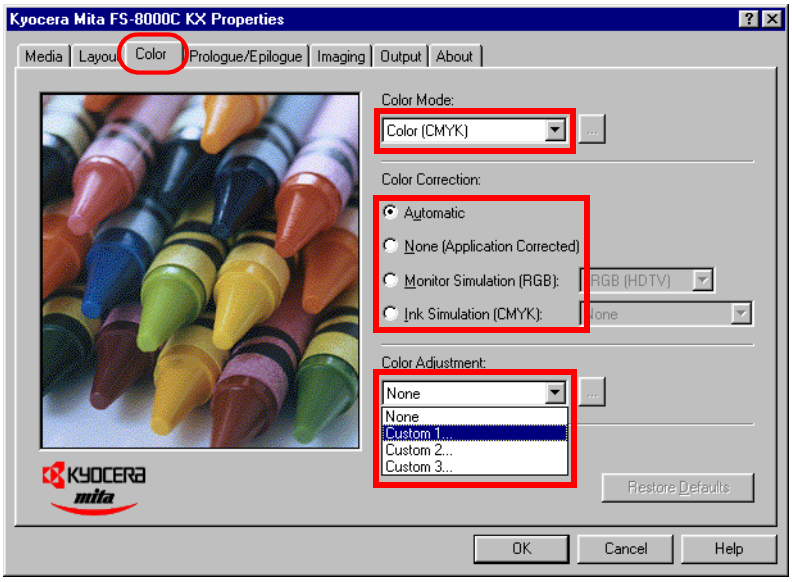


Figure 4-11

Color Mode	Allows you to select between **Color** and **Monochrome** (black and white) printing, and to select **Custom** Color Mode settings. **CMYK** is an acronym for Cyan, Magenta, Yellow and Black.
Color Correction	Allows you to specify how the printer processes color matching in the job. Color matching is the process of accurately and consistently converting RGB colors (how colors are displayed on the video monitor) to CMYK colors (how colors are used for output printing). **Monitor Simulation (RGB)** corrects colors in the RGB mode, as they appear on a monitor screen. **Ink Simulation (CMYK)** corrects colors in the CMYK mode using either **Euroscale** or **SWOP**.
Color Adjustment	Allows you to set and save **Custom** color adjustments. Under **Color Adjustment** in the **Color** tab, select **Custom 1**, **Custom 2**, or **Custom 3**, then click the button on the right of color Ajustment to open the **Color Adjustment (Custom)** dialog box. For details, see *Color Adjustment dialog box* below.

Color Adjustment dialog box

First, in the **Color Adjustment (Custom)** dialog box, you should select **Color Space** that is **HSL** or **RGB**. Then, according to the **Color Space**, you can adjust the followings.

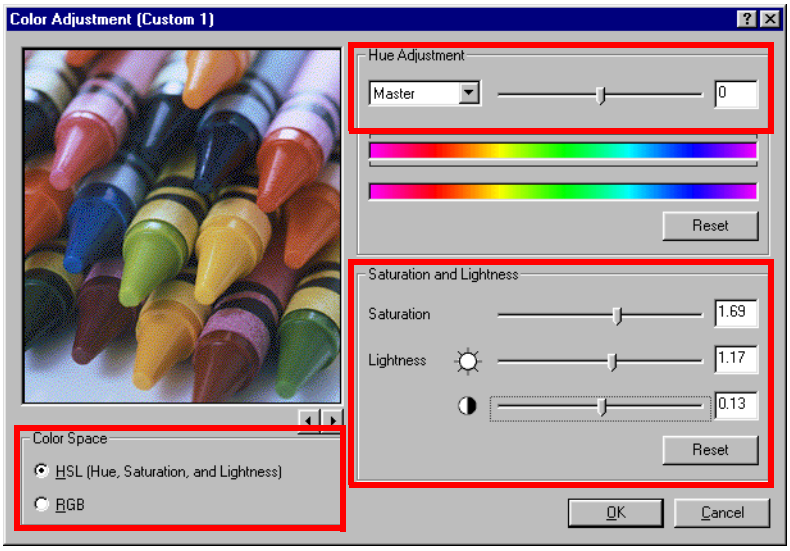


Figure 4-12

HSL (Hue, Saturation, and Lightness)

Hue adjustment

You can adjust the entire image at once or adjust a specific color.

- Select **Master** (the default setting) and drag the slider right or left to adjust the entire picture at once by changing each hue to another hue. Every part of the image becomes a different color. The upper color bar and the 3-D image will change to illustrate your setting.
- Select a specific color from the drop down list and drag the slider right or left to adjust only that color. The selected color changes to the hue on either side of the spectrum. The horizontal bracket above the upper color bar shows which part of the color bar is being edited.
- Click **Reset** to return all hue adjustment settings to normal.

Saturation and Lightness

You can adjust the brightness, contrast, and vividness of the color.

- Drag the **Saturation** slider to adjust levels between vivid and dull.
- Drag the **Lightness** ( ) slider to lighten or darken the graphic images.
- Drag the contrast ( ) slider to adjust levels between black and white.
- Click Reset to return all Lightness and Saturation levels to normal.

RGB

RGB Level

You can adjust the relative values of **R** (Red), **G** (Green), and **B** (Blue), to the colors of a computer monitor. Click and drag the slider under each bar.

Printing in N-Up

You can specify how many pages of your document to print on one sheet of paper. To specify the number of pages, select the **Layout** tab and select the appropriate number for **Pages per Sheet**. The maximum number of pages is 25.

Scaling allows you to enlarge or reduce the printed pages from 20 to 500 % with reference to the original paper size.

If you have the option duplex unit installed in your printer††, you can activate duplex printing by checking in **Print on Both Sides (Duplex)**. You can then choose from either **Flip on Long Edge** or **Flip on Short Edge** for binding.

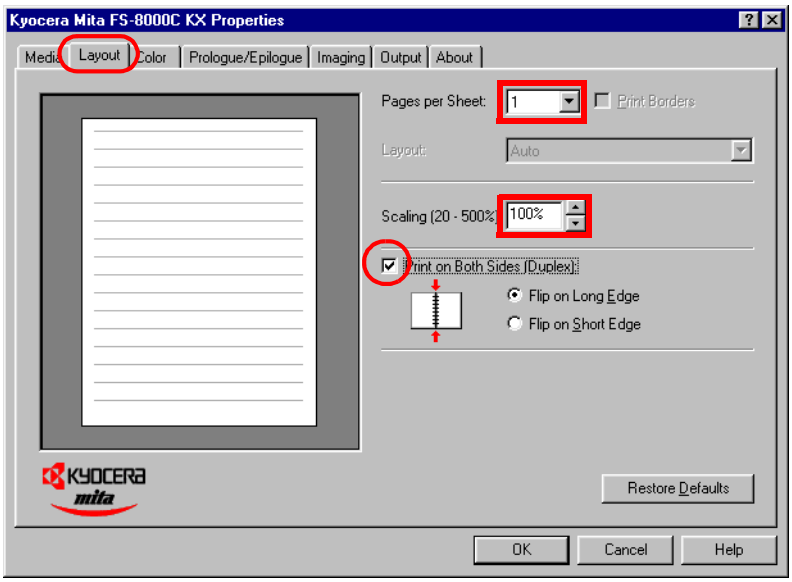


Figure 4-13

†† Model FS-8000CD is equipped with the duplex unit as a standard equipment.

4.5 Configuring the Network Printer

If you have installed an option network interface card on the FS-8000C or purchased a FS-8000CN (network model), you can attach and configure the printer on a network.

To successfully configure the network printer, you will have to:

- Install the network interface card in the printer (except for the FS-8000CN)
- Set the IP address, netmask, and gate way
- Activate the appropriate network protocol (TCP/IP, Novell NetWare, AppleTalk, etc.) using the software (supplied with the network interface card)
- Share the printer on the network, if desired

You can use the instructions provided with the option card to complete these steps. In general, the information you will be required to enter during these steps must be obtained from your network administrator.

To set the IP address, netmask, and gateway, using the printer operator panel, see *Chapter 3 Using the Operator Panel, section 3.5.4 Resolving IP Address on page 3-43* .

To print a network status page, see *Chapter 3 Using the Operator Panel, Printing a Network Interface Card Status Page on page 3-44*.

4.6 Installing a Printer Driver for Macintosh

The CD-ROM also contains printer drivers, utilities, and PPD files for Macintosh computers. These files are separated by country and can be installed by double-clicking on the installer file (for example, the English Installer) in each country folder.

To install the printer driver in your language, follow these steps.

1. Set the supplied CD-ROM in the CD-ROM drive. An icon will appear on the desktop.
2. Double-click the CD-ROM icon.
3. Double-click the **Drivers** folder. Double click the appropriate language folder.
4. Double click the appropriate **FS-Series** installer icon for your environment from the choices of languages on the screen.
5. Follow the instructions on the screen and perform the rest of the operation.

Chapter 5 Troubleshooting

This chapter explains how to handle printer problems that may occur. If a problem cannot be corrected, contact your Kyocera Mita dealer. This chapter explains the following topics:

- *General Guidelines*
- *Print Quality Problems*
- *Error Messages*
- *Clearing Paper Jams*

5.1 General Guidelines

The table below provides basic solutions for problems you may encounter with the printer. We suggest you consult this table to troubleshoot the problems before calling for service.

Symptom	Check Items	Corrective Action
Print quality is not good.	See *Section 5.2 Print Quality Problems on page 5-3*.	
Paper is jammed.	See *Section 5.4 Clearing Paper Jams on page 5-13*.	
Nothing lights on the operator panel even when power is turned on and the fan makes no noise.	Check that the power cord is properly plugged into the power outlet.	Turn off the printer's power, plug in the power cord securely, and try turning on the printer's power again.
	Check that the power switch is in the On (|) position.	Set the power switch to the On position.
The printer prints a status page, but does not print jobs from the computer.	Check the printer cable or the interface cable.	Connect both ends of the printer cable securely. Try replacing the printer cable or the interface cable.
	Check program files and application software.	Try printing another file or using another print command. If the problem occurs only with a specific file or application, check the printer driver settings for that application.

Table 5-1

5.1.1 Tips

Printer problems may be solved easily by following the tips below. When you have encountered a problem that following the above guidelines will not solve, try the following:

- Turn the printer power off and wait for several seconds. Then, turn on the printer.
- Reboot the computer which sends the print jobs to the printer.
- Obtain and use the latest version of the printer driver. The latest printer drivers are available from your local Kyocera Mita web site, or `http://www.kyocera.com/w2k`.
- Make sure that the procedures for printing are correctly followed in the application software. Consult the documentation supplied with the application software.
- If the printer prints garbage characters or stalls when the computer is turned on, particularly when the printer is connected to the computer under Windows 98 via the parallel port, rename device driver file drvwppqt.vxd. This file may be located in Windows\System\Iosubsys or Arcada\System folder. For technical details, visit Microsoft web site for the device driver.

5.2 Print Quality Problems

The tables and diagrams in the following sections define print quality problems and the corrective action you can conduct to solve the problems. Some solutions may require cleaning or replacing parts of the printer.

If the suggested corrective action will not solve the problem, call for service.

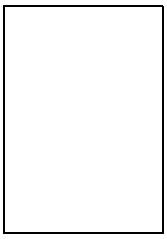
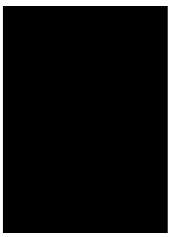
Printed Results	Corrective Action
Completely blank printout 	Check the toner containers. Open the printer front cover and check that the toner containers are correctly installed in the printer. For more information on installing the toner containers, see the separate *Installation Guide* supplied with the printer. Check the primary transfer unit. If paper is jammed in the primary transfer unit, remove the paper. See *Figure 5-17 on page 5-23* for details. Check that the application software is correctly operated.
All-black printout 	Call a service.

Table 5-2

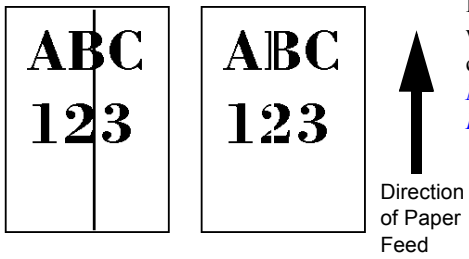
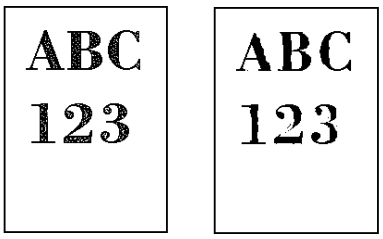
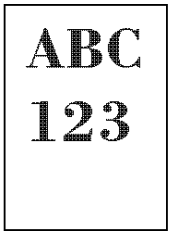
Printed Results	Corrective Action
Black or white vertical streaks 	Check the operator panel for toner. If the `Toner low TK-82` message is displayed with color description, install a new toner kit for the color. To replace the toner container, see *Chapter 6 Maintenance, section 6.1 Toner Container Replacement on page 6-2*.
	Clean the main charger and the separation charger. Open the printer front cover. Pull the green cleaning knob slowly in and out a few times. For full details, see *Chapter 6 Maintenance, section 6.5.2 Cleaning the Main Charger Unit on page 6-20*.
	Have a service person check the fuser unit.
Faint or blurred printing	If monochrome printing, check the EcoPrint (toner saver) setting. If EcoPrint is unintentionally set to On, switch it to Off on the operator panel.
	Clean the main charger and the separation charger. Open the printer front cover. Pull the green cleaning knob slowly in and out a few times. For full details, see *Chapter 6 Maintenance, section 6.5.2 Cleaning the Main Charger Unit on page 6-20*.
	Check the primary transfer unit for jammed paper remaining. For removal of jammed paper, see *[Paper Jam — Paper Feed Unit] on page 5-18*.
	Make sure the paper type setting is correct the paper being used. See *Chapter 3 Using the Operator Panel, section 3.10.4 Setting the Cassette Paper Type on page 3-82*.
	Conduct color calibration either by switching the printer off then on or using the printer operator panel (**MENU**). For full details, see *Chapter 3 Using the Operator Panel, section 3.11.4 Color Calibration on page 3-100*.
	Try adjusting the color control settings using the printer driver.
	Try switching the tone mode between Normal and Fine using the operator panel (**Menu**>**Print Quality**>**Tone**).
	Check the operator panel. If the `Toner low TK-82` message is displayed with color description, install a new toner kit for the color. To replace toner, see *Chapter 6 Maintenance, section 6.1 Toner Container Replacement on page 6-2*.

Table 5-2 (Continued)

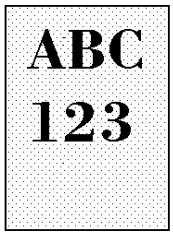
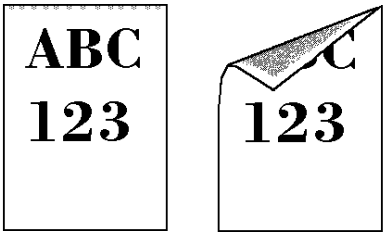
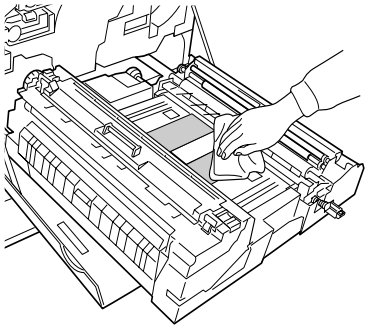
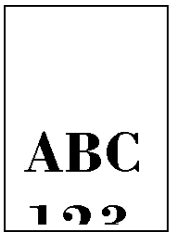
Printed Results	Corrective Action
Grey background 	Clean the main charger and the separation charger. Open the printer front cover. Pull the green cleaning knob slowly in and out a few times. For full details, see *Chapter 6 Maintenance, section 6.5.2 Cleaning the Main Charger Unit on page 6-20*.
	Conduct color calibration either by switching the printer off then on or using the printer operator panel (**MENU**). For full details, see *Chapter 3 Using the Operator Panel, section 3.11.4 Color Calibration on page 3-100*.
Dirt on the top edge or back of the paper 	Clean the rubber belts. See below. For details, see *Chapter 6 Maintenance, section 6.5.1 Cleaning the Paper Feed Unit on page 6-16*. 
	Clean the main charger and the separation charger. Open the printer front cover. Pull the green cleaning knob slowly in and out a few times. For full details, see *Chapter 6 Maintenance, section 6.5.2 Cleaning the Main Charger Unit on page 6-20*.
	Clean the parts in the paper paths—such as the paper cassette, etc.
	Check secondary the transfer roller. If the secondary transfer roller is dirty with toner, try printing several pages.
Printing incomplete or out of position 	Check that the application software is correctly operated.
	See *5.1.1 Tips on page 5-2*.

Table 5-2 (Continued)

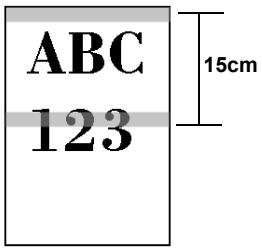
Printed Results	Corrective Action
Oily streaks at the top of the page and approximately 15 cm below 	This may happen when printing is made using a new oil unit or after the printer has been left unused for a prolonged period of time. Try printing several pages until the streaks disappear.

Table 5-2 (Continued)

5.3 Error Messages

The tables on the following pages indicate how to respond to problems indicated by the operator panel indicators and messages.

5.3.1 Error Messages

The following table lists errors and maintenance messages that can be dealt with by yourself. If `Call service` appears, turn off the printer, disconnect the power cord, and contact your Kyocera Mita dealer.

Some errors cause the alarm sound to sound. To stop the alarm sound, press the **CANCEL** key to stop the alarm sound.

Message	Corrective Action
`Add paper` (paper source)	The paper has run out in the paper source displayed. Supply paper according to the paper source displayed (paper cassettes, MP tray, or optional paper feeders). This message is displayed alternately with messages indicating the printer status, such as, `Ready`, `Please wait`, `Processing`, `Waiting`, and `Form Feed Time Out`. If the number of copies to print is 2 or more, only the `Add paper` message is displayed.
`Add staples` `Press GO`	The optional document finisher has run out of staples. Replenish staples and press the **GO** key.
`Call service` `####:0123456`	`####` represents a mechanical error (#=`0`, `1`, `2`, ...). Call a service. The printer does not operate when this message is displayed. The total number of pages printed is also indicated, e.g. `0123456`.
`Call service` `F###:0123456`	`F###` represents a controller error (#=`0`, `1`, `2`, ...). Call a service. The printer does not operate when this message is displayed.
`Call service` `Person F0`	This message means an error in data communications between the printer controller and the operator panel. Call a service.
`Cassette #` `not loaded`	The corresponding paper cassette is not installed. Install the cassette. The cassette number can be 1 (topmost) to 6 (bottom); and for the duplexer model, 2 to 6.
`Check waste toner` `bottle`	This message warns following two cases. Install the new waste toner bottle. • The waster toner bottle is not installed. • The waste toner bottle is almost full.
`Clean printer` `Press GO`	The printer has reached the schedule to conduct cleaning. Clean the inside of the printer . See *Chapter 6 Maintenance, section 6.5 Cleaning the Printer on page 6-16*. This message will be automatically displayed when replacing the toner container after the message `Replace toner TK-82` is displayed. After cleaning the inside of the printer, press the **GO** key and the printer will resume printing.
`Duplex drawer` `not loaded`	The duplex drawer is not installed. Install the duplex drawer. This message is applicable to the duplexer model.
`Face-down tray` `paper full`	The face-down tray has become full (approx. 500 pages). You must remove all printed pages from the face-down tray. When the printer senses that the face-down tray is empty again, the printer will continues printing into the face-down tray.

Table 5-3

Message	Corrective Action
Face-up tray path error	The face-up tray is not open although you have attempted to print in the face-up tray. Open the face-up tray.
File not found Press GO	You have attempted to print a job that is not contained in the specified tray of the virtual mailbox,or the specified tray of the virtual mailbox is not found. If Auto Continue is set to On, printing will be automatically resumed after a preset period of time.
Format error Memory Card	The memory card inserted in the printer is not formatted, and therefore cannot be read or written. To format a memory card, follow the procedure in *Chapter 3 Using the Operator Panel, section 3.9.2 Reading/Writing to an Option Storage Device, Formatting a Storage Device on page 3-75*.
Format error Hard disk	The hard disk installed in the printer is not formatted, and therefore cannot be read or written. To format the hard disk, follow the procedure in the Installation Guide of the hard disk.
Front cover open	The front cover is open. Close the front cover .
Hard disk err ## Press GO	A hard disk error has occurred. Look at the error code given in place of ## and refer to *Section 5.3.2 Storage Error Codes on page 5-11* . To ignore the hard disk error, press the **GO** key.
I/F occupied	This message is displayed when you attempt to use the printer's operator panel to change the environmental settings on the interface from which data are presently being received.
ID error	The user ID entered for a private job, or a stored job is not correct. Check the user ID that you specified on the printer driver.
Insert the same memory card	You have inserted the wrong memory card when the Insert again message was displayed. Remove the wrong memory card from the printer's memory card slot and insert the correct memory card. The printer again reads it from the beginning of the data.
Install MK [A]†	Replace Maintenance Kit A. Replacement of the maintenance kit A is necessary at every 400,000 images of printing and requires professional servicing. Contact your Kyocera Mita dealer.
Install MK [B]†	Replace Maintenance Kit B. Replacement of the maintenance kit B is necessary at every 200,000 pages of printing and requires professional servicing. Contact your Kyocera Mita dealer.
Install MK [C]†	Replace Maintenance Kit C. Replacement of the maintenance kit C is necessary at every 200,000 images of printing and requires professional servicing. Contact your Kyocera Mita dealer.
Install MK [D]†	Replace Maintenance Kit D. Replacement of the maintenance kit D is necessary at every 100,000 pages of printing and requires professional servicing. Contact your Kyocera Mita dealer. **Note: This message is not applicable for European countries and Australia.**
KPDL error ## Press GO	Current print processing cannot continue because of occurrence of KPDL (PostScript) error which is categorized by ##. To print out an error report, display > Print KPDL err(or)s from the menu system, and select On. Press the **GO** key to resume printing. You can abandon printing by the **CANCEL** key. If Auto Continue is set to On, printing will be automatically resumed after a preset period of time.

Table 5-3 (Continued)

Message	Corrective Action
`Load Cassette #` (paper size)/(paper type)††	The paper cassette matching the paper size and paper type of the print job is empty. Load paper into the paper cassette. The option paper feeder cassettes are indicated by `#`. Press the **GO** key to resume printing. Or, if you want to print from a different paper source, press the ▽ or △ key to display `Use alternative` and you can change the source for paper feeding. After selecting a paper source and pressing the **MENU** key, `Paper Handling >` appears. By pressing the △ key, the paper type settings menu appears. After setting the correct paper type, press the **ENTER** key and printing starts. If you want to print from a different paper source, see *Chapter 3 Using the Operator Panel, section 3.10.5 Selecting the Paper Feed Source on page 3-84*.
`Load MP Tray` (paper size)/(paper type)††	There is no paper cassette installed in the printer that matches the paper size and paper type of the print job. Set paper in the MP tray. Press the **GO** key to resume printing. (Note that feeding the paper having a paper size which does not match the current paper size from the MP tray can cause paper jam.) Or, if you want to print from a different paper source, press the ▽ or △ key to display `Use alternative` and you can change the source for paper feeding. After selecting a paper source and pressing the **MENU** key, `Paper Handling >` appears. By pressing the △ key, the paper type settings menu appears. After setting the correct paper type, press the **ENTER** key and printing starts. If you want to print from a different paper source, see *Chapter 3 Using the Operator Panel, section 3.10.5 Selecting the Paper Feed Source on page 3-84*.
`Memory card err` `Insert again`	The memory card is accidentally removed from the printer's memory card slot during reading. If you continue reading the memory card, insert the same memory card into the slot again. The printer again reads it from the beginning of the data. Also see *`Insert the same memory card`*.
`Memory overflow` `Press GO`	The total amount of data received by the printer exceeds the printer's internal memory. Try adding more memory. Press the **GO** key to resume printing. You can abandon printing by the **CANCEL** key. If Auto Continue is set to `On`, printing will be automatically resumed after a preset period of time.
`MemoryCard err##` `Press GO`	A memory card error has occurred. Look at the error code given in place of `##` and refer to *Section 5.3.2 Storage Error Codes on page 5-11*. To ignore the memory card error, press the **GO** key
`Missing` `duplex drawer`	The duplex unit is not installed. Install the duplex unit.
`Missing` `stapler unit`	The stapler unit is not installed in the optional document finisher. Install the stapler unit in the document finisher.
`Missing toner` `TK-82 #######`	Install the toner container using a toner kit for the particular color. The printer does not operate when this message is displayed.
`Option interface` `error ##`	A failure has occuerred with the option network interface card. Check the option network interface card installed in the printer.
`Option stacker` `cover open`	The cover of the optional finishers (bulk stacker, document finisher, or sorter) is open. Close the cover.
`Option stacker` `paper full`	The optional bulk stacker (ST-30) tray is full. Remove paper sheets.

Table 5-3 (Continued)

Message	Corrective Action
`Option stacker path error`	The optional bulk stacker, document finisher, or sorter is not installed properly. Correct the installation.
`Option tray ## paper full`	A tray of the optional document finisher (DF-31) or sorter (SO-30) is full. Remove paper sheets in the corresponding tray as displayed in place of `##`.
`Paper feeder # side cover open`	The side cover of paper feeder is open. Close the cover of the paper feeder 1 (topmost) to 3 (bottom) as displayed in place of `#`.
`Paper jam ###############`	A paper jam has occurred. The location of the paper jam is indicated in place of the `#`'s. For details, see *Section 5.4 Clearing Paper Jams on page 5-13*.
`Paper loading`	After the paper cassette is closed, papaer loading is in progress in the paper cassette.
`Print overrun`††† `Press GO`	The print job transferred to the printer was too complex to print on a page. Press the **GO** key to resume printing. (The page may break in some pages.). You can abandon printing by the **CANCEL** key. If Auto Continue is set to `On`, printing will be automatically resumed after a preset period of time.
`RAM disk error##` `Press GO`	A RAM disk error has occurred. Look at the error code given in place of `##` and refer to *Section 5.3.2 Storage Error Codes on page 5-11* . To ignore the RAM disk error, press the **GO** key.
`Remove paper option tray ##`	Paper remains in an option document finisher or sorter tray as displayed in place of `##`. Remove paper sheets.
`Replace toner` `Clean printer` ↓↑ `Replace toner` `TK-82 #######`	Two message items are displayed alternately. Toner has run out in the toner container(s). Replace the toner container using a new toner kit for the particular color. The printer does not operate when this message is displayed. For example, if `Replace toner C,K` is displayed, replace the cyan and the black toner containers.
`Set paper` `Press GO`	The MP tray is out of paper. Load paper and press the **GO** key. (Note that feeding the paper having a paper size which does not match the current paper size from the MP tray can cause paper jam.)
`Side cover open`	Open the side cover at the printer's left side, then close tightly.
`Toner low` `TK-82 #######`	Replace the toner container using a new toner kit. Color of the toner container that needs to be replaced is represented by `#######:` C (Cyan), Y (Yellow), M (Magenta), and K (black).
`Unsupported external device`	A device not supported by the printer is installed. Install an optional bulk stacker supported by the printer.
`Virtual mail box full`	The storage area in the hard disk for the virtual mailboxes is full. Print out accumulated jobs in the virtual mailboxes.
`Warning low memory`	The printer's internal memory is running low due to too many numbers of fonts and macros downloaded. Try deleting unnecessary fonts and macros.

Table 5-3 (Continued)

† These messages may be displayed altogether such as `Install MK [A][B][C][D]`.
†† Messages separated by '/' are displayed alternately.
††† After this error has happened, page protect mode will be automatically turned on. To maintain optimum use of memory during printing, we recommend you manually turn off page protect mode. See *Chapter 3 Using the Operator Panel, section 3.7.3 Page Protect Mode on page 3-60*.

5.3.2 Storage Error Codes

Hard Disk Errors

Code	Meaning
01	Hard disk format error. If this error recurs even if the power has been turned off and then on, reformat the hard disk.
02	The disk system is not installed. Recheck the requirements for using the system and the devices.
03	Cannot write in the hard disk because write protection is enabled. Disable write protection.
04	There is no available hard disk space. Delete unnecessary files, etc., in order to free up space.
05	The specified file does not exist in the hard disk.
06	There is no memory available to the hard disk system. Increase the available memory.
10	Formatting is not possible because host data is being spooled on the hard disk. Wait until the hard disk is ready, and then format.
20	The hard disk was installed in the incorrect (OPT1) slot. Reinstall the hard disk in a different (OPT2/HDD) slot.
85	VMB: Alias error. The alias setting was lost, or the virtual tray corresponding to the alias does not exist. Set the alias again.
86	VMB: Password error. There is no password specified, the password is incorrect, or the password setting is lost. Confirm the correct password.
87	VMB: Although an attempt was made to use a virtual tray job stack, the stack size reached the maximum limit.
88	VMB: An unreadable job or page was found while outputting the jobs in a virtual tray. The job is damaged.
97	The number of permanent code jobs that can be stored reached the limit value, and no more can be saved. Either delete some unnecessary jobs, etc., or increase the limit.
98	An unreadable page was found in a job (The job is damaged.).

Table 5-4

Memory Card Errors

Code	Meaning
01	The printer does not support the memory card inserted. The memory card must meet the requirements described in *Appendix A Options, section A.3.1 Memory Card on page A-7*.
02	The memory card is not installed.
03	The memory card is write-protected. Cancel the write-protection of the memory card.
04	The memory card is full and cannot hold further data. Purge unnecessary files or use a new memory card.
05	Specified file is not on the memory card.
06	Insufficient printer memory to support the memory card system. Expand printer memory.

Table 5-5

RAM Disk Errors

Code	Meaning
01	Format error. Try turning the power off and on again.
02	RAM disk mode is Off. Turn RAM disk mode On from the operator panel.
03	Cannot write to the disk system because it is write protected. Remove the write protection.
04	No disk space. Purge unnecessary files.
05	Specified file is not on disk.
06	Insufficient printer memory to support the RAM disk system. Expand printer memory.

Table 5-6

5.4 Clearing Paper Jams

If the paper jammed in the paper transport system, or no paper sheets were fed at all, the `Paper jam` message appears and the location of the paper jam (the component where the paper jam has occurred) is also indicated. The printer automatically goes off-line when this message is displayed. Remove jammed paper. After removing jammed paper, the printer will re-start printing.

5.4.1 Possible Paper Jam Locations

The figure below explains the printer's paper path including the options, for example, the document finisher and the duplexer (a standard accessory for the FS-8000CD). Possible areas where paper jam can occur are indicated by the letters **A** through **M**, each explained in *Table 5-7* below. Paper jams can occur in more than one component on the paper path.

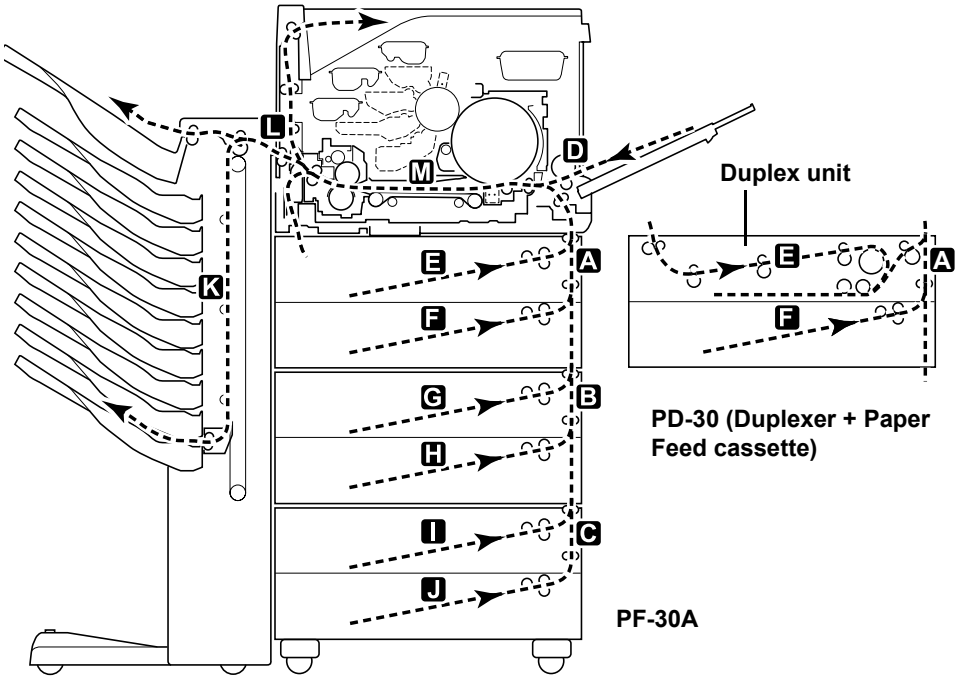


Figure 5-1

	Possible location of Jam	Reference
A	`Feeder 1 Cover`	See *Section 5.4.3 [Paper Jam — Feeder # Cover] on page 5-15*.
B	`Feeder 2 Cover`	
C	`Feeder 3 Cover`	
D	`MP Tray`	See *Section 5.4.5 [Paper Jam — MP Tray] on page 5-16*.
E	`Cassette 1` (FS-8000C/FS-8000CD)	See *Section 5.4.4 [Paper Jam — Cassette #] on page 5-15*.

Table 5-7

	Possible location of Jam	Reference
E	Duplexer (FS-8000CD)	See *Section 5.4.6 [Paper Jam — Duplexer Drawer] on page 5-17*.
F	Cassette 2	See *Section 5.4.4 [Paper Jam — Cassette #] on page 5-15*.
G	Cassette 3	
H	Cassette 4	
I	Cassette 5	
J	Cassette 6	
K	Option Stacker	See *Section 5.4.9 [Paper Jam — Option Stacker] on page 5-24*.
L	Side Cover	See *Section 5.4.8 [Paper Jam — Side Cover] on page 5-23*.
M	Paper Feed Unit	See *Section 5.4.7 [Paper Jam — Paper Feed Unit] on page 5-18*.

Table 5-7 (Continued)

5.4.2 General considerations for clearing jams

Bear in mind the following considerations when attempting jam removal:

When you remove paper jams, be sure to remove all of the jammed paper in the printer.

- If paper jams occur frequently, try using a different type of paper, replace the paper with paper from another ream, flip the paper stack over, or rotate the paper stack 180 degrees. Selection of paper is fully discussed in *Chapter 2 Handling Paper on page 2-1*. The printer may have problems if paper jams recur after the paper was replaced.
- Whether or not the jammed pages are reproduced normally after printing is resumed depends on the location of the paper jam.

Utilizing Online Help Messages

Online help messages are available in the printer's message display to provide simple instructions for clearing jams. Press the **?** key when the paper jam message has appeared. Then a help message will appear to facilitate jam clearing in the location.

5.4.3 [Paper Jam — Feeder # Cover]

The paper jammed inside the feeder side cover as the paper leaves the paper cassette. Clear the jam in the indicated feeder cover.

1 Open the paper feeder side cover. Pull the paper outward. Close the cover.

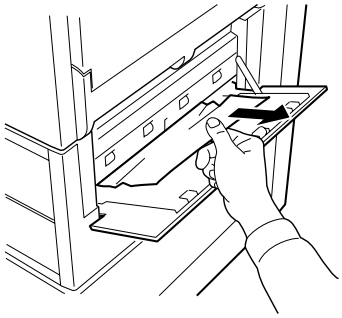


Figure 5-2

5.4.4 [Paper Jam — Cassette #]

The paper jammed in the paper cassette as indicated by # (=1,2,3...), from the topmost feeder cassette to the bottom feeder cassette. Clear the jam in the indicated paper cassette.

1 Open the paper cassette. Remove the paper.

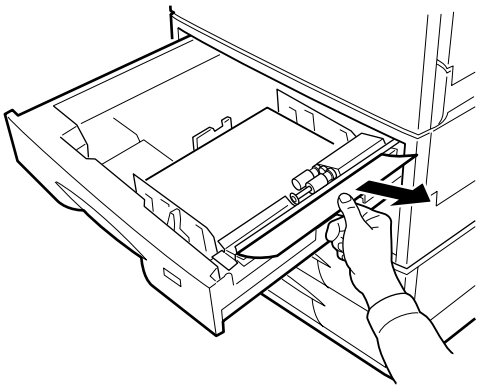


Figure 5-3

5.4.5 [Paper Jam — MP Tray]

The paper jammed in the MP tray. Clear the jam in the MP tray.

1 Remove the jammed paper on the MP tray up and towards the right.

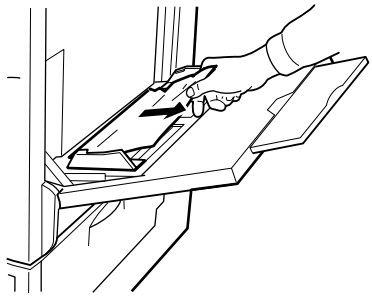


Figure 5-4

2 Reset the sheets on the MP tray.

3 Open and close the front cover to notify the printer of the completion of jam removal.

5.4.6 [Paper Jam — Duplexer Drawer]

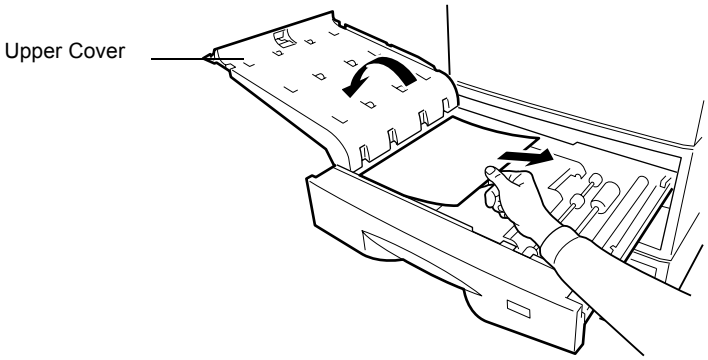
This message is relevant to the FS-8000CD.

The paper jammed inside the duplexer drawer. Clear the jam in the following locations:

- Upper cover
- Lower cover

1 Open the duplexer drawer towards you.

2 First, open the upper plastic cover of the duplexer drawer to remove the jammed paper under the cover.



3 Then open the lower plastic cover of the duplexer drawer to remove the jammed paper under the roller.

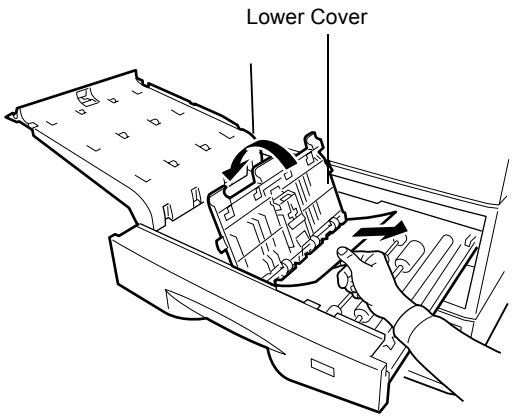


Figure 5-5

4 When the jammed paper sheets are removed, close both covers of the duplexer. Close the duplexer drawer completely.

5.4.7 [Paper Jam — Paper Feed Unit]

The paper jammed inside the paper feed unit. After checking and clearing the jam in the paper feed unit, also check the fuser unit and the primary transfer unit. Clear any paper jams in these components.

1 Open the front cover.

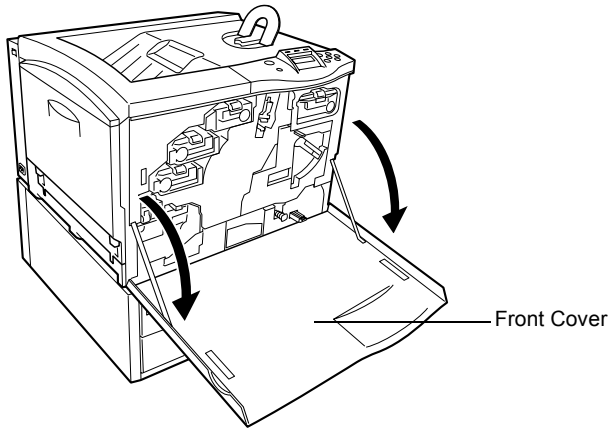


Figure 5-6

2 Grasp the handle at the end of the paper feed unit and pull the unit out completely.

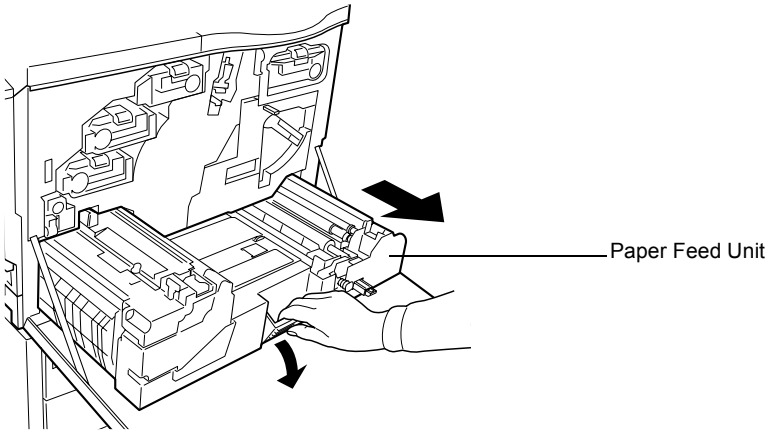


Figure 5-7

3 Swing the green-colored lever to the right. Remove the jammed paper, if any, inside the cover.

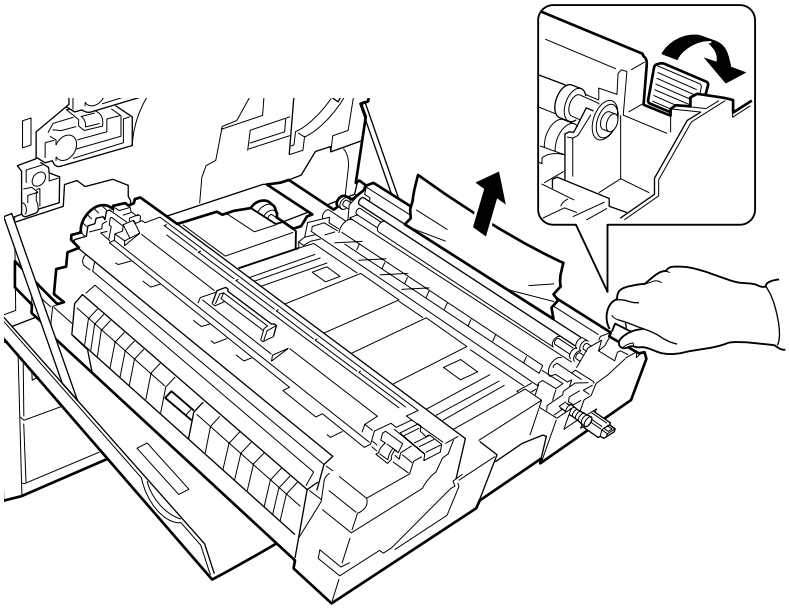


Figure 5-8

4 If there is jammed paper on the belts in the middle of the paper feed unit, remove the paper.

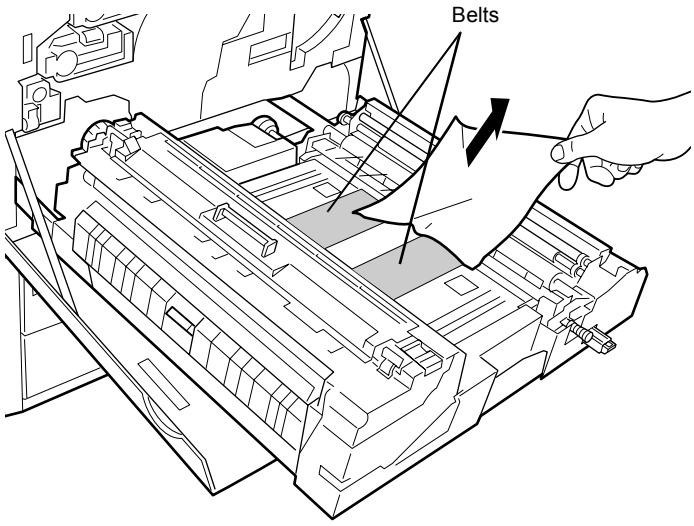


Figure 5-9

5 If the paper is jammed in the fuser unit, open the fuser access cover by pressing the green-colored lock lever.

Caution

The fuser unit is hot. Wait for a while until the fuser unit cools down.

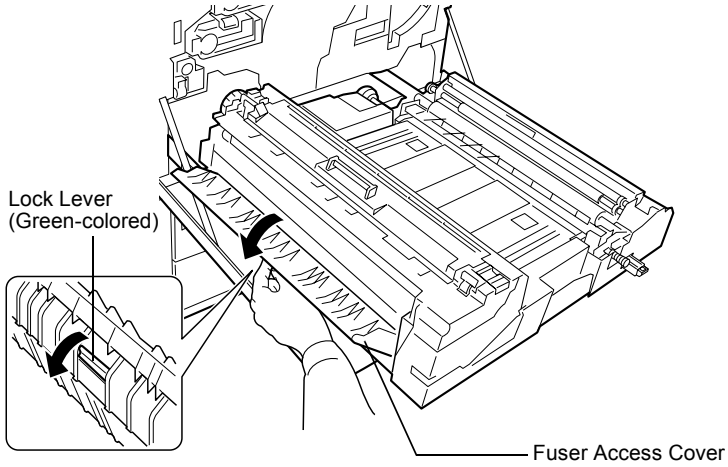


Figure 5-10

6 Open the fuser top cover by simultaneously pulling the two lock levers (green-colored). Remove the jammed paper.

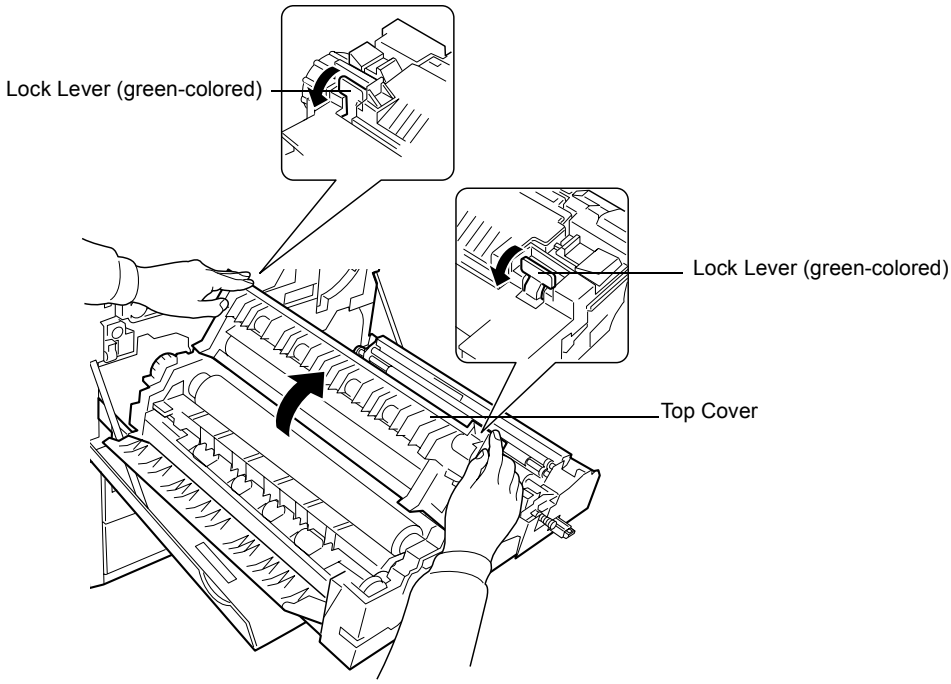


Figure 5-11

7 If the paper is hard to remove, raise the sub-cover by grasping the clip marked as A on the rear side while removing the paper.

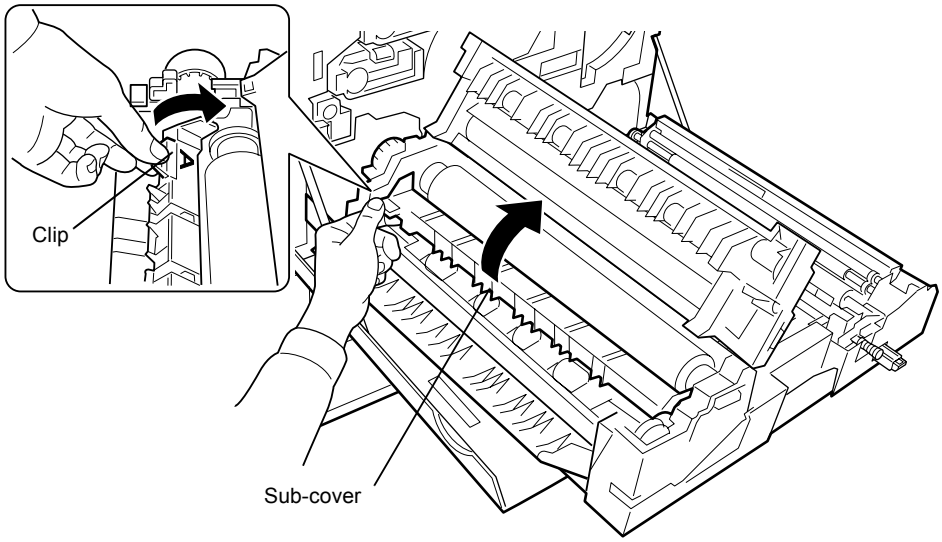


Figure 5-12

8 If the paper winds around the fuser roller, turn the wheel on the left-hand side of the fuser unit toward you. The jammed paper will be driven out. Remove the jammed paper.

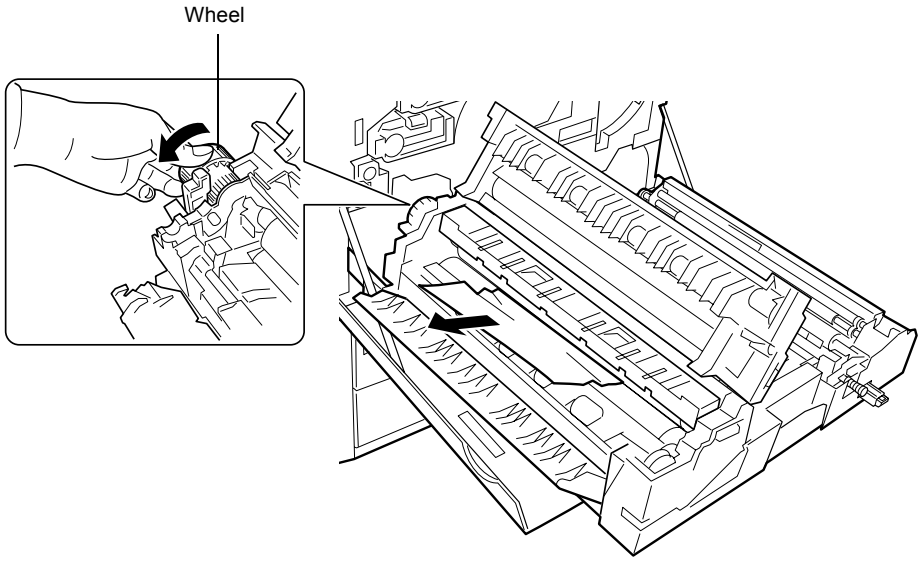


Figure 5-13

If driving the paper in the reverse direction will ease removing the paper, you can turn the wheel away from you by pressing the stopper lever.

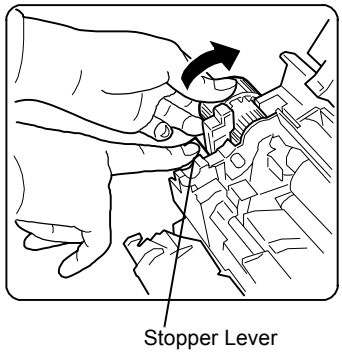


Figure 5-14

9 Set the green lever on the front of the primary transfer unit clockwise to the position of six o'clock (usually this lever is in a position of four o'clock). This unlocks the primary transfer unit.

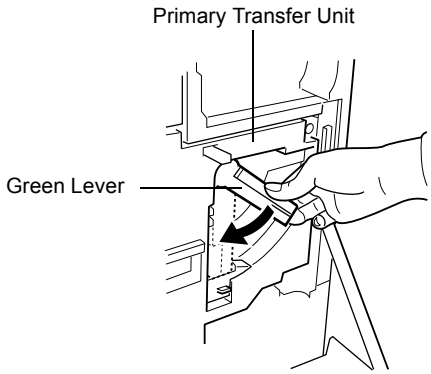


Figure 5-15

10 Grasp the handle at the end of the primary transfer unit and pull the unit out.

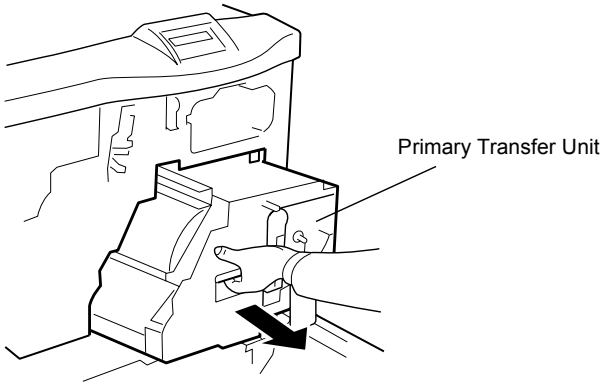


Figure 5-16

11 Turn the wheel (with gear teeth) on the right-hand side of the primary transfer unit away from you. The primary transfer unit will turn at the same time. Remove the jammed paper.

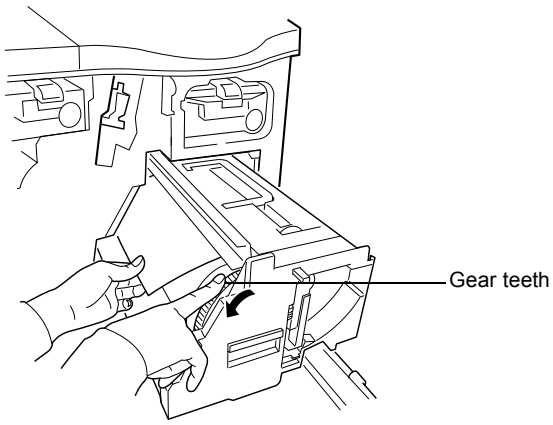


Figure 5-17

Use care not to touch the drum component of the primary transfer unit.

12 Push the primary transfer unit back in. To do this, lower the lock button close to the bottom end of the lever to unlock the lever. Set the lever (in the position of six o'clock) back to the original (four o'clock) position. See the figure below.

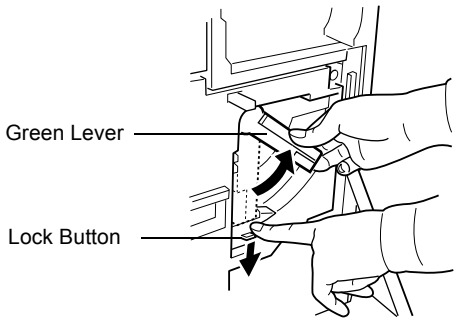


Figure 5-18

13 Push the fuser unit back in and close the top cover. To close the cover, be sure to pull the left and right lock levers (the lock levers are green) toward you. See *Figure 5-11 on page 5-20*. The top cover cannot be closed properly if you skip this.

14 Close the front cover.

5.4.8 [Paper Jam — Side Cover]

The paper jammed in the face-up tray. After checking and clearing the jam in the face-up tray, also check the side cover for the face-up tray. Clear any paper jams in these components.

1 Open the side cover for the face-up tray.

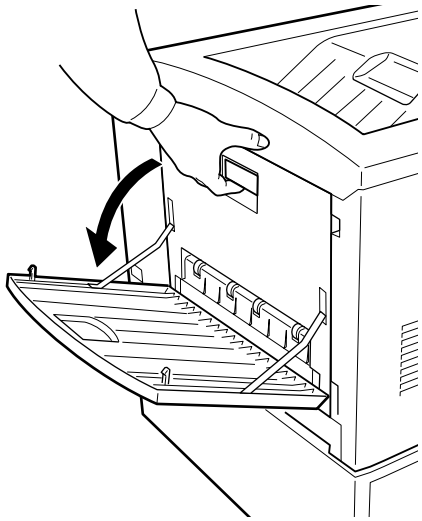


Figure 5-19

2 Remove the jammed paper gently. If the paper is stuck under the roller, grasp the green-colored knob and rotate the roller so that the paper is driven out.

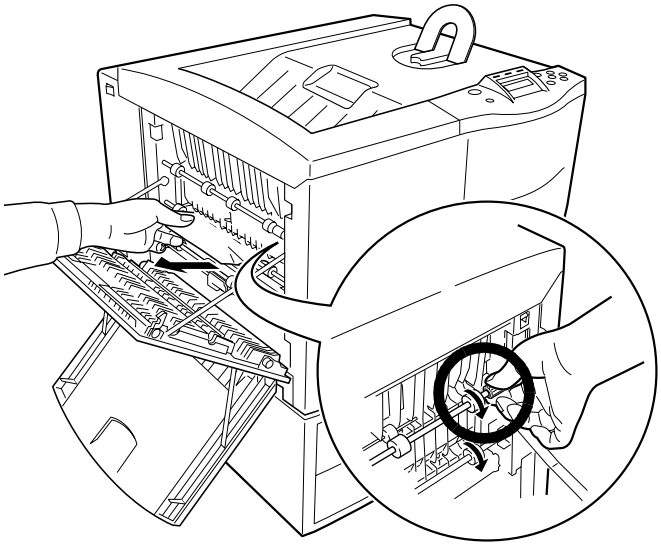


Figure 5-20

3 Close the side cover. Close the face-up tray.

5.4.9 [Paper Jam — Option Stacker]

The mailbox/sorter, bulk stacker, and the document finisher are optional equipment. When this message is displayed, refer to the appropriate documentation for the option attached with the printer.

Chapter 6 Maintenance

This chapter describes basic maintenance tasks you can perform on the printer. You can replace the following component according to the printer's display:

- TK-82 C/M/Y/K Toner Kits
- Waste Toner Bottle
- Oil Kit
- Maintenance Kit D

Also, the following parts need periodic cleaning:

- Paper Feed Unit
- Main Charger Unit

6.1 Toner Container Replacement

6.1.1 Frequency of toner container replacement

The life of the toner containers depends on the amount of toner required to accomplish your printing jobs. When 5 % coverage (a typical business document) of individual toner colors is assumed for A4 or letter size paper in landscape orientation, without using draft (EcoPrint [monochrome printing only]) mode:

- The black toner container lasts an average of 25,000 monochrome pages.
- The cyan, magenta, and yellow toner containers last an average of 10,000 color images.

You can print a status page to check how much toner remains in the toner container. For details, see *Chapter 3 Using the Operator Panel, section 3.3.2 Printing a Status Page on page 3-16* . The Toner Gauge section on the status page shows a progress bar for each color, which roughly represents how much toner is left in the toner container.

Starter Toner Containers

The toner containers packed with the new printer are starter toner containers. The black starter toner container lasts an average of 12,500 monochrome pages. The cyan, magenta, and yellow starter toner containers last an average of 5,000 color images for each.

6.1.2 Toner Kits

It is strongly recommended to use the new Kyocera Mita TK-82 Toner Kit supplied from Kyocera Mita to prevent printer troubles and ensure a long printer life.

The TK-82 Toner Kits are supplied in each of the following four colors. The letter following TK-82 describes the color of toner included in the container as follows:

TK-82C	Cyan
TK-82M	Magenta
TK-82Y	Yellow
TK-82K	Black

A new TK-82 toner kit for each color contains the following items:

- Toner Container
- Cleaning cloth
- Grid cleaner for main charger cleaning
- Plastic waste bags for old toner container and old waste toner bottle
- Waste toner bottle
- Installation Guide

Note

Do not remove the toner container from the carton until you are ready to install it in the printer.

6.1.3 Understanding Messages Requesting Toner Container Replacement

The printer displays messages for individual colors at two stages of toner usage. This message is automatically alternated with the other printer message (such as `Ready`):

- When the printer becomes low on toner, for example in the cyan container, the printer displays the message `Toner low TK-82C` as the first caution. Note the replacement is not always necessary at this stage.
- If you ignore the above message and continue printing, the printer displays the message `Replace Toner/Clean printer` — just before the toner is used up. The toner container must be replaced immediately. After the replacement is finished, the massage automatically changes to `Clean printer Press GO`. Clean the separate charger wires, etc. After the cleaning is finished, however, the message does not automatically change to `Ready`. To restart printing, you must press the **GO** key and make the printer ready.

In either case, to replace the toner container, see *Section 6.1.4 Replacing the Toner Container on page 6-4*.

6.1.4 Replacing the Toner Container

Note

During toner container replacement, temporarily put storage media and computer supplies (such as floppy disks) away from around the toner container. This is to avoid damaging media by the magnetism of toner.

This section explains how to replace the toner containers. When replacing the toner container of any color, always replace the waste toner bottle at the same time. If this bottle is full, the printer may be damaged or contaminated by the waste toner that may spill over the bottle.

Note

You do not have to turn printer power off before starting the replacement. Any data that may be under printing process in the printer will be deleted if you turn printer power off.

To replace the toner container, first make sure of the color of the toner container requiring replacement. In this example, it is assumed that you are replacing the black toner container.

1 Open the front cover.

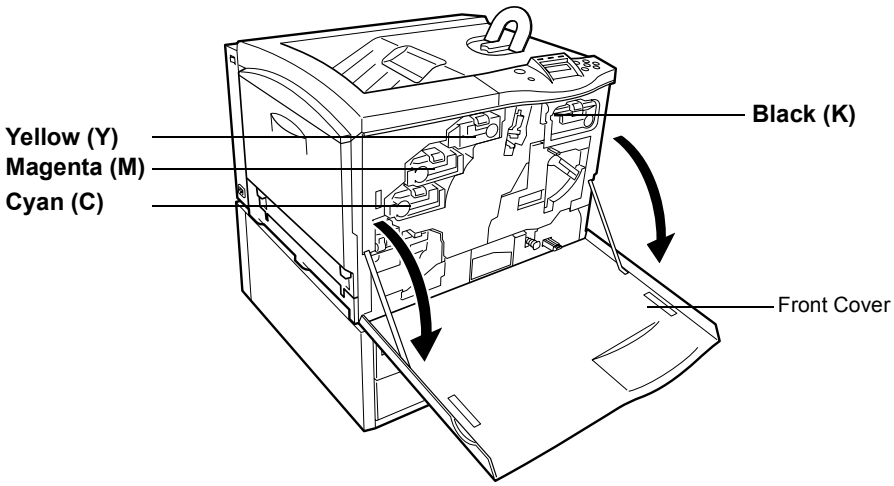


Figure 6-1

2 While lowering the lever (blue-colored) at the end of the toner container to unlock the container, pull the black toner container out.

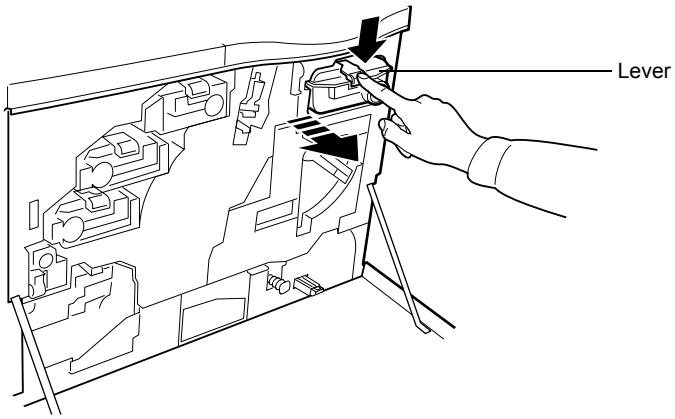


Figure 6-2

3 Take the new toner container out of the toner kit. To loosen and redistribute the toner inside, hold the container and shake the container back and forth at least 5 times.

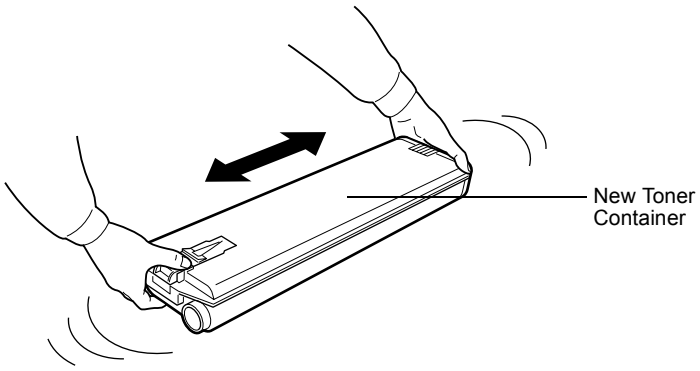


Figure 6-3

4 Insert the new toner container all the way in. The container is locked automatically when it is properly seated.

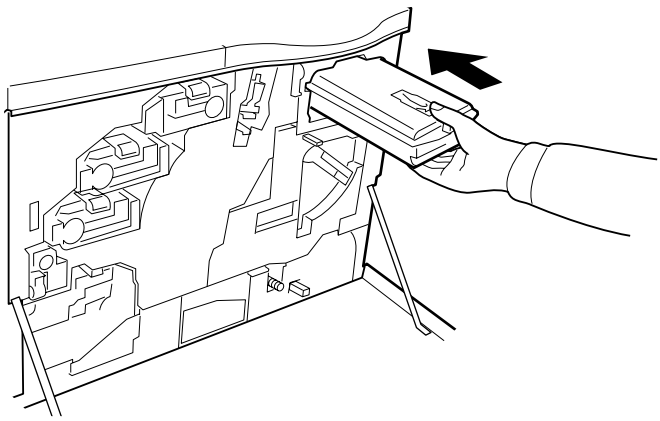


Figure 6-4

5 Put the old toner container in the plastic waste bag (contained in the toner kit) and discard it later according to the local code or regulations for waste disposal.

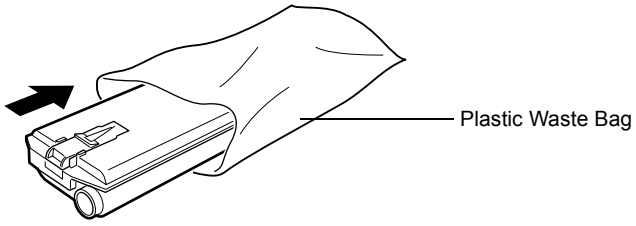


Figure 6-5

To replace the other color toner container, use the same procedure above.

Proceed to the next section and replace the waste toner bottle.

6.2 Replacing the Waste Toner Bottle

Replace the waste toner bottle each time you replace the toner container. A new waste toner bottle is included with the toner kit. The printer will not operate without replacing the waste toner bottle.

1 Pull the paper feed unit all the way out. Tilt to the right the lever on the right-hand side of the bottle and remove the bottle. Do not place the removed bottle upside down.

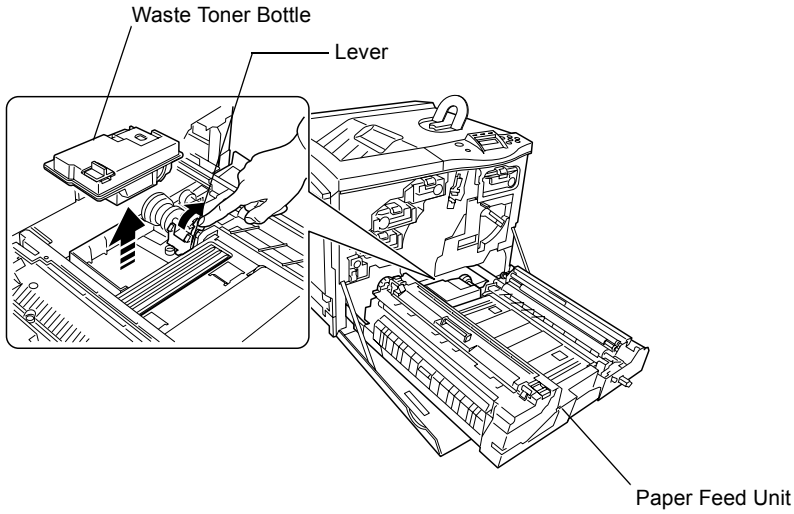


Figure 6-6

2 The old waste toner bottle has a cap. Remove the cap (black) on the top of the bottle and put the cap onto the opening as shown below. This is to prevent the toner from spilling.

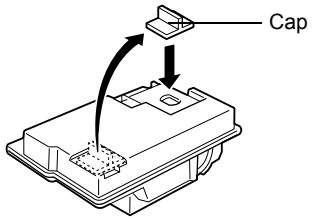


Figure 6-7

3 Put the old waste toner bottle in the plastic waste bag (contained in the toner kit) and discard it later according to the local code or regulations for waste disposal.

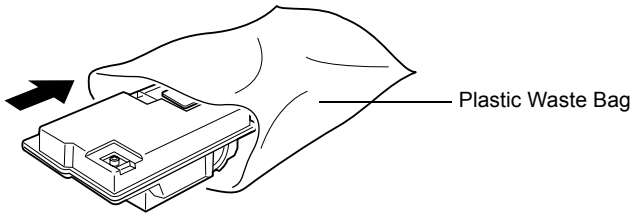


Figure 6-8

4 Insert the new waste toner bottle (contained in the toner kit) upright until it snaps into place.

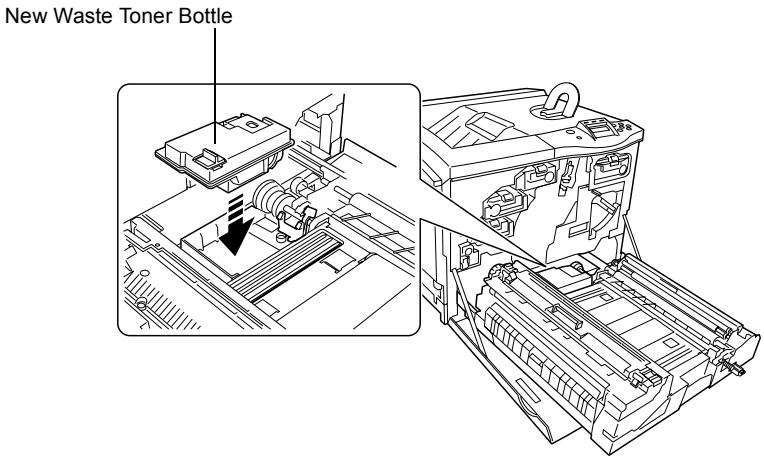


Figure 6-9

Caution

Do not put the lid on the opening of a new waste toner bottle. This could cause damage to the printer.

After replacing the toner containers and the waste toner bottle, clean the paper feed unit and the main charger unit. For instructions, see *Section 6.5 Cleaning the Printer on page 6-16*.

6.3 Replacing the Oil unit

The oil unit lasts an average of 25,000 pages and must be replaced when the printer displays the `Replace Oil kit` message.

1 Open the front cover.

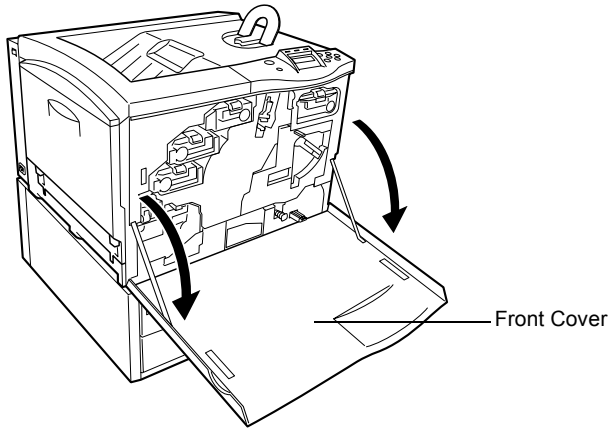


Figure 6-10

2 Grasp the handle at the end of the paper feed unit and pull the unit out completely.

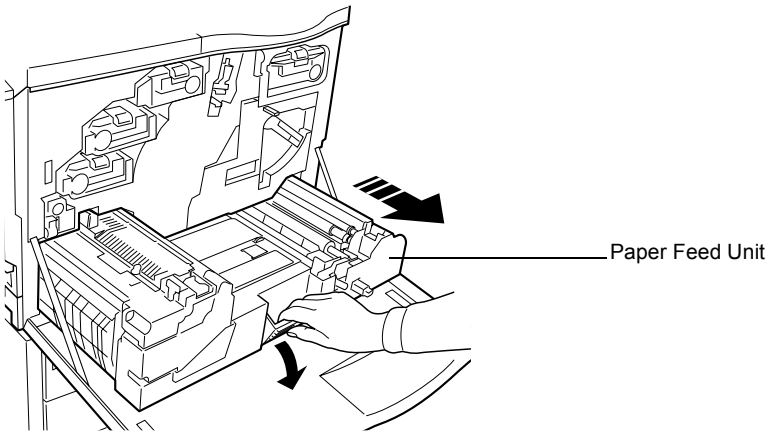


Figure 6-11

Caution

The fuser unit is very hot. Never touch the fuser unit until the fuser cools down.

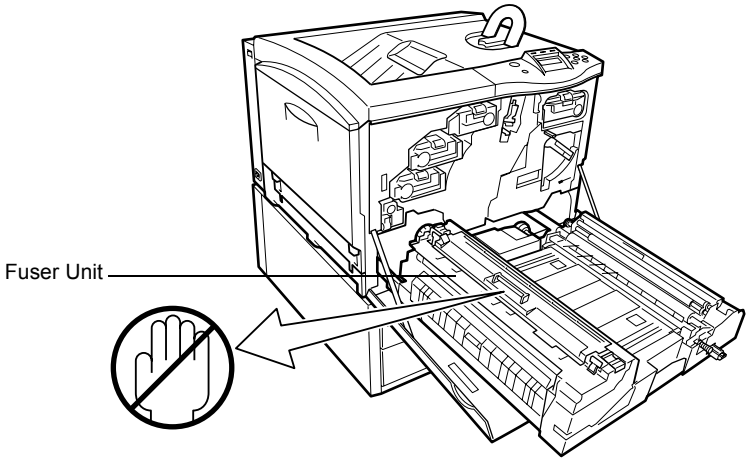


Figure 6-12

3 Open the front and rear release levers outward and remove the oil unit.

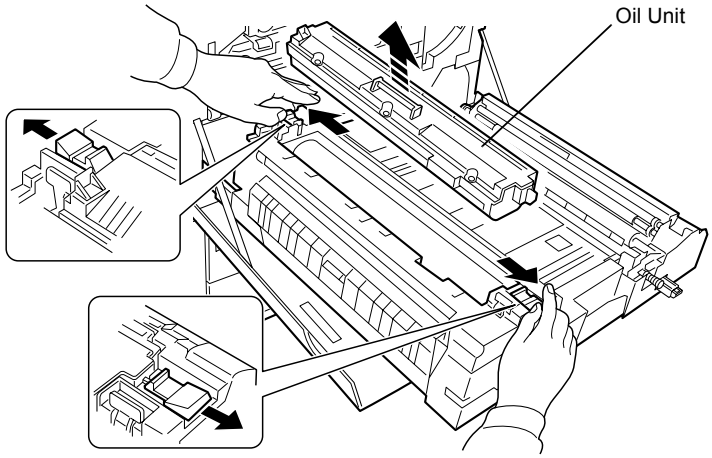


Figure 6-13

4 Take out the new oil unit from the cover. Remove the sealing tapes at both ends. Attach the new oil unit. Seat it securely by pressing on the front and rear sides (the **PUSH HERE** areas).

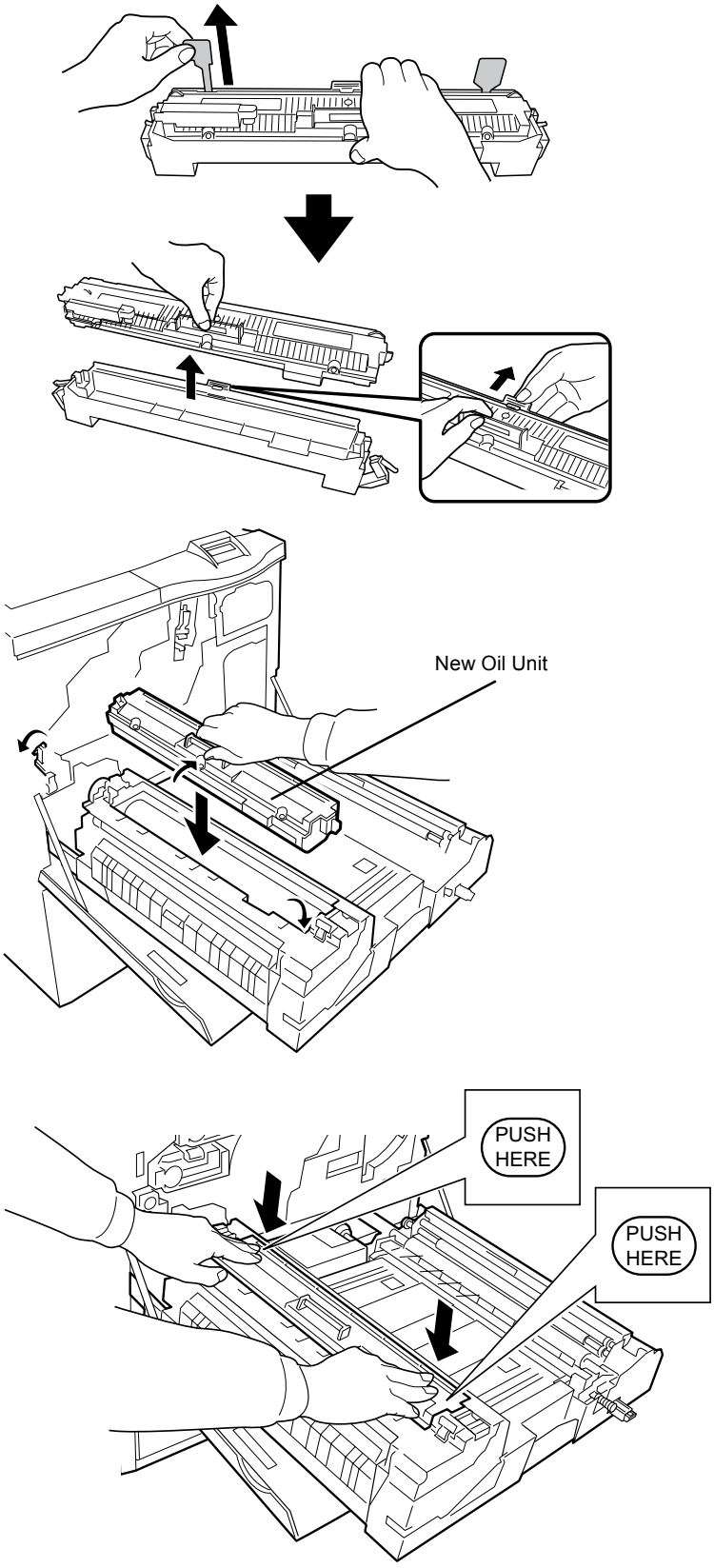


Figure 6-14

5 Push the paper feed unit back in completely.

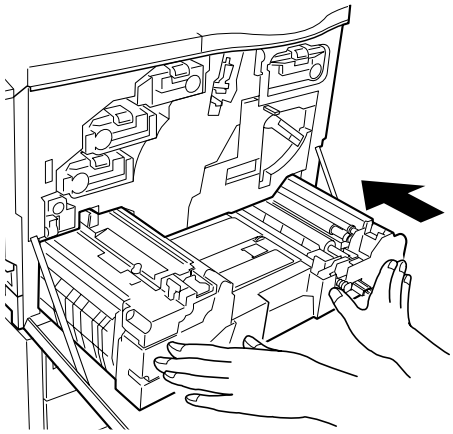


Figure 6-15

6 Close the front cover.

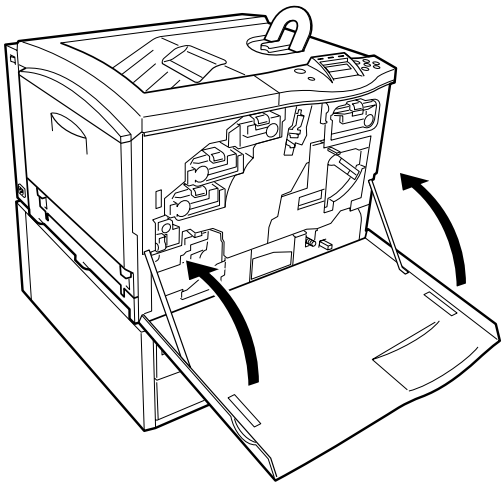


Figure 6-16

7 Put the cover (that was used with the new oil unit) to the old oil unit and put the oil unit in the plastic waste bag (contained in the oil kit) and discard it later according to the local code or regulations for waste disposal.

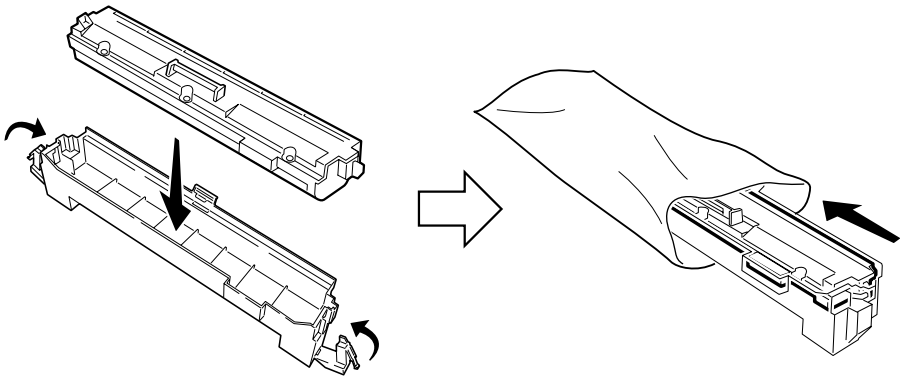


Figure 6-17

6.4 Replacing the Maintenance Kit D (Separation Charger Unit)

Note

The following procedure is not necessary for European countries and Australia.

The separation charger unit needs to be replaced after every 100,000 pages of printing. When the printer displays the message `Install MK [D]` (ATTENTION indicator flashes), replace the separation charger unit as follows.

1. Open the front cover.
2. Grasp the handle at the end of the paper feed unit and pull the unit out completely.

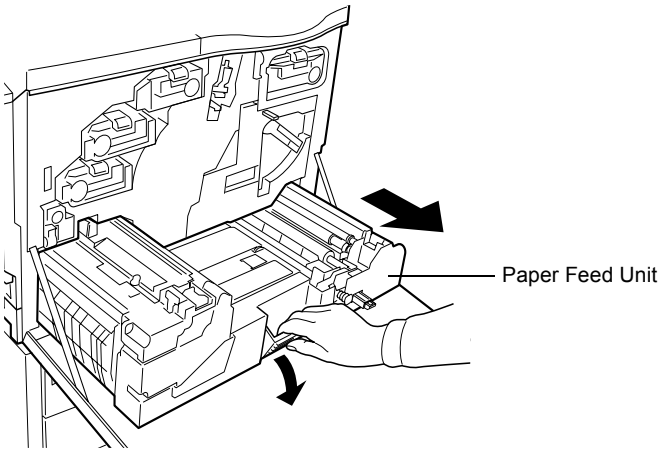


Figure 6-18

3. Remove the old separation charger unit from the secondary transfer unit. When you pull the projecting pin on the front end of the separation charger unit towards you as shown, the back end of the separation charger unit lifts up. Hold the back end of the separation charger unit to remove it.

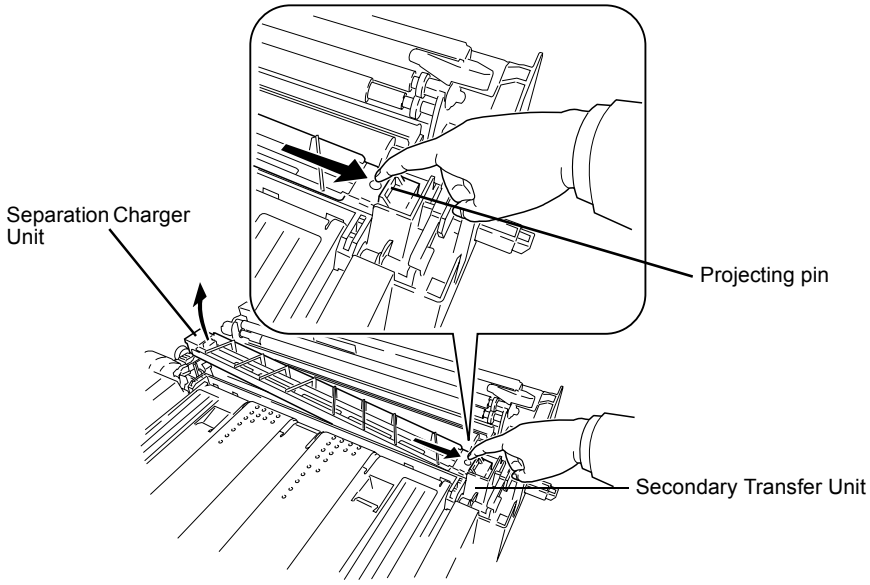


Figure 6-19

4 Hold the new separation charger unit so that the projecting pin is in front of you and pass the green knob (separation charger wire cleaning knob) through the secondary transfer unit. Press the back side to lock the unit.

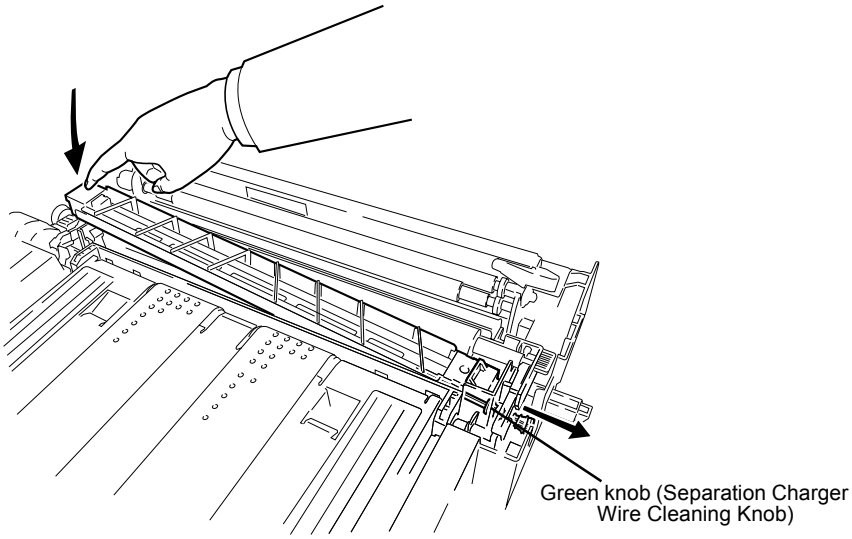


Figure 6-20

5 Push the paper feed unit back in completely and close the front cover.

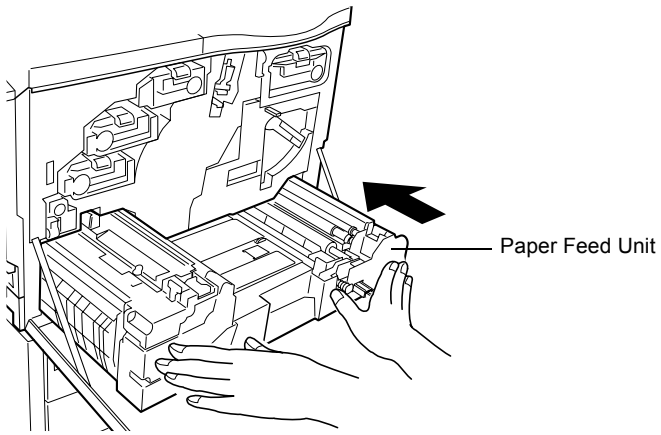
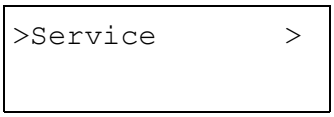


Figure 6-21

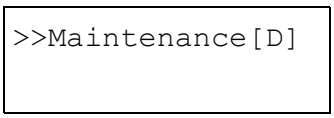
6 Use the operator panel to reset the counter. Press the **MENU** key. Press the [△] or [▽] key repeatedly until `Others >` appears.

```
Others          >
```

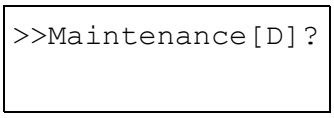
7 Press the [▷] key. Press the [△] or [▽] key repeatedly until `>Service >` appears.



8 Press the [▷] key again. Press the [△] or [▽] key repeatedly until `>>Maintenance [D]` appears.



9 Press the **ENTER** key. A question mark (?) appears.



10 Press the **ENTER** key again. A question mark disappears and the counter of maintenance kit D is reset.

11 Press the **MENU** key. The message returns to `Ready`.

6.5 Cleaning the Printer

As discussed earlier, the following parts must be cleaned each time the toner container and waste toner bottle are replaced:

- Paper feed unit
- Main charger unit

In addition to this, it is recommended that these parts are cleaned periodically at least once a month.

6.5.1 Cleaning the Paper Feed Unit

Print problems such as soiling of the reverse side of printed pages may occur if the paper feed unit becomes dirty. To clean the paper feed unit, the following tool must be used:

- Cleaning cloth (included in the toner kit)

Clean the paper feed unit according to the procedure that follows:

1 Open the front cover.

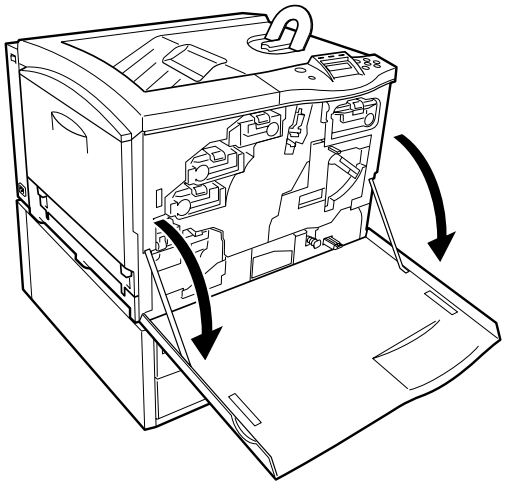


Figure 6-22

2 Grasp handle on the paper feed unit and slowly pull it out.

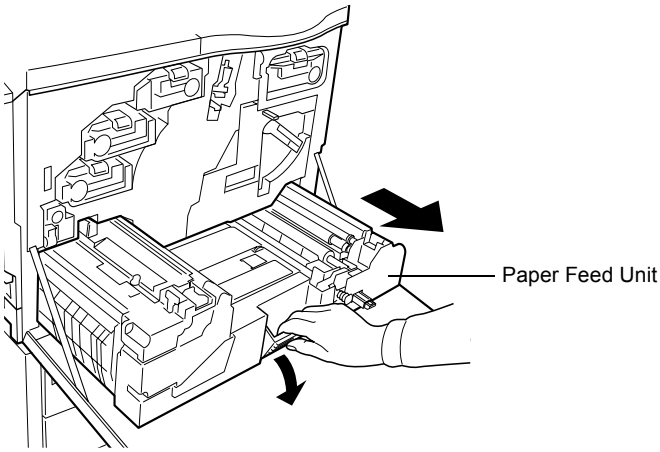


Figure 6-23

3 Clean the registration roller (metal) using the cleaning cloth.

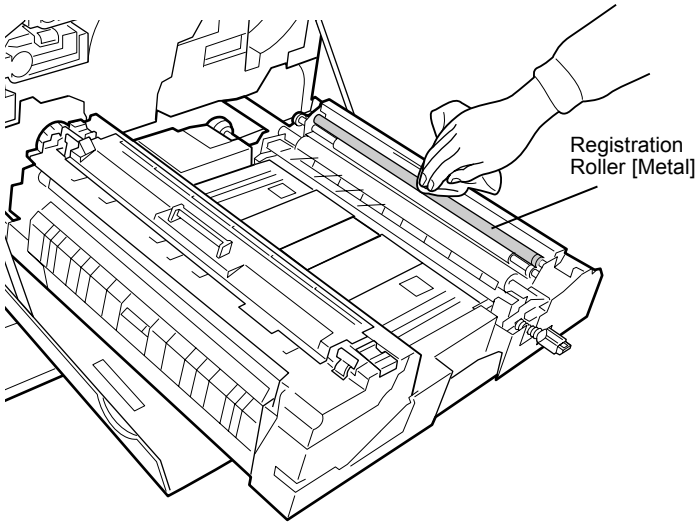


Figure 6-24

4 Clean the rubber belts using the cleaning cloth.

Note

Be careful not to touch the black, sponge roller (secondary transfer roller) during cleaning as this may adversely affect print quality.

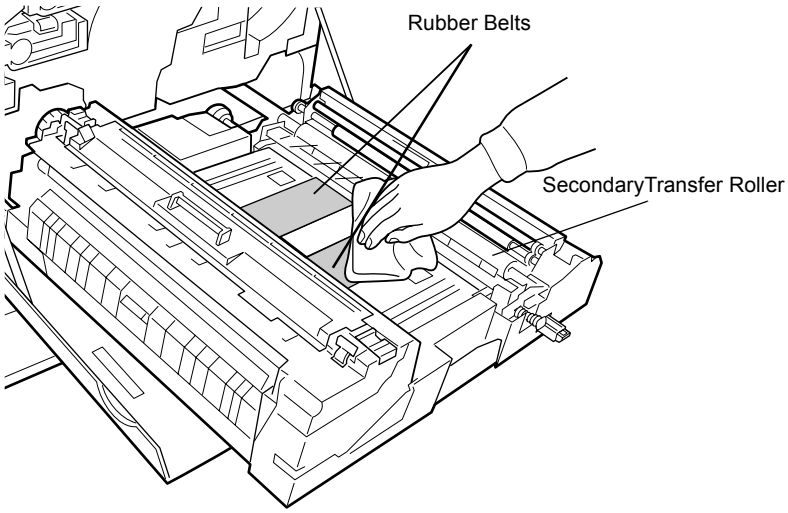


Figure 6-25

5 Grasping the tab of the separation charger cleaning knob, gently pull the cleaning knob out and push it back in. Repeat this 5 to 7 times. This cleans the separation charger wires inside.

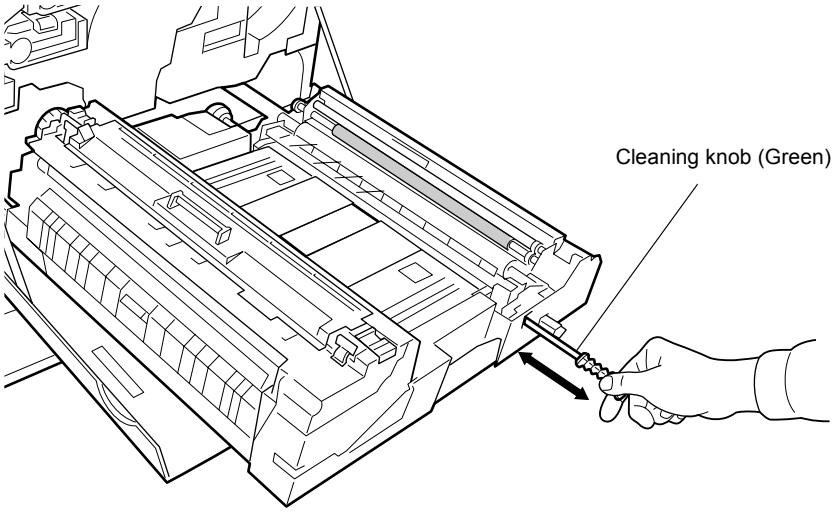


Figure 6-26

6 Push the paper feed unit back in completely.

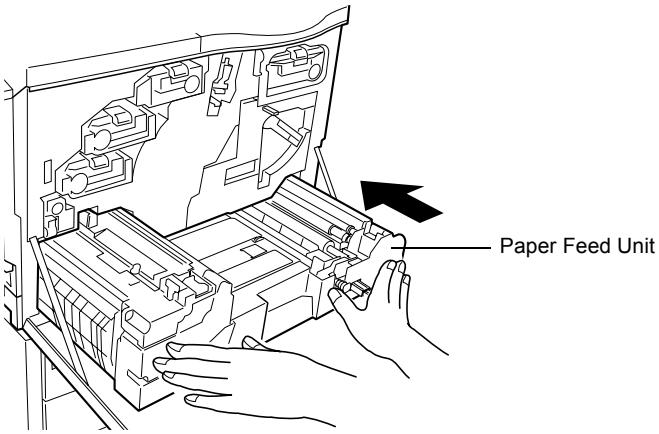


Figure 6-27

7 Close the front cover.

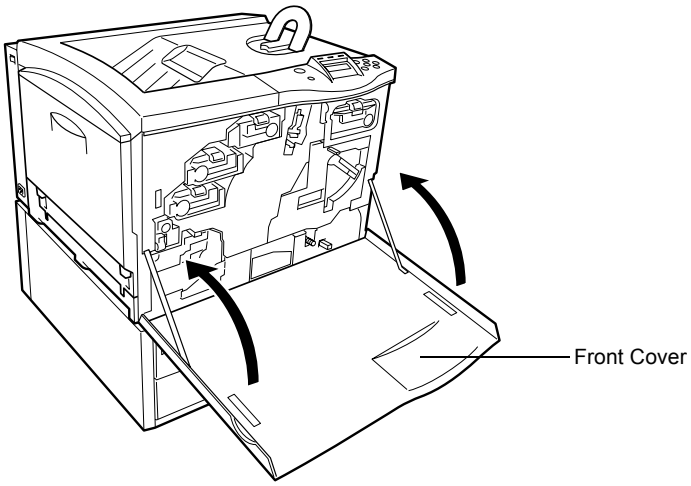


Figure 6-28

6.5.2 Cleaning the Main Charger Unit

The main charger unit needs to be cleaned periodically as it gets contaminated with dioxide after a long usage. The main charger is comprised of two main parts — the wire and the grid — which should be cleaned separately as instructed below.

To clean the main charger unit, proceed as follows:

1. Open the front cover.

2. First we clean the main charger wire. Grasp the tab of the cleaning knob (green-colored). Gently pull the cleaning bar out and push it back in. Repeat this 3 to 5 times.

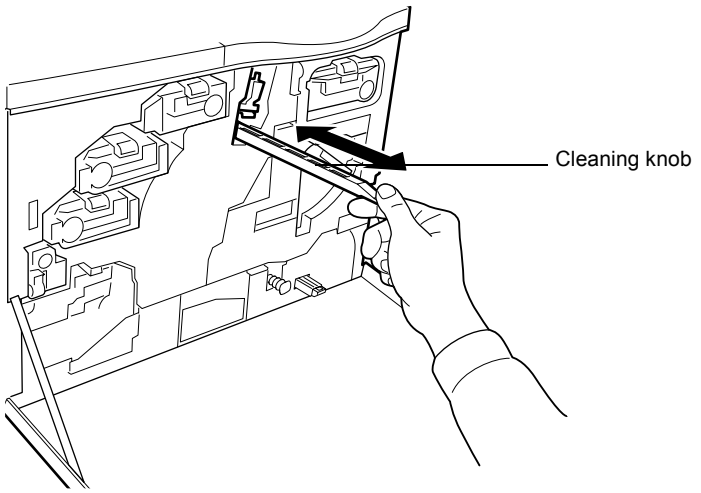


Figure 6-29

3. Next, we clean the main charger grid. Take the grid cleaner out of the toner kit. Take the grid cleaner out of the protective bag and remove the cap.

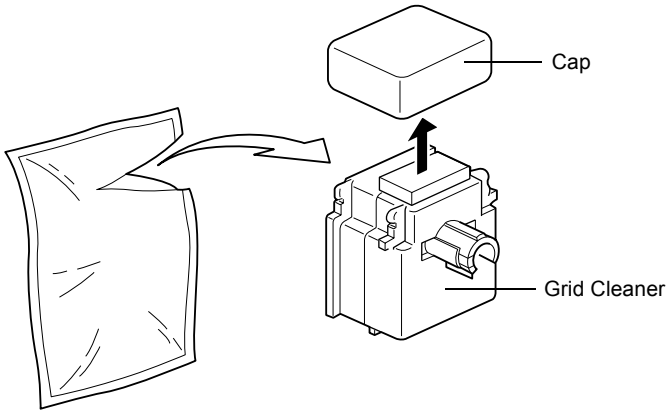


Figure 6-30

Note

The pad of the grid cleaner contains water. Clean the grid quickly so that the pad may not dry off.

4 Attach the grid cleaner to the printer with the pad facing up.

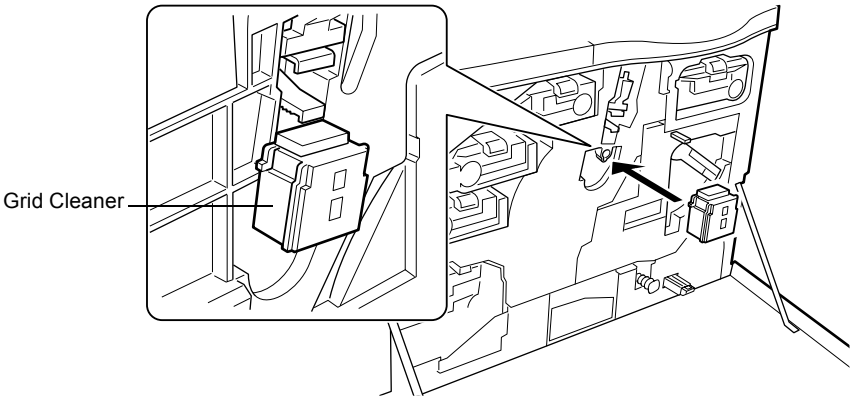


Figure 6-31

5 While pushing the main charger unit lock lever upward as shown in *Figure 6-32*, slightly lift the main charger unit, and gently pull the gray-colored main charger handle out and push it back in. Repeat this 2 to 3 times. These movements clean the grid.

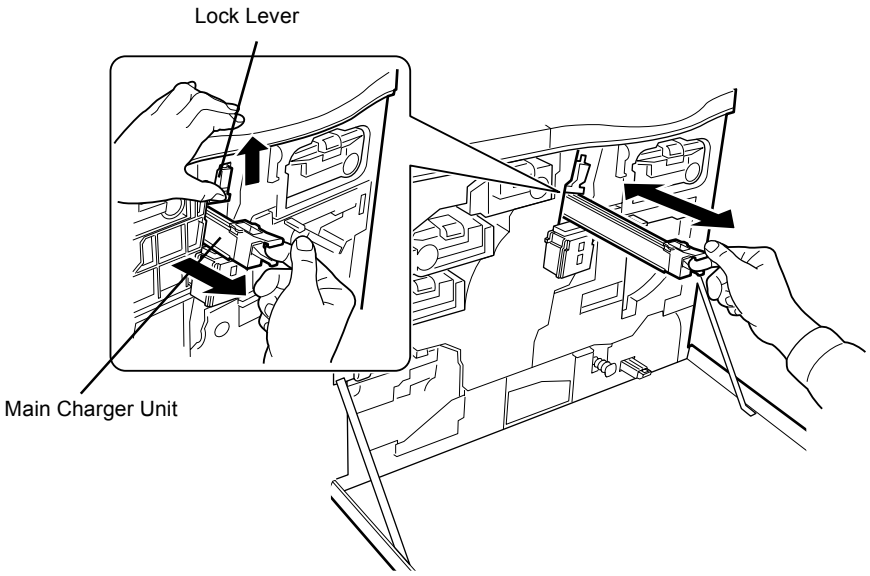


Figure 6-32

6 After cleaning is finished, remove the grid cleaner from the printer and discard it. The grid cleaner cannot be reused. Close the front cover.

Note

If the front cover does not fully close, although the printer shows Ready, open the front cover and push the main charger unit until it is fully inserted in the printer.

Appendix A Options

Your printer can be installed with various options indicated in this appendix.
You can select the options that will satisfy your printing requirements.
For availability of the options, consult your Kyocera Mita dealer.

CA-31B is a caster kit to prevent the FS-8000C printer from tipping over because of weight in the printer and the upper paper drawers. To prevent the FS-8000C printer from tipping over, the optional CA-31B caster kit must be installed when the printer is installed with more than one paper feeder or a duplex unit. For detailed information on the CA-31B caster kit, see *page A-11*.

A.1 Options

The FS-8000C series printers have the following options available. For instructions on installing individual options, refer to the documentation included with the option. Some options are explained in the following sections.

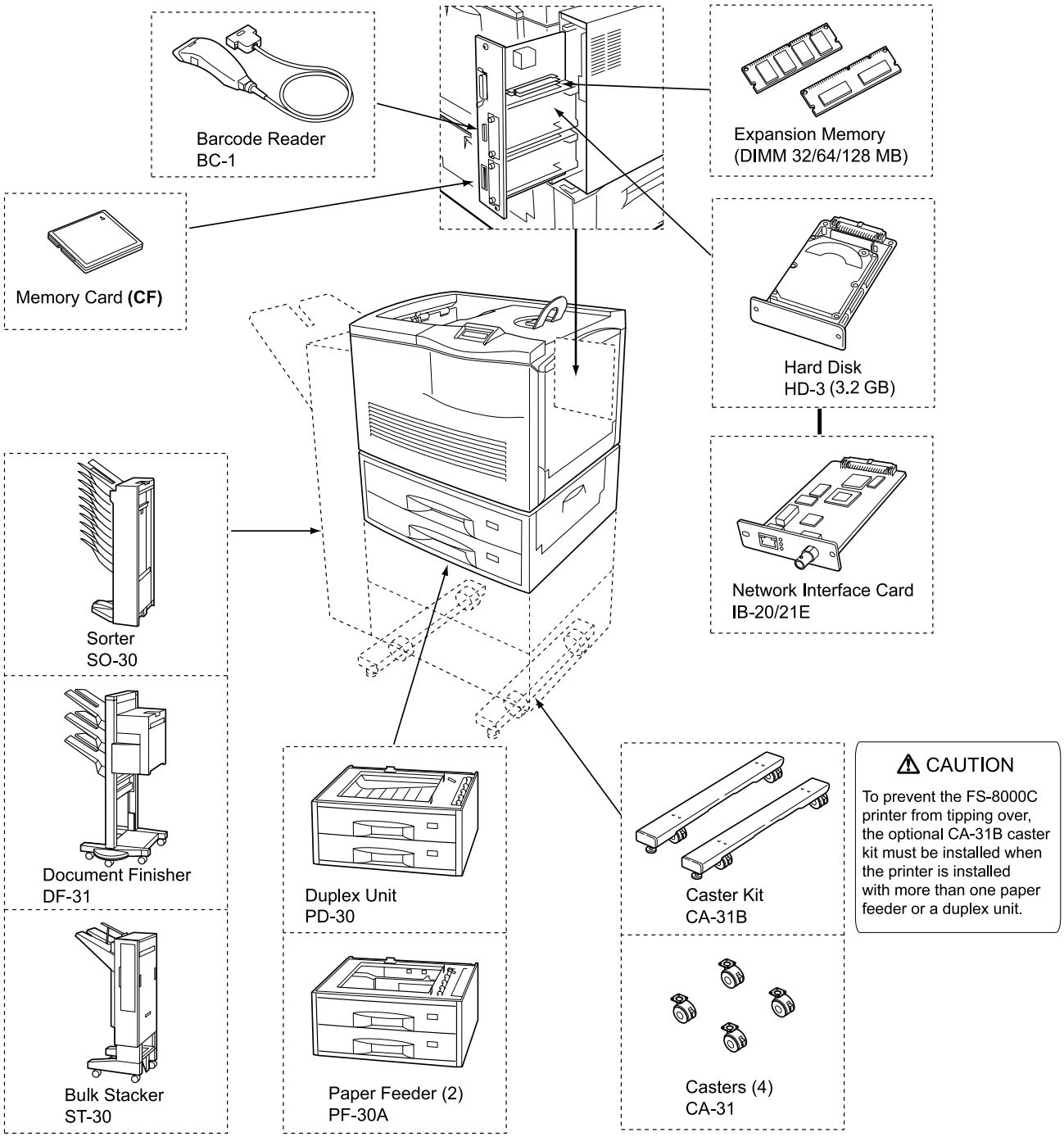


Figure A-1

A.2 Expansion Memory Modules

To expand the printer memory for more complex print jobs and faster print speed, you can plug in optional memory modules (dual in line memory modules) in two memory slots provided on the printer main controller board. You can select additional memory modules from 32, 64, or 128 MB (the maximum memory size is 256 MB, including the base 64 MB memory).

Note

Only an authorized Kyocera Mita dealer should install the expansion memory. Kyocera Mita shall not be liable for any damages caused by improper installation of expansion memory.

Precautions on handling the printer's main controller board and memory modules

- To protect electronic parts, discharge static electricity from your body by touching a water pipe (faucet) or other large metal object before handling the memory modules. Or, wear an antistatic wrist strap, if possible, when you install the memory modules.
- Always hold the main controller board or a memory module by its edges as shown below to avoid damaging electronic parts.

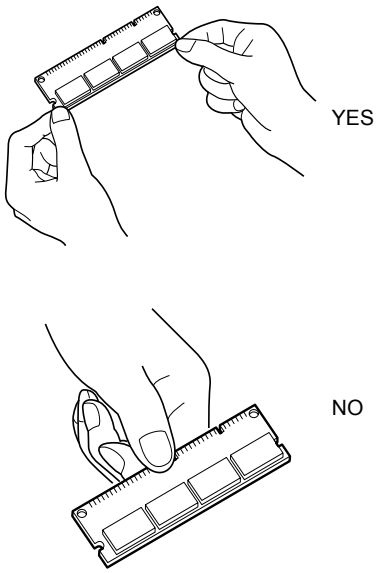


Figure A-2

A.2.1 Installing the Memory Modules

1 Power off the printer and unplug the printer power cord.

2 Unscrew three screws at the back of the main controller board.

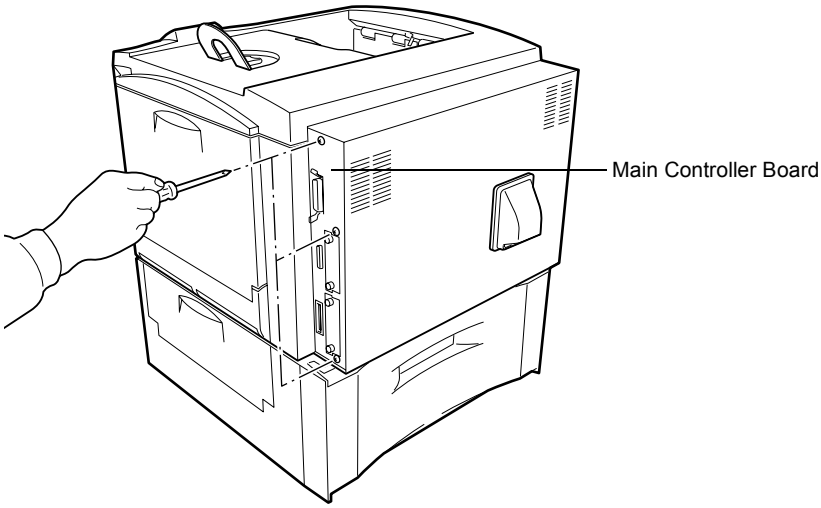


Figure A-3

3 Pull out the main controller board gently.

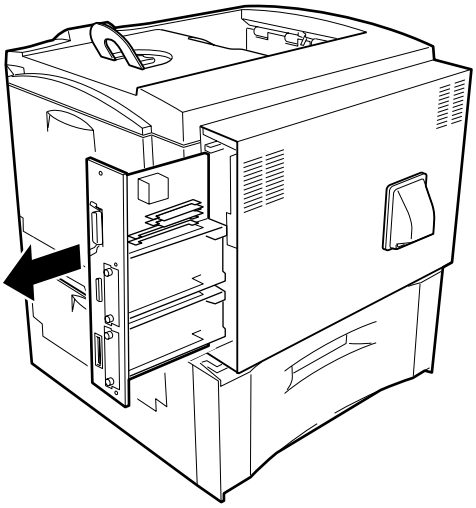


Figure A-4

4 Push out the clamps on both ends of the memory socket on the main controller board.

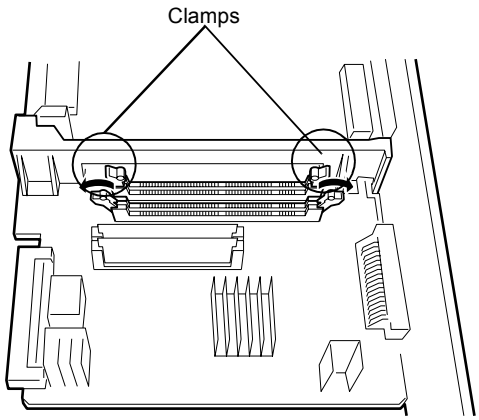


Figure A-5

5 Remove the memory module from its package. Aligning the cutouts of the memory module with the matching keys of the socket, carefully plug the memory module into the memory socket until it clicks in place.

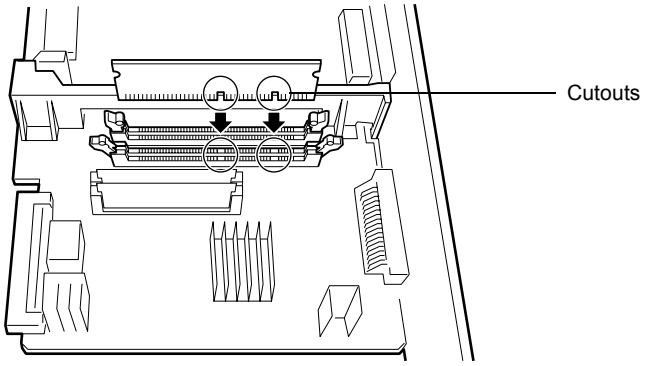


Figure A-6

6 Push down the two socket clamps to secure the memory modules.

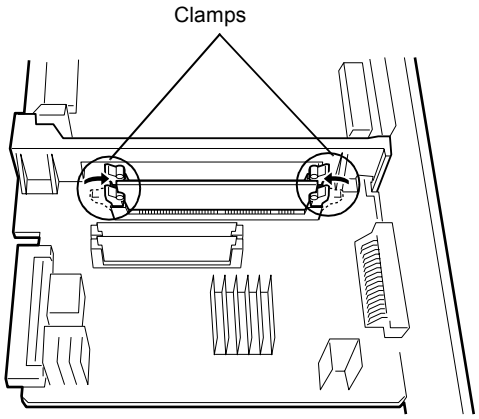


Figure A-7

7 After you finish installing the memory modules, reinstall the main controller board and fasten it with screws.

Removing a Memory Module

To remove a memory module, remove the main controller board, then carefully push out the two socket clamps. Ease the memory module out of the socket to remove.

Testing the expanded memory

To verify that the memory modules are working properly, test them by printing a status page. To print a status page:

1 Make sure the printer is switched off. Plug in the printer power cord into an AC outlet and power on the printer.

2 Wait until the printer becomes `Ready`. When ready, press the **MENU** key.

3 Press the ▽ key repeatedly until the message display shows `Print Status Page`.

4 Press the **ENTER** key twice. A status page is printed.

Check the **Memory** field in the upper right area. It shows information about the memory modules installed in memory slots 1 and 2. If you see an increase in the total memory size, the installation is successful. (Note that the printer is shipped with 64 MB of base memory.)

A.3 General Discription of Options

A.3.1 Memory Card

The printer is equipped with a slot for a memory card with the maximum size of 64 MB. A memory card is useful for storing fonts, macros, and overlays. You can use the **IC Link for Windows** utility to download fonts, etc., to a flash memory card. This software is included in the CD-ROM supplied with the printer.

Reading Font from the Memory Card

Once inserted in the printer's slot, the contents of the memory card can be read from the control panel or automatically when you power on or reset the printer. To manually read read data in the memory card, see *Chapter 3 Using the Operator Panel, section 3.9.2 Reading/ Writing to an Option Storage Device on page 3-70*.

Before inserting a memory card in the printer, make sure that the printer is switched off.

Insert the memory card in the memory card slot.

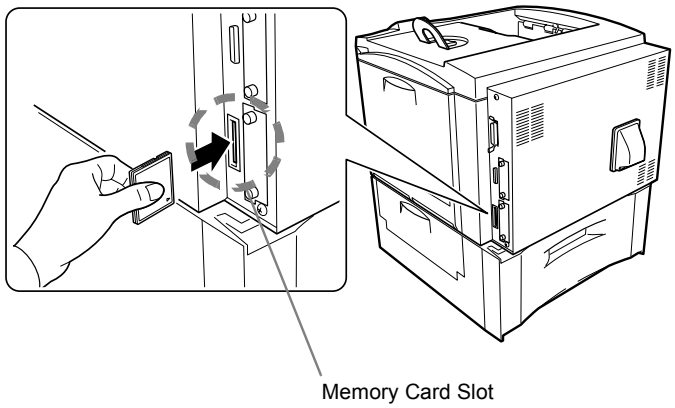


Figure A-8

A.3.2 PF-30A Paper Feeder

The PF-30A paper feeder has two paper cassettes allowing a large number of sheets of paper to be fed continuously for printing. The paper cassette can hold up to approximately 500 sheets of ISO A3, ISO A4, ISO A5, JIS B4, JIS B5, ledger, letter, and legal size (80 g/m^2) paper. This feeder is attached at the bottom of the printer as shown below.

Caution

To prevent the printer from tipping over because of weight in the printer and the upper paper drawers, the CA-31B caster kit must be installed at the bottom-most paper feeder, when an optional paper feeder or duplex unit is installed with the printer.

For detailed information on installing the paper feeder, see the manual supplied with the paper feeder.

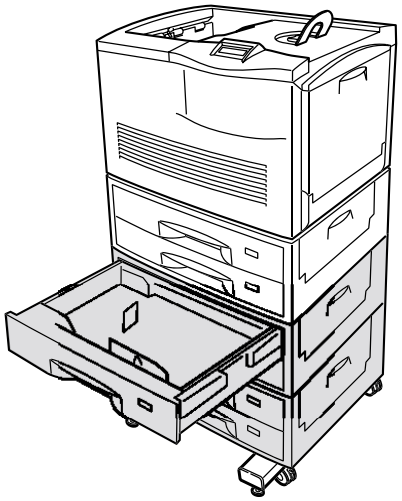


Figure A-9

A.3.3 PD-30 Duplex Unit

This duplex unit is provided as a standard accessory for the FS-8000CD printer.

The PD-30 is similar to the PF-30A paper feeder but has a duplexer (required for printing on both sides of a sheet) in place of the first paper cassette. Printing on both sides can be performed using ISO A3, ISO A4, ISO A5, JIS B4, JIS B5, ledger, letter, and legal sized paper.

The paper cassette can hold up to approximately 500 sheets of ISO A3, ISO A4, ISO A5, JIS B4, JIS B5, ledger, letter, and legal size (80 g/m^2) paper. This unit is attached at the bottom of the printer as shown below.

Caution

To prevent the printer from tipping over because of weight in the printer and the upper paper drawers, the CA-31B caster kit must be installed at the bottom-most paper feeder, when an optional paper feeder or duplex unit is installed with the printer.

For detailed information on installing the duplex unit, see the manual supplied with the duplex unit.

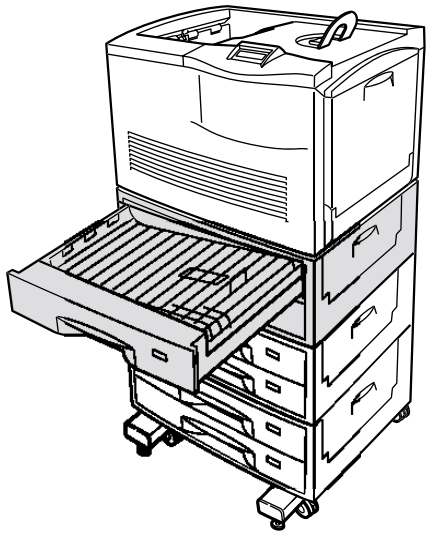


Figure A-10

A.3.4 SO-30 Sorter

The SO-30 sorter has nine output trays that can be used to separate printouts in accordance with different print driver settings—sorting or collating. You can also use it in mailbox mode to prevent loss or mishandling of printouts by assigning dedicated output trays to specific departments or individuals.

The sorter is attached to the left side of the printer as shown below.

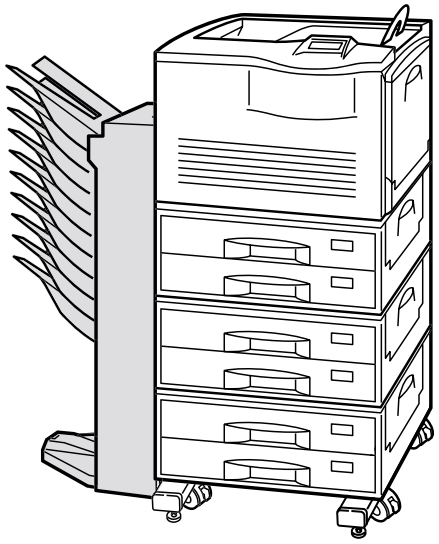


Figure A-11

A.3.5 ST-30 Bulk Stacker

This bulk stacker can hold up to 3,000 copies for a continuous, voluminous output. It incorporates the jog feature to avoid loss or mishandling of printouts by staggering and dividing the stacked printed sheets.

The bulk stacker is attached to the left side of the printer as shown below. Use the supplied dedicated bracket to attach the bulk stacker to the printer.

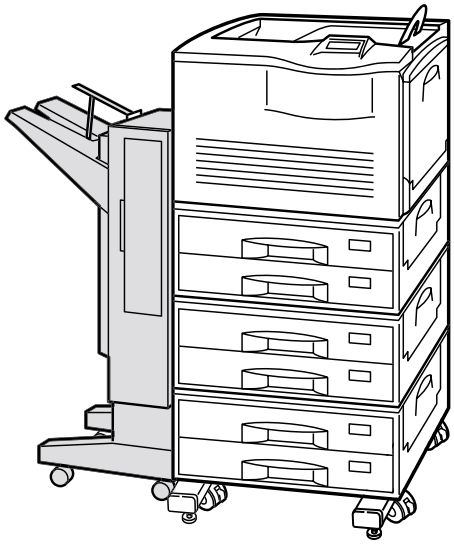


Figure A-12

A.3.6 DF-31 Document Finisher

This multipurpose device is used for organizing printouts. The device can staple printed sheets by electronic means and provides three output trays for stacking printed sheets after dividing and staggering them according to print jobs.

The document finisher is attached to the left side of the printer as shown below. Use the supplied dedicated bracket to attach the document finisher to the printer,

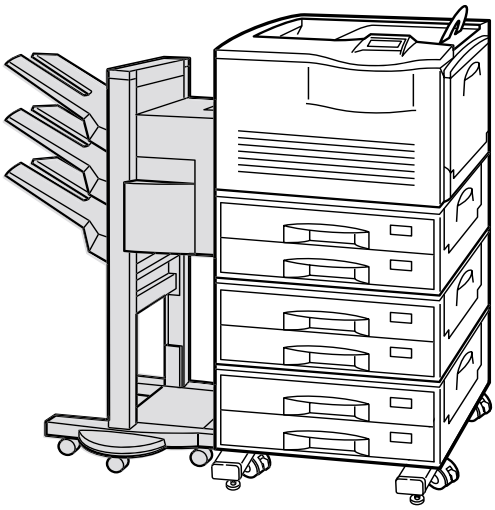


Figure A-13

A.3.7 CA-31 Casters and CA-31B Caster Kit

These casters are mounted at the bottom of the bottom feeder for moving or fixing the printer. The CA-31 is the regular casters that may be used for the standalone FS-8000C, including only the standard PF-30A paper feeder or PD-30 duplex unit. The CA-31B is the topple-resistant, heavy-duty caster kit. The CA-31B must be installed when the printer is installed with one or more extra paper feeders.

Caution

The manufacturer is not liable for any damages or injuries that may be caused when the CA-31B is not used to support the printer having more than one paper feeders.

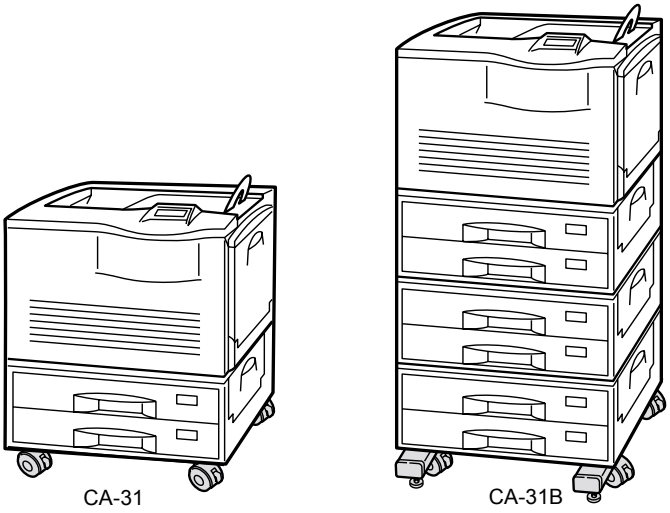


Figure A-14

A.3.8 HD-3 Hard Disk

The HD-3 hard disk is provided as a standard accessory for the FS-8000CN printer.

The HD-3 is a hard disk for storing print data and electronic sorting as controlled by the printer driver. You can use the **KM-NET Printer Disk Manager** utility to keep track of the stored data. This software is included in the CD-ROM supplied with the printer.

The hard disk is installed in the **OPT2/HDD** (upper) slot provided for it at the back of the printer as shown below.

The hard disk must be formatted before the initial use. To format the hard disk, use the printer operator panel or the **KM-NET Printer Disk Manager**. Before you install the hard disk in the printer, power off the printer and unplug the power cord.

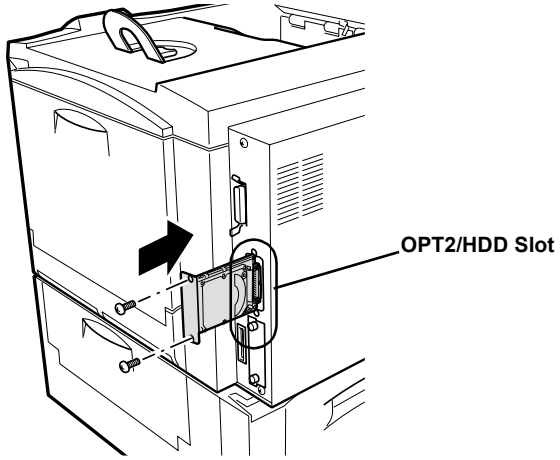


Figure A-15

- **Do not install the hard disk in the OPT1 (lower) slot.**
- **This printer remains energized for 30 minutes even after it is powerd off for internal cooling. Unplug the power cord before installing the hard disk in the printer. Power on the printer immediately after you finish the hard disk installation.**

A.3.9 BC-1 Barcode Reader

The barcode reader allows your printer to use bar codes for the management of stored print jobs. This barcode reader is connected to the printer's serial interface.

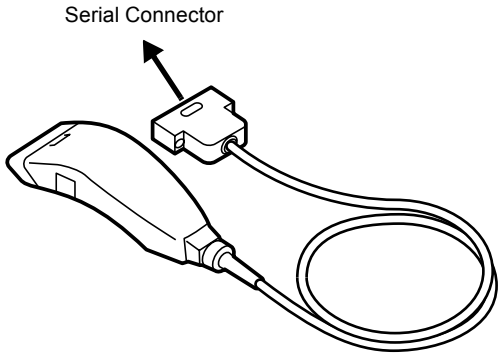


Figure A-16

Note

The printer's serial interface must be switched to barcode mode when using the barcode reader.

Caution

This printer remains energized for 30 minutes even after it is powerd off due to internal cooling. Unplug the power cord before installing the barcode reader to the printer. Power on the printer immediately after you finish the barcode reader connection.

A.3.10 IB-20/IB-21E Network Interface Cards

The IB-21E network interface card is provided as a standard accessory for the FS-8000CN printer.

Either of these two network interface cards is required to connect your printer to a network. The network interface cards support TCP/IP, IPX/SPX, NetBEUI, and EtherTalk protocols so that the printer can be used on network environments including Windows, Macintosh, UNIX, NetWare, etc. Install the network interface card in either the **OPT1** or **OPT2/HDD** slot located on the lower right side of the printer rear as shown below.

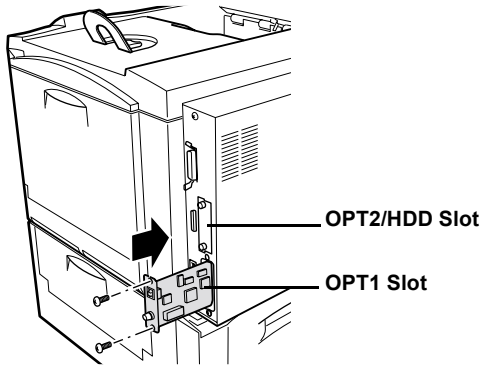


Figure A-17

The two cards differ in their support for connectors and operating voltages. The IB-20 supports connectors for 10Base-T, 100Base-TX, and 10Base-2, whereas the IB-21E supports connectors for only 10Base-T and 100Base-TX. The IB-20's printer interface accepts 3.3 V and 5 V and allows memory sharing, whereas the IB-21E's printer interface accepts only 3.3 V and does not allow memory sharing.

Instructions on installing and operating the IB-20/21E Network Interface Cards are fully detailed in the documentation that comes with this product.

Caution

This printer remains energized for 30 minutes even after it is powered off due to internal cooling. Unplug the power cord before installing the network interface card to the printer. Power on the printer immediately after you finish the network interface card installation.

Appendix B Computer Interface

This appendix describes the signals used by the printer's parallel and serial (RS-232C) interfaces. It also describes pin assignments, signal functions, timings, connector specifications, and voltage levels for these interfaces. Furthermore, the appendix explains the RS-232C protocol and how to use the printer in a multi-computer environment.

B.1 Parallel Interface

B.1.1 Communication Modes

The printer provides high-speed data transmission on a parallel interface. You can select the parallel interface communication mode from the operation panel. To change communication mode, see *Chapter 3 Using the Operator Panel, section 3.5.1 Changing Parallel Interface Mode on page 3-38* .

Note

Use a parallel interface cable that complies with the IEEE 1284 standard.

You can choose from four communication modes:

- Auto (default)
  The printer automatically changes its communication mode to the one that is currently used by the host computer.
- Nibble
  Allows high-speed data communications in compliance with the IEEE 1284 standard.
- Normal
  The standard communications method for Centronics interfaces.
- High-speed
  Enables high-speed data transmission between host computer and printer.

B.1.2 Interface Signals

Table shows the connector pins and corresponding input and output signals of the parallel interface. Explanation of each signal is also given in the table.

The description in [ ] indicates signal names in Auto mode and Nibble (high) mode (IEEE 1284-compliant). In Auto and Nibble modes, these signals are bidirectional.

Pin	In or out	Signal	Description
1	In	Strobe† [nStrobe]	A negative-going-strobe pulse causes the printer to read and latch the data on the Data 0 [1] to Data 7 [8] signal lines.
2	In	Data 0 [Data 1]	These eight signals form one byte of data sent from host computer to printer. Data 7 [8] is the most significant bit.
3	In	Data 1 [Data 2]	
4	In	Data 2 [Data 3]	
5	In	Data 3 [Data 4]	
6	In	Data 4 [Data 5]	
7	In	Data 5 [Data 6]	
8	In	Data 6 [Data 7]	
9	In	Data 7 [Data 8]	
10	Out	Acknowledge† [nAck]	This negative-going pulse acknowledges the previous character received.
11	Out	Busy [Busy]	When this signal is high, the printer is busy. When it is low, the printer is able to receive more data.
12	Out	Paper Empty [PError]	This signal goes high when the printer runs out of paper.††
13	Out	Online (Select) [Select]	This signal goes high when the printer is online and low when the printer is offline. The signal goes low when you press the **GO** key to make the printer go off line.††
14	In	— [nAutoFd]	Ignored
15	—	—	Not used
16	—	0 V DC	
17	—	Chassis Ground	
18	—	+5 V DC	This pin is used for the printer's +5 V DC power supply (+5±0.5 V, 400 mA maximum, with fuse)
19	—	Ground return	
20	—	Ground return	
21	—	Ground return	
22	—	Ground return	
23	—	Ground return	
24	—	Ground return	
25	—	Ground return	
26	—	Ground return	
27	—	Ground return	

Table B-1

Pin	In or out	Signal	Description
28	—	Ground return	
29	—	Ground return	
30	—	Ground return	
31	In	— [nInit]	Ignored
32	Out	Error† [nFault]	When the high-speed parallel line control is set to on (!R! FRPO O2, 2; EXIT;), this line returns an error status.
33	—	—	Not used
34	—	—	Not used
35	Out	Power Ready	This signal goes high when the printer is powered on.
36	In	Select In [nSelect In]	When this line is high, IEEE1284 mode is enabled.

Table B-1

† Indicates signals that are low active.
†† The Paper Empty , Online, and Error signals work only after you have enabled them using the O2 parameter of the FRPO command.

B.2 Serial Interface

B.2.1 Interface Signals

Table B-2 below shows the pins and corresponding input and output signals of the RS-232C interface connector.

Pin	In or out	Signal	Description
1	—	FG	Frame Ground. This pin is connected directly to the printer frame.
2	Out	TXD	Transmit Data. This pin is used to output asynchronous data sent from the printer to the computer. This signal is often used in handshaking.
3	In	RXD	Receive Data. This pin is used to input serial asynchronous data sent from the computer to the printer.
4	Out	RTS	Request To Send. This output is always high (above 3 volts).
5	In	CTS	Clear To Send. Not used.
6	In	DSR	Data Set Ready. Not used.
7	—	SG	Signal Ground. This pin is used to establish a common reference level for the voltages of all signals other than Frame Ground.
20	Out	DTR	Data Terminal Ready . This pin is used to notify the status of the printer buffer (i.e., nearly full or nearly empty) when handshaking is used. The pin goes high (above 3 volts) when the buffer is able to accept more data.

Table B-2

B.2.2 Interface voltage levels

The voltage levels of the interface signals conform to EIA RS-232C specifications. The voltage level of SPACE is 3 to 15 volts. The voltage level of MARK is -3 to -15 volts. Voltages between -3 and 3 volts are undefined.

B.2.3 Serial connector

The serial interface connector (RS-232C) is a DB-25S connector. Use a cable with a DB-25P connector or its equivalent for this connector.

B.3 RS-232C Protocol

B.3.1 Parameters of the RS-232C Protocol

A protocol is a set of rules followed by various devices to send or receive data. The parameters of the RS-232C protocol are stored in the battery-powered memory of the printer. You can verify these parameters on the status printout as marked by the following identifications:

- H1: Baud rate
- H2: Number of data bits
- H3: Number of stop bits
- H4: Parity
- H5: Protocol logic
- H6: Buffer-nearly-full threshold
- H7: Buffer nearly-empty threshold
- H8: Received data buffer size

The parameters can be changed from the printer operator panel. To change the value for the serial interface parameters, see *Chapter 3 Using the Operator Panel, section 3.5.2 Changing Serial Interface Parameters on page 3-39*.

This following section outlines the parameters and their values you can select on the operator panel:

H1: Baud rate

Parameter value	Baud rate
12	1200
24	2400
48	4800
96	9600
19	19200
38	38400
57	57600
11	115200

The factory setting is 96 (9600 baud).

H2: Number of data bits

7 or 8. The factory setting is 8.

H3: Number of stop bits

1 or 2. The factory setting is 1.

H4: Parity

Parameter value	Meaning
0	None
1	Odd
2	Even
3	Ignored

The factory setting is 0 (none).

H5: Protocol logic

Parameter value	Meaning
0	Combination of DTR (positive logic) and XON/XOFF
1	DTR (positive logic)
2	DTR (negative logic)
3	XON/XOFF
4	ETX/ACK

The factory setting is 0.

H6: Buffer nearly-full threshold

A percentage value from 0 to 99. The factory setting is 90.

H7: Buffer nearly-empty threshold

A percentage value from 0 to 99. The factory setting is 70. The factory settings of the buffer nearly-full and nearly-empty thresholds (H6 and H7) are subject to change without notice.

The difference between the nearly-full and nearly-empty thresholds allows the computer to send a fairly large amount of data in a continuous stream.

H8: Received data buffer size

The input buffer size is specified in increments of 100 kB. The factory setting is 5 (500 kB).

B.3.2 PRESCRIBE FRPO D0 Command

The PRESCRIBE FRPO D0 command is provided to allow manipulating XON/XOFF when an error has occurred on the serial interface. *Table B-3* summarizes the error status corresponding to different D0 values.

Timing of XON transfer to host while Ready or Waiting	Serial interface error	
	error not handled	error handled
XON sent every 3-5 seconds	D0=0 (default)	D0=1
XON not sent	D0=10	D0=11

Table B-3

B.4 RS-232C Cable Connection

B.4.1 Preparing an RS-232C Cable

After you procure an RS-232C cable, check its wiring against the pin assignments shown in page *section B.1.2 Interface Signals on page B-3*. If you have an IBM communications adapter cable type 1502067, use the procedure below to solder the wiring at the end (printer side) of the cable:

1. Unscrew the plastic cover at the end (printer side) of the cable.
2. A bare shield wire is provided for each wire in the cable. Solder all shield wires together into a single bundle.
3. Connect the bundled shield wires to the connector metal face using a piece of flat cable about 3 mm wide and 15 mm long,. Make sure that the soldered connections are secure.
4. Unsolder wires 2 and 3, then resolder them in a crossover configuration. In other words, solder wire 2 to pin 3 and wire 3 to pin 2. Cover the solder joints with a thermofit tube.
5. Cut wires 4, 5, 6, and 20.
6. Solder wires 5 and 6 together and connect them to pin 20. Cover the solder joints with a thermofit tube. Leave wire 4 unconnected.
7. Tape all remaining loose ends together, or seal them with a thermofit tube.
8. Screw the plastic cover back on the cable end.

B.4.2 Connecting the Printer to the Computer

Make sure that both computer and printer are powered off.

1. Discharge static electricity from your body by touching a metal object such as a doorknob.
2. Plug the end (printer side) of the RS-232C cable into the printer's serial interface connector and screw it on securely.
3. Plug the other end of the cable into the computer’s serial interface connector.
4. Power on the printer.
5. The printer’s parameters are set at the factory as follows:

   Baud rate = 9600 bps, data bits (character length) = 8, stop bits = 1, parity = none

   The two RS-232C protocols are XON/XOFF and DTR. The printer executes both of these protocols simultaneously, using positive logic for DTR.

If you are not sure about the printer's current parameter settings, reset them to the values shown above (i.e., baud rate = 9600 bps, etc.). You can perform parameter settings from the operation panel. See *Chapter 3 Using the Operator Panel, section 3.5.2 Changing Serial Interface Parameters on page 3-39*.

6 On the computer, set the same parameters as that of the printer. Most computers allow you to do this by DIP switch settings that should be made before power is turned on.

Otherwise, you can make the parameters settings on a Windows 95/98 platform as follows:

1 Click the **Start** button from the Task Bar of Windows 95/98, point to **Settings**, and click **Control Panel**.

2 On the **Control Panel** window, double-click **System**.

3 The **System Properties** box opens. Select the **Device Manager** tab and click the **COM** port you want to use.

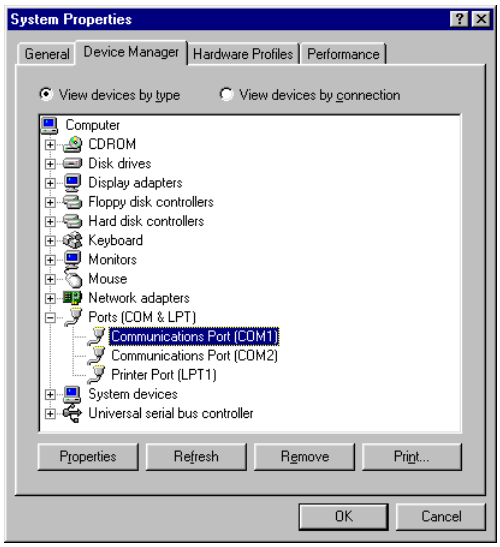


Figure B-1

4 Press the **Properties** button.

5 The **Properties** sheet is displayed for the selected **COM** port. Select the **Port Settings** tab and set the port properties.

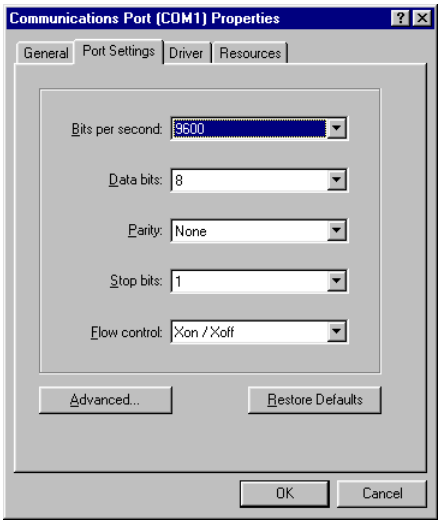


Figure B-2

6 After setting the properties, click **OK**.

Using DOS for Serial Connection

To set the computer's serial parameters to, for example, 9600 bps, etc., at the DOS command prompt, enter the following:

```
C:\>MODE COM1:96, N, 8, 1, P
C:\>MODE LPT1:=COM1
```

To test the interface, enter the following:

```
CTRL P
C:\>DIR
CTRL P
```

Appendix C Technical Specifications

Note

The technical specification may be changed for improvement purpose.

C.1 Printer Specification

Item		Specification
Printing method		Electrophotographic four color (CMYK) printing using laser diode.
Printing speed		See *section C.2 Printing Speeds on page C-4*.
Resolution		600 dpi (horizontal and vertical)
First print (A4, 23 °C)		Approximately 17 seconds (monochrome) Approximately 28 seconds (color)
Warm up time (23 °C)		300 seconds or less
Main Controller CPU		PowerPC 750CX (400 MHz)
Main memory		64 MB, expandable up to 256 MB maximum
Expansion Memory Module		32, 64, or 128 MB (for 2 slots)
Operating system		Windows 3.1, Windows 95/98/Me, Windows NT/2000, Macintosh, Linux
Protocol support		IPX/SPX, TCP/IP, DLC
Interfaces	Parallel	IEEE1284, 1
	Serial	RS-232C, 1
	Option	2, Network interface card or hard disk (KUIO)
Memory card slot		Compact flash memory card, maximum 64 MB
Self-diagnostics		Performed at power-on
Maximum duty cycle (for standard dry A4 plain paper)		100,000 pages per month for monochrome; 25,000 pages per month for color
Imaging drum		Amorphous silicon drum
Developers		Four (CMYK) dual-component dry developers
Main charger		Positive scorotron charger
Transferring	Primary	Drum system
	Secondary	Roller system
Separation		Corona charger
Drum cleaning		Blade cleaner
Primary transfer drum cleaning		Brush cleaner
Drum discharging		LED array
Fuser		Heat rollers
Toner saving		EcoPrint mode (monochrome printing only)
Paper		See *Chapter 2 Handling Paper, section 2.1.2 Paper specifications on page 2-2*.
Paper sizes	Cassettes	A3, B4, A4, B5, A5, ledger, legal, and letter sizes, adjustable
	Multi-purpose tray	80 × 148mm to 310 × 458 mm
Unprintable areas		A top, bottom, left, or right margin of 4 mm
Paper capacity	Cassettes	500 sheets (80 g/m^2)
	Multi-purpose tray	150 sheets (80 g/m^2)

Table C-1

Item			Specification
Output tray capacities		Face-down tray	500 sheets (80 g/m^2)
		Face-up tray	150 sheets (80 g/m^2)
Operating environment		Temperature	10 to 32.5 °C (50 to 90.5 °F)
		Relative humidity	15 to 80 %
		Optimum conditions	23 °C (73 °F), 60% (relative humidity)
		Altitude	2,000 m (6,500 feet) maximum
		Illumination	1,500 lux or less
Power supply		U.S.A. and Canada	120 V, 60 Hz, 11.5 A max
		Europe, Asia, Oceania	220 to 240 V, 50 or 60 Hz, 5.8 A max. at 230 V
		Allowable voltage fluctuations	± 10 % maximum
		Allowable frequency fluctuations	± 2 % maximum
Power consumption	U.S.A and Canada	Maximum	1,318 W
		Normal operation	412 W
		Standby	177 W
		Sleeping	34 W (FS-8000C/FS-8000CD) 37 W (FS-8000CN)
	Europe, Asia, Oceania	Maximum	1,323 W
		Normal operation	437 W
		Standby	184 W
		Sleeping	35 W (FS-8000C/FS-8000CD) 38 W (FS-8000CN)
Noise†		Printing	LpA = 49.7 dB (A) (color), 51.1dB (A) (monochrome)
		Standby	LpA = 35.3 dB (A)
		Sleeping	Negligible
Dimensions		Printer	590 (23-1/4) wide × 429 (16-7/8) high × 585 mm (23-5/16 inches) deep
		Paper feeder	560 (22-1/16) wide ×251 (9-7/8) high × 566 mm (22-5/16 inches) deep
Weight		Printer	76.3 kg (168-3/16 lb)
		Paper feeder	19.1 kg (42-1/8 lb)
		Duplexer	22.1 kg (48-3/4 lb)

Table C-1 (Continued)

† In accordance with ISO 7779 (Bystander Position, sound pressure level at the front)

C.2 Printing Speeds

Mode	Paper Size	Print Speeds	
		Color	Monochrome
Simplex printing	A4, Letter	8 pages/minute	30 pages/minute
	A5	8 pages/minute	15 pages/minute
	A3, Ledger, Legal, B4, B5	4 pages/minute	15 pages/minute
	A4 thick, Transparency (A4)	3.5 pages/minute	8 pages/minute
Duplex printing†	A4, Letter	8 pages/minute	15 pages/minute
	A5	8 pages/minute	15 pages/minute
	A3, Ledger, Legal, B4, B5	4 pages/minute	7.5 pages/minute

Table C-2

† The PD-30 duplex unit is required.

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