



FS-1920

Page Printer



Operation Guide

Caution on Installation

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Notice on Software

Software used with this printer must support the printer's emulation mode. The printer is factory-set to emulate the PCL. The emulation mode can be changed by following the procedures described in [Chapter 1](#).

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Cautions for Toner Handling

- Do not incinerate toner and toner containers. Dangerous sparks may cause burn.
- Never open the toner container or waste toner box.
- Make sure not to inhale the toner, and not to rub your eyes or touch your mouth with the hands stained with the toner. And make sure not to stick to your skin.
- For the disposal of old toner container and waste toner box, consult your dealer. Or dispose of the toner or toner containers in accordance with Federal, state and Local rules and regulations.
- Keep away the toner container and the waste toner box from children.

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Introduction

The Kyocera Mita page printer has many extremely desirable features. It was designed to make a contribution to a cleaner environment as well as to represent the latest generation of page printer technology.

This section contains the following subsections.

- **Features**
- **For More Information...**
- **Guide to the Operation Guide**

Features

This section outlines the common major printer features of the FS-1920 page printer.

Ultra long life modules

The drum, developer, and fuser have been designed for ultra long life.

Amorphous silicon drum

The drum has been developed using Kyocera's unique ceramic technology using amorphous silicon.

KIR (Kyocera Image Refinement)

This is Kyocera's original smoothing function. It uses software to enhance the printer's resolution and produce high-quality printing. The default setting is On.

Superb print quality

Using 1200 dpi resolution in Fast 1200 mode, the printout is close to typeset quality. Also, with Kyocera Image Refinement (KIR) technology, high quality printing can be achieved even at 300 dpi and 600 dpi.

Large paper capacity

Approximately 500 sheets can be loaded into the paper cassette, and about 100 sheets can be loaded into the MP tray.

Wide variety of print media

As well as standard paper, the printer will print on transparency, labels and other types of special purpose media.

Sleep Mode

Conserves energy during the printer's idle periods.

Ecoprint

Extends the toner yield by reducing the amount of toner used on the page.

Displaying printer messages in any of eight languages

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

USB (Universal Serial Bus) Interface

This printer supports Full-Speed USB 2.0 standards. Connection to a computer with a USB interface gives a higher communication speed than parallel interface connection.

e-MPS

‘e-MPS’ is an abbreviation for ‘enhanced-Multiple Printing System,’ which is a post-processing function that combines electronic sorting, job retention, and virtual mailboxing.

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 Mita’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)

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

PDF direct printing

Allows you to send a selected PDF file directly to the printer without invoking a printer driver.

Account management system

The account management system function records the number of pages printed by each department. The administrator can preset the maximum number of pages that each department will be allowed to print.

Microdrive (hard disk unit) slot for various functions such as job retention, VMB, and more

By saving print jobs onto the Microdrive, they can be printed out at the operator panel when desired. The electronic sort function can be used for much faster printing.

CompactFlash card slot for option fonts, macros, forms, etc.

Data in the CompactFlash card can be selectively read from the printer's operator panel.

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 CD-ROM (comes with the printer) for details.

For More Information...

Item	Description
Installation Guide (paper manual)	Describes procedures from printer setup to printing a test page.
KX Printer Driver Installation Guide (paper manual)	Describes the procedure to install the printer driver software.
Operation Guide (this manual)	Guides you through topics concerning the operations and maintenance of the printer.
KX Printer Drivers Operation Guide	Describes how to install and set the printer driver.
PRESCRIBE Command Technical Reference	PRESCRIBE is the native language of the Kyocera Mita printers. This Technical Reference contains the information about how the printing is performed using the PRESCRIBE commands as well as the font and emulation description. Also included is a list of permanent parameters and their explanation needed when customizing your printer.
PRESCRIBE Command Reference	Gives a detailed explanation of the PRESCRIBE command syntax and parameters with the aid of print examples.



Note

- For information on how to install the printer driver software, refer to the KX Printer Driver Installation Guide that is included with the printer.
- For information on how to use the printer driver software, refer to the KX Printer Driver Operation Guide that is included on the CD-ROM (comes with the printer).

Guide to the Operation Guide

This *Operation Guide* has the following chapters:

Chapter 1 Using the Operator Panel

This chapter explains the message display, indicators and keys on the operator panel, and how to make various settings from the operator panel.

Chapter 2 Paper Selection

This chapter explains the types of paper that can be used with the printer.

Chapter 3 Maintenance

This chapter explains how to replace the toner container, waste toner box, and how to care for your printer.

Chapter 4 Troubleshooting

This chapter explains how to handle printer problems that may occur, such as paper jams.

Chapter 5 Fonts

This chapter explains about fonts and lists the printer's internal fonts.

Appendix A Options

This appendix explains how to expand the printer's memory and how to install each option unit.

Appendix B Host Computer Interface

This appendix explains the pin assignment and specifications for the printer's parallel interface, USB interface, and option serial interface.

Appendix C Specifications

This appendix lists the printer's specifications.

Glossary

This glossary explains the terminology used in this guide.

The following symbols are used to attract your attention in this guide. The symbols and their meanings are as follows:



Note

Indicates tips or advice useful for operation.



Caution

Indicates situations that are potentially hazardous to the human body or devices.



Warning

Indicates situations that are potentially extremely hazardous to the human body or devices.



Option

Indicates operations that can be performed or are effective only when the required option unit is installed.

Chapter 1 Using the Operator Panel

This chapter explains the following topics:

- **Understanding the Operator Panel**
- **Printing Test Pages**
- **Paper Handling**
- **Pagination**
- **e-MPS**
- **Interface**
- **Operating the Storage Device**
- **Configuration**

Understanding the Operator Panel

The operator panel has a LCD message display, three indicators, and eight keys.

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

Message Display

The message display gives information in the form of short messages. The eight messages listed below are displayed during normal warm-up and printing.

Other messages that may appear when the printer needs the operator's attention are explained in [Chapter 4](#).

Message	Meaning
Self test	The printer is self-testing after power-up.
Please wait	The printer is warming up and is not ready. When the printer is switched on for the first time after the toner container is installed, (Adding toner) also appears.
Ready	The printer is ready to print.
Processing	The printer is receiving data, generating graphics, reading a CompactFlash card/Microdrive, or printing.
Sleeping	The printer is in sleep mode. The printer wakes from sleep mode whenever the GO key on the operator panel is pressed, the cover is opened or closed, or data is received. The printer then warms up and goes online. The time that the printer takes to enter sleep mode depends on the sleep timer setting.
Cancelling data	Jobs inside the printer are being canceled. To cancel a job, see the table on page 1-5 .
Waiting	The printer is waiting for the end-of-job command before printing the last page. Pressing the GO key allows you to obtain the last page immediately.
FormFeed Time Out	The printer is printing the last page after a waiting period.

Table 1-1

Interface Indicator



The interface indicator shows the interface that is currently used. It uses the following abbreviations:

PAR	Standard bi-directional parallel interface
USB	Standard USB interface
SER	Option serial interface (RS-232C)
OPT	Option network interface card
---	No interface is active.



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



This indicator indicates the paper size of the current paper cassette. The following abbreviations are used to indicate the paper sizes.

Message Display	Paper Size	Message Display	Paper Size
A4	ISO A4 (21 × 29.7 cm)	EX	Executive (7-1/4 × 10-1/2 inches)
A5	ISO A5 (14.8 × 21 cm)	#6	Commercial 6-3/4 (3-5/8 × 6-1/2 inches) [†]
A6	ISO A6 (10.5 × 14.8 cm) [†]	#9	Commercial 9 (3-7/8 × 8-7/8 inches) [†]
B5	JIS B5 (18.2 × 25.6 cm)	O2	Oficio II (8-1/2 × 13 inches)
B6	JIS B6 (12.8 × 18.2 cm) [†]	16K	16 kai (19.7 × 27.3 cm)
LT	Letter (8-1/2 × 11 inches)	ST	Statement (5-1/2 × 8-1/2 inches) [†]
LG	Legal (8-1/2 × 14 inches)	FO	Folio (21 × 33 cm)
MO	Monarch (3-7/8 × 7-1/2 inches) [†]	HA	Japanese Postcard (10 × 14.8 cm) [†]
BU	Business (4-1/8 × 9-1/2 inches) [†]	OH	Return Postcard (20 × 14.8 cm) [†]
DL	ISO DL (11 × 22 cm) [†]	Y2	Envelope (Youkei 2) (11.4 × 16.2 cm) [†]
C5	ISO C5 (16.2 × 22.9 cm)	Y4	Envelope (Youkei 4) (10.5 × 23.5 cm) [†]
b5	ISO B5 (17.6 × 25 cm)	CU	Custom Size (14.8 × 21 cm to 21.6 × 35.6 cm)

Table 1-2

[†] With only the MP tray feeding.



While the printer is processing data, the SIZE indicator indicates the paper size selected by the application software.

Paper Type Indicator



This shows the paper type defined for the current paper cassette. Automatic cassette switching is available according to the paper type.

The paper type can be specified at the operator panel. See [Creating Custom Paper Type](#) on page 1-32.

The following abbreviations are used to indicate the paper type.

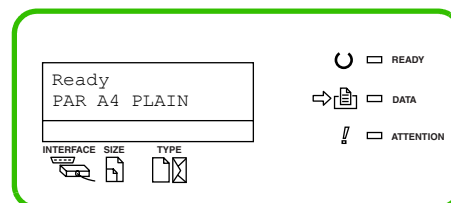
Message Display	Paper Type	Message Display	Paper Type
None	Auto	LETTERHEA	Letterhead
PLAIN	Plain	COLOR	Color
TRNSPRNCY	Transparency [†]	PREPUNCHE	Prepunched
PREPRINTE	Preprinted	ENVELOPE	Envelope [†]
LABELS	Labels [†]	CARDSTOCK	Cardstock [†]
BOND	Bond	THICK	Thick [†]
RECYCLED	Recycled	HIGH QUAL	High quality
VELLUM	Vellum [†]	CUSTOM 1 (to 8)	Custom 1 (to 8)
ROUGH	Rough		

Table 1-3

[†] With only the MP tray feeding.

READY, DATA, and ATTENTION Indicators

The following indicators light during normal operation and when the printer needs attention.

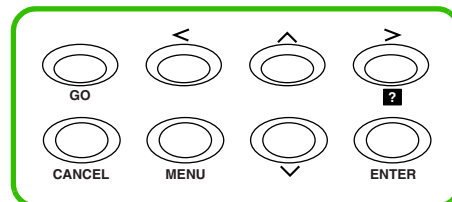


Indicator	Description
READY	<p>Flashing: Indicates when an error occurs that you can clear by yourself.</p> <p>Lit: Indicates that the printer is on-line. The printer prints received data.</p> <p>Off: Indicates that the printer is off-line. Data can be received but will not be printed. Also indicates when printing is automatically stopped due to occurrence of an error.</p>
DATA	<p>Flashing: Indicates data transfer is taking place.</p> <p>Lit: Indicates either that data is being processed, or that data is being written to the memory card.</p>
ATTENTION	<p>Flashing: Indicates when the printer needs maintenance attention or the printer is warming up (Please wait).</p> <p>Lit: Indicates when a problem or an error occurs that you can clear by yourself. (For example, paper jam occurs.)</p>

Table 1-4

Keys

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



Note

Settings made with these keys effect only the interface currently in use.









Key	Function
	<ul style="list-style-type: none"> Switches the printer on-line and off-line. Prints and feed out one page. Cancels specific errors.
	<ul style="list-style-type: none"> Cancels a printing job. To cancel, proceed as follows: <ol style="list-style-type: none"> 1 Check if Processing is displayed in the message display. 2 Press the CANCEL key. 3 Print Cancel? appears in the message display and then interface to be canceled. Parallel USB Serial (appears only when an option serial interface board kit is installed) Option (appears only when an option network interface card is installed) Press the CANCEL key again if you wish to stop the cancellation of printing. 4 Select the interface to cancel using the ^ or v key and then press the ENTER key. Printing from the selected interface will stop. Cancelling data appears in the message display and printing stops after the current page is printed. Resets numeric values, or cancels a setting procedure. Used to stop the sounding of the alarm buzzer an error occurs.
	<ul style="list-style-type: none"> When pressed during mode selection, terminates the setting and the printer returns to the Ready condition. Used to select the emulation, font, character code set; to read an CompactFlash card, and more.
	Used to access a desired item or enter numeric values. In some of the control procedures, the > and < keys are used to enter or exit a sub item.
	Used to access a desired item or enter of numeric values. In some of the control procedures, the > and < keys are used to enter or exit a sub item.
	Used as the < key in the mode selection function.
	<ul style="list-style-type: none"> Used as the > key in the mode selection function. Displays online help messages on the message display when paper jam errors occur. When pressed in the Ready condition, displays explanations of online help messages. When pressed while the online help is displayed, cancels the online help.
	Finalizes numeric values and other selections.

Table 1-5

† If you hold down the **ENTER** key and press the **MENU** key when Ready is shown on this printer, the AdministrationID menu will be displayed. This menu is the setting menu for administration under the Account Management System and is normally not used. Press the **MENU** key to return to the Ready display.

Menu System Road Map

This section explains how to use the menu selection system. The **MENU** key on the operator panel allows you to use the menu to set or change the printer environment such as the number of copies to make, emulation, etc., to your specific needs. Settings can be made when *Ready* is indicated on the printer message display.

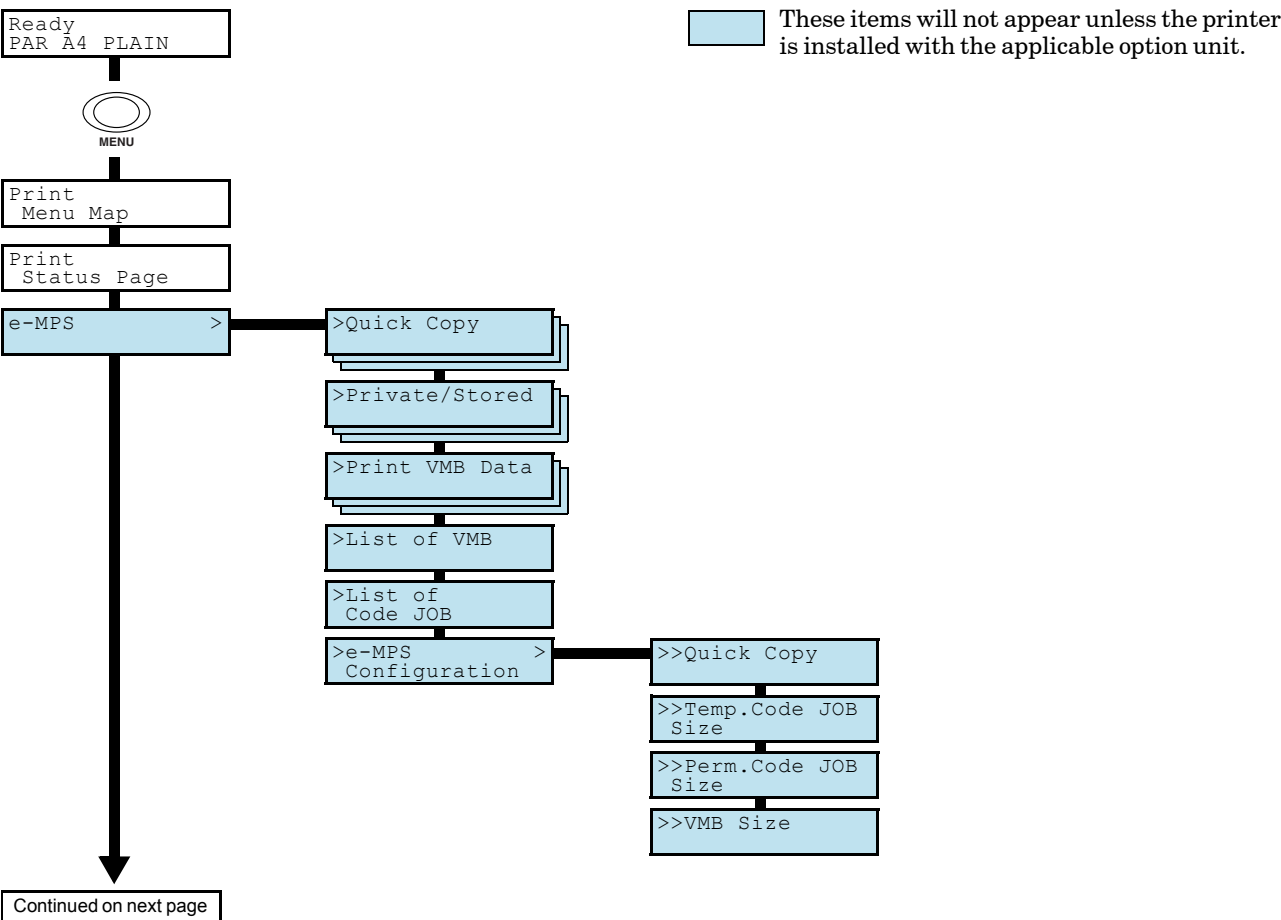


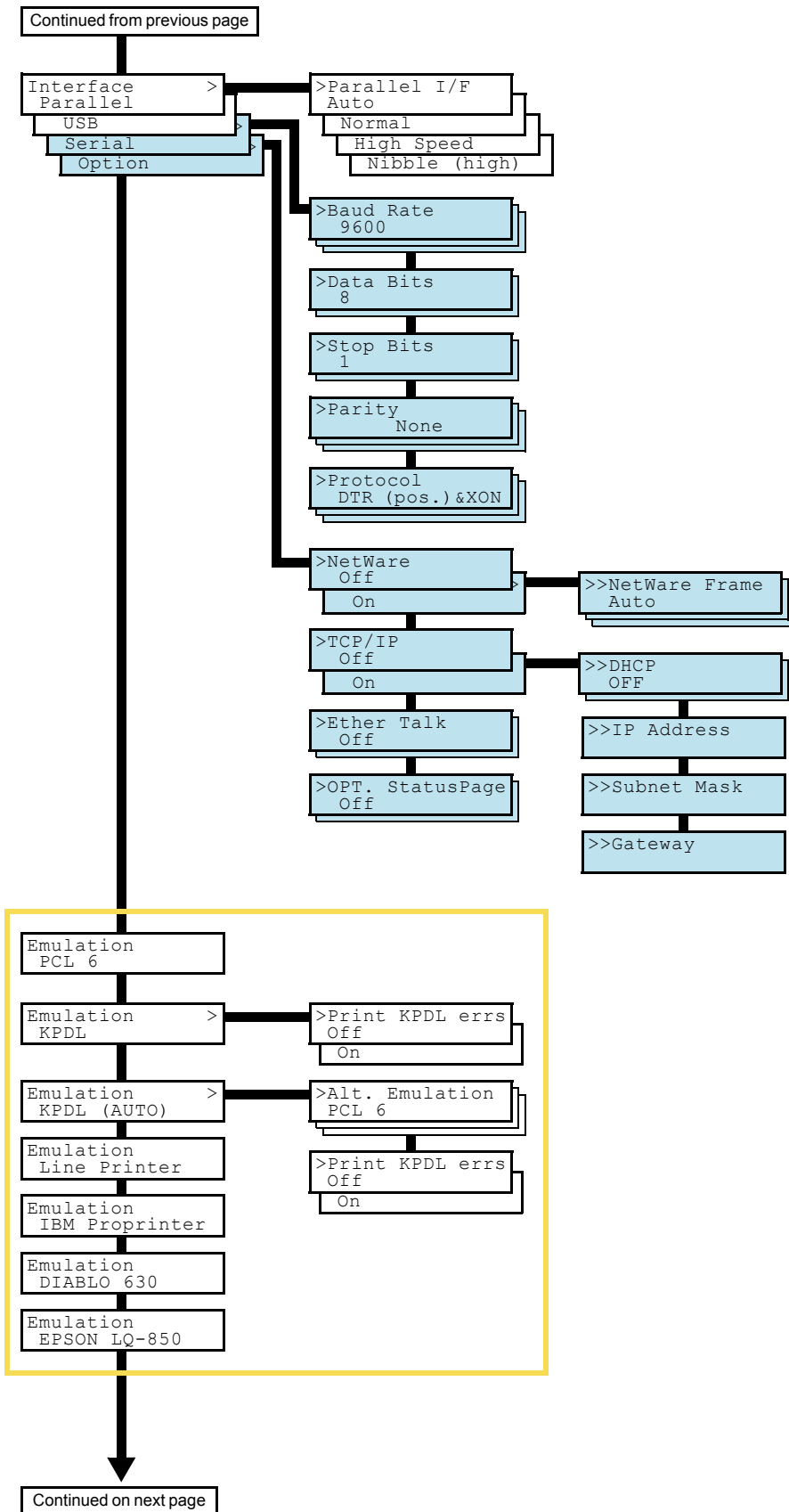
Note

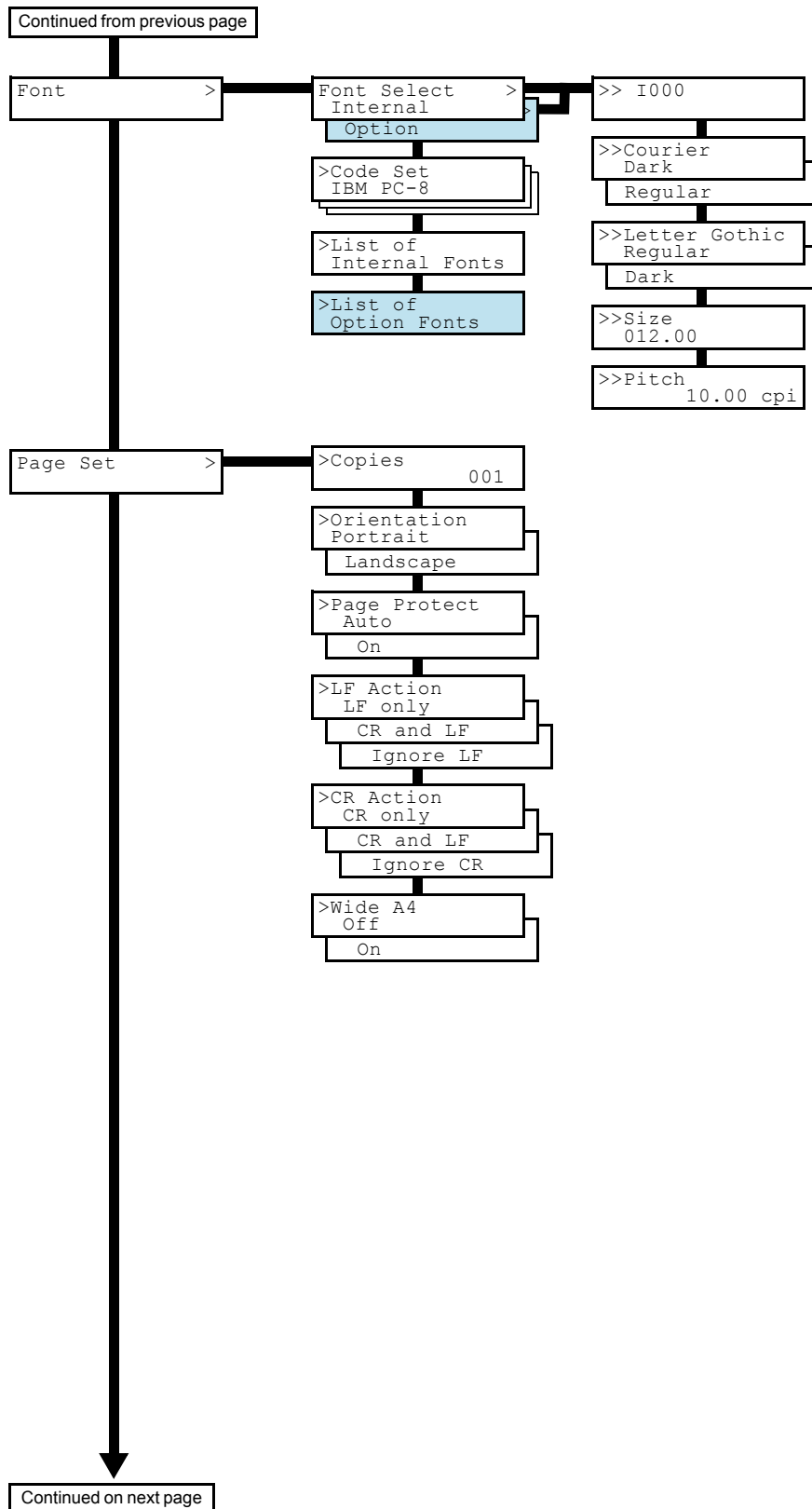
The printer obeys the most recently received printer settings sent from the application software, or from the printer driver, which take priority over operator panel settings.

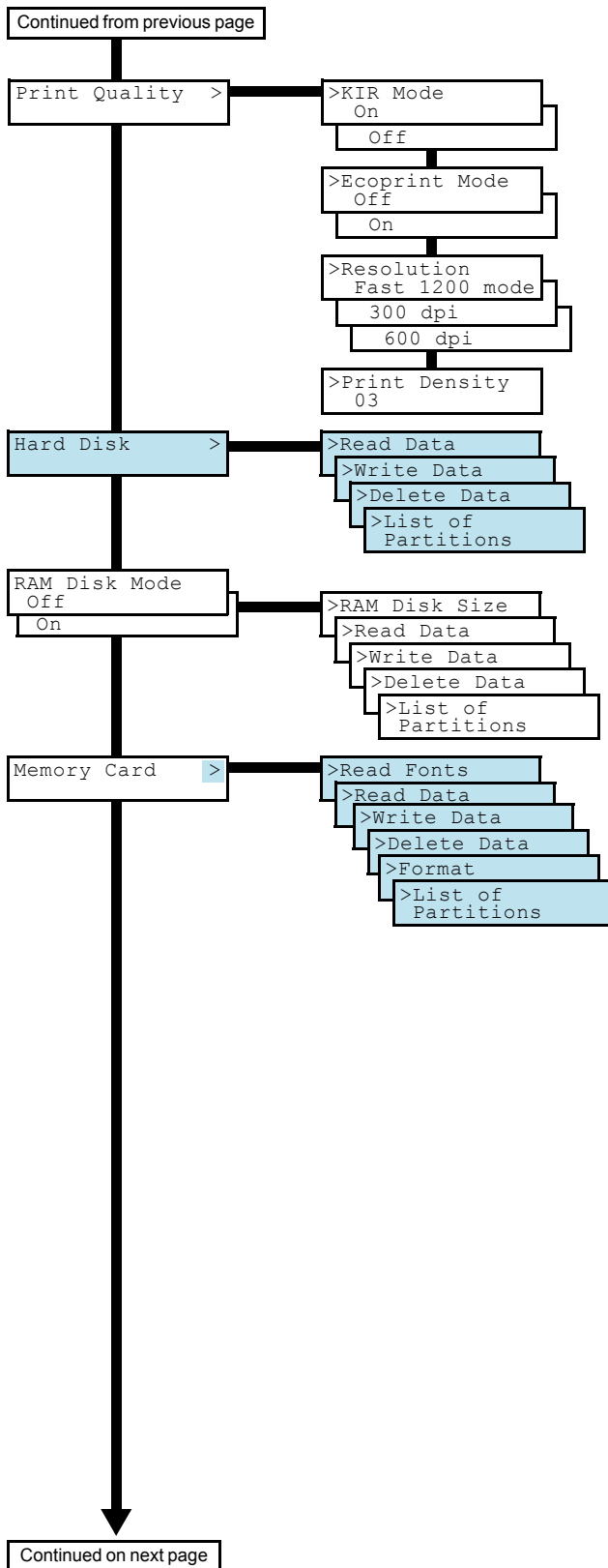
The following is the hierarchy diagram of the menu selection system of the printer.

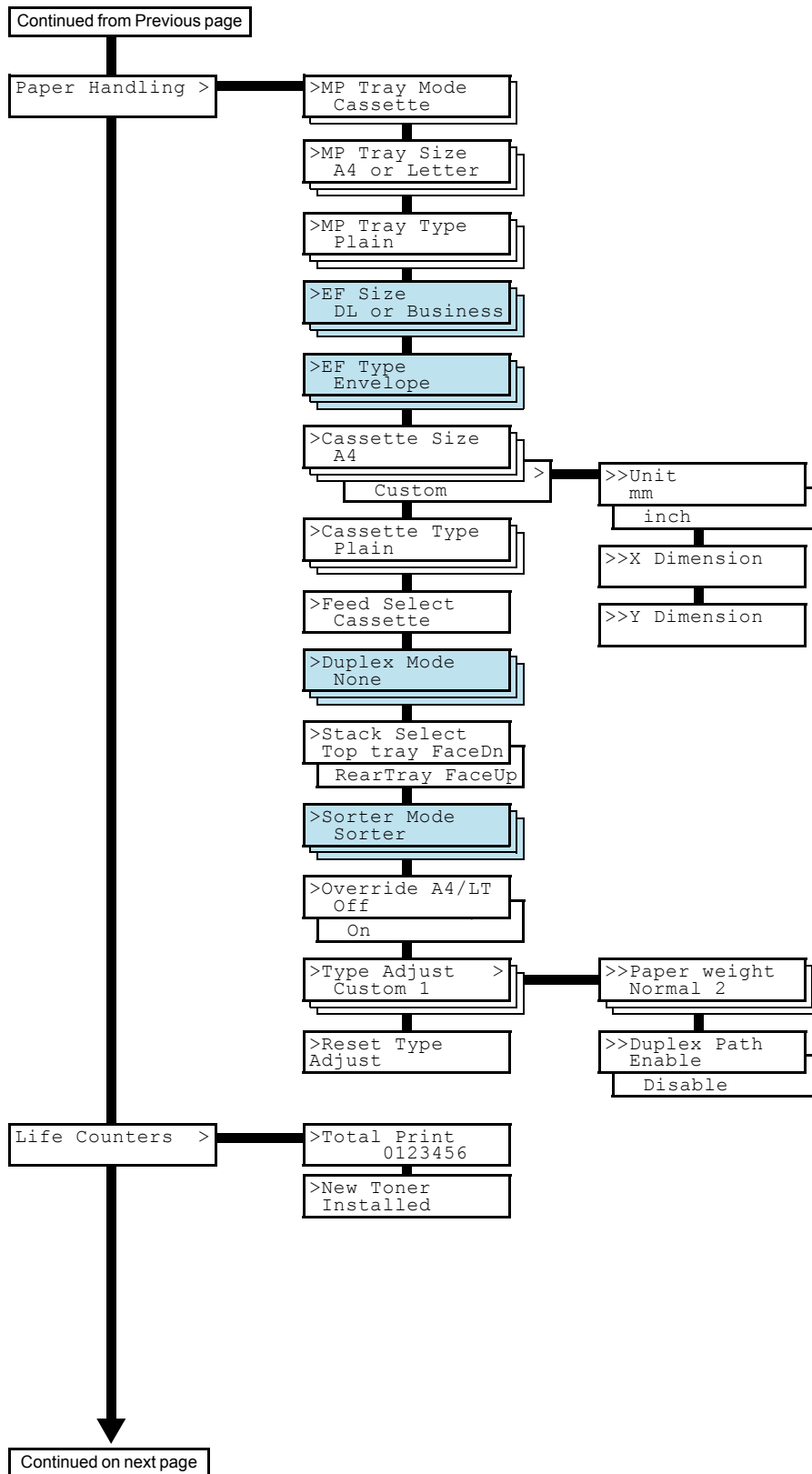
The vertical transition is made with the **^** and **∨** keys and horizontal transition is made with the **>** and **<** keys. To change or finalize configuration on an item, use the **ENTER** key.

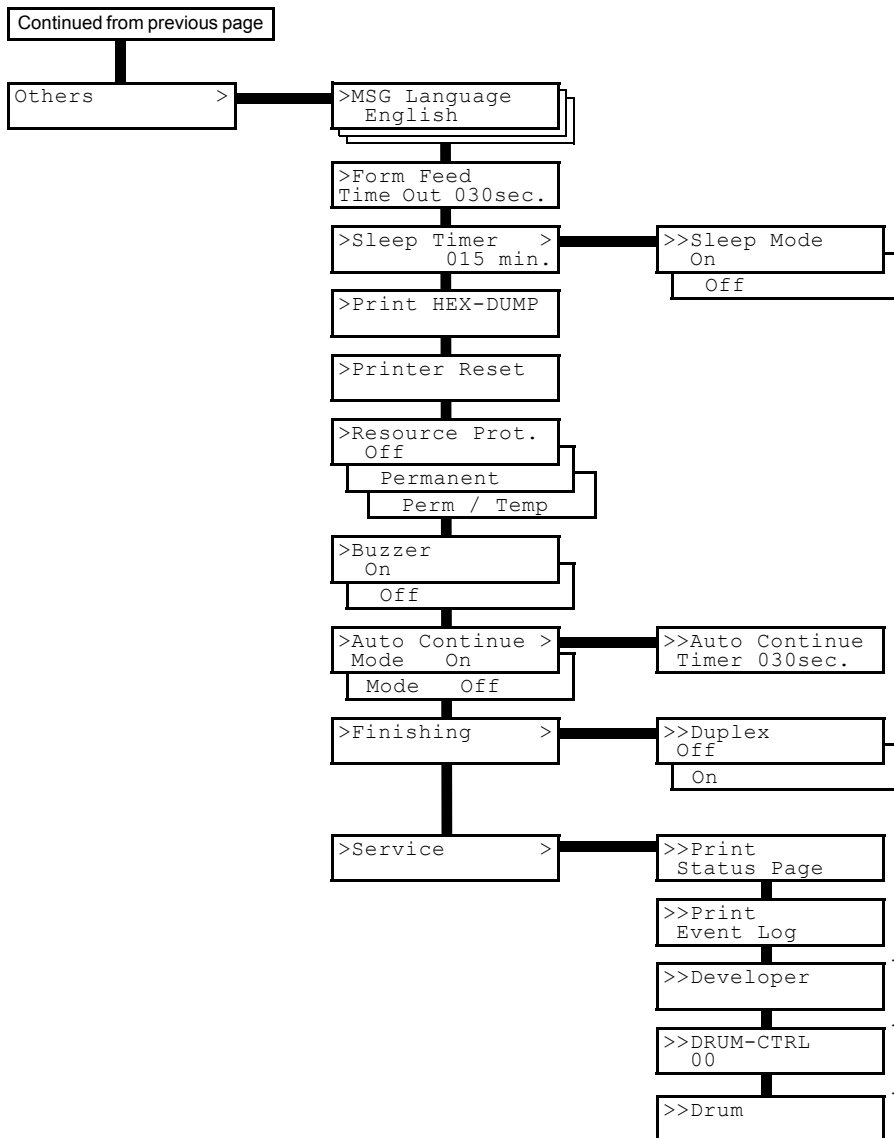












† Since this menu is provided for service, normally you need not use it.

Printing Test Pages

This section explains the procedure for printing the printer's internal information using the menu selection system. The menu map is useful 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.

Menu Map

The printer prints a full list of menu selection system. Note that menus indicated on the list may vary depending on which option units are installed on the printer.

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until **Print Menu Map** appears.

Print
Menu Map

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

Print
Menu Map ?

- 4** Press the **ENTER** key again. The printer prints a menu map.

Sample MENU MAP



FS-1920 Page Printer

MENU MAP

[illegible]

Status Page

If you want to check the printer's current status, including memory available and option settings, you can find the information you need on the 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 ?`

- 4** Press the **ENTER** key again. The printer prints a status page.

For a full description of the status page, see the following pages.

The following is a sample status page. The numbers below refer to the contents explained on the following pages.

KYOCERA Ecosys FS-1920 Page Printer

STATUS PAGE

Firmware Version: _____ Released: _____

Hardware Information

.....
.....
.....
.....
.....

Memory

.....
.....
.....
.....
.....

Page Information

.....
.....
.....

Installed Options

.....
.....
.....

Network Status

.....
.....
.....

Emulation

.....
.....
.....
.....
.....

Error Log

.....

Toner Gauge

0 _____ 100

Interfaces

.....
.....
.....
.....
.....
.....
.....
.....

KIR Test pattern _____ **ON**



Note

Items and values on the status page may vary depending on the printer's firmware version.

1 — Software Version

This information shows the firmware version and date of issue of the printer.

2 — Hardware Information

This information shows various printer settings, such as the size and type of the paper in the paper cassettes.

3 — Memory

This shows the amount of total memory installed in the printer, the amount of currently available memory, and the current status of the RAM disk. See *Operating the Storage Device* on page 1-81.

4 — Page Information

This shows the print resolution, number of copies, and the total page count.

5 — Installation Options

This shows the option(s) installed in the printer.

6 — Network Status

This shows the IP address, Subnet Mask address, and Default Gateway address for the network interface card installed in the printer.

7 — Emulation

This shows all available emulations of the printer. The printer is shipped from the factory with PCL 6 emulation selected as the default.

8 — Error Log

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

- KPD L (PostScript) errors
- Memory card errors
- Memory card, hard disk, RAM disk errors

The most recent error is displayed on the top line of the Error Log. For error remedies, see section *Error Messages* on page 4-10. Error information is cleared when the printer's power is turned off.

9 — Toner Gauge

This shows the approximate level of remaining toner. When the value is 100, the toner container is full.

10 — Interface Information

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

11 — KIR Test Pattern

KIR is the Kyocera Mita's original smoothing function. This test pattern shows the effect of the KIR (Kyocera Image Refinement) system.

Service Status Page

The service status page contains printer settings information that is more detailed than the standard status page and is therefore for mostly service purposes. However, since there is a great deal of information available on the service status page that may be helpful 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 again. The display indicates `Processing` and printing starts.

Network Card Interface Status Page



Option

To use this function, the network interface card must be installed on the printer.

You can print out a status page for the network interface. The network interface card status page shows the firmware version, the network addresses, and other information under various network protocols about the network interface card. The default setting is **On** (print). If the setting is changed to **Off** (not print) as follows, however, the network interface status page will be printed when the printer status page is printed.



Note

Printing out a network interface card status page may not be possible with some network interface cards. For details, see the manual for the network interface card.

- 1 Press the **MENU** key.
- 2 Press the **^** or **v** key repeatedly until **Interface >** appears.

```
Interface  >
Parallel
```

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

```
Interface
? Parallel
```

If you want to abandon the interface selection procedure, press the **CANCEL** key. The interface remains unchanged.

- 4 Press the **^** or **v** key repeatedly until **Option** appears.

```
Interface
? Option
```

- 5 Press the **ENTER** key again. A **>** appears.

```
Interface  >
Option
```

- 6 Press the **>** key and then press the **^** or **v** key repeatedly until the message display indicates **>Opt. StatusPage**.

```
>Opt. StatusPage
On
```

- 7** The default setting is On. If it is set to Off, change it as follows. Press the **ENTER** key. A blinking question mark (?) appears.

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

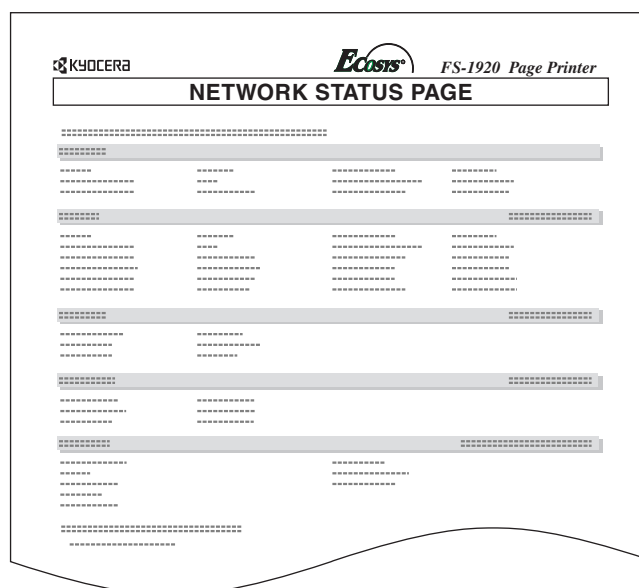
- 8** Select On using the ^ or v key.

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

- 9** Press the **ENTER** key again.

```
>Opt. StatusPage
On
```

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



Font Lists

To help in selecting fonts, you can print the lists of the fonts including option fonts.

1 Press the **MENU** key.

2 Press the \wedge or \vee key repeatedly until `Font >` appears.

```
Font >
```

3 Press the `>` key.

4 Press the \wedge or \vee key repeatedly until `> Font Select>` appears.

```
>Font Select >
Internal
```

5 To print a list of the internal fonts, check that `Internal` is displayed. To print a list of option fonts, press the **ENTER** key. Press the \wedge or \vee key repeatedly until the message display indicates `Option` and press the **ENTER** key.

6 Press the \wedge or \vee key repeatedly until `>List of Internal Fonts` or `>List of Option Fonts` appears.

```
>List of
Internal Fonts
```

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

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

8 Press the **ENTER** key again. `Processing` appears, then `Ready`. The printer prints a list of fonts with a short sample and font ID (number) for each font.

Font Lists

[illegible]

Received Data Dumping

It is possible to print data received by the printer as hexadecimal code for the purposes of 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. `Processing` appears for a second, and then `Waiting` appears.

```
Processing
```



```
Waiting
```

- 7** Send data to be dumped to the printer. The message `Processing` will be displayed during receiving the data.

Once the dumped data you require has been output, it is possible to cancel the printing of any further dumped data by taking the printer offline by pressing the **GO** key and then pressing the **CANCEL** key.

- 8** Once all data has been received, the message `Waiting` will appear. Press the **GO** key to finish printing.

Paper Handling

This section explains how to use the operator panel to change the paper size and type for each paper source, the mode for the MP (multi-purpose) tray, and other settings regarding paper handling.

Setting the Paper Size

Set the paper sizes according to the sizes of paper to be set in the paper cassette and the MP tray.

If they do not match, printing will not be made on the correct size paper when automatic paper size selection is made by the application software (printer driver).

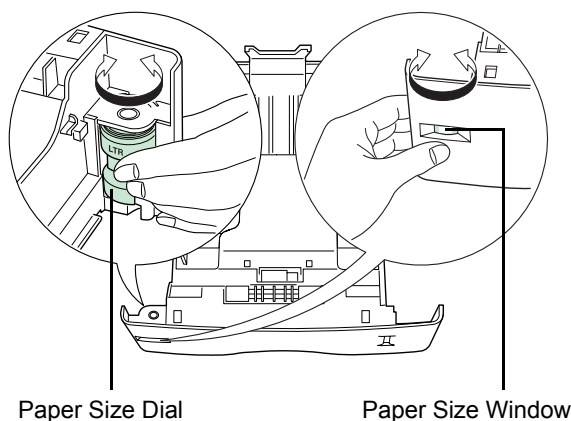
Setting the Paper Size in Paper Cassette

To set the standard sizes A5, A4, B5, Letter, and Legal (for U. S. A. only) size for the paper cassette, use the following procedure to set the paper size dial of the paper cassette.

If you use a non-standard size, see [Custom Paper Size](#) on next page.

Properly set the paper into the paper cassette. For details about the adjustment of the paper guides and paper stopper inside the paper cassette, set the [Installation Guide](#) supplies with the printer.

- 1 Turn the paper size dial so that the size of the paper you are going to use appears in the paper size window.



- 2 Adjust the paper guides and paper stopper inside the paper cassette to the size of the paper to be used and load the paper into the cassette.

The paper size setting for the paper cassette is completed.

Custom Paper Size

In addition to the standard sizes A5, A4, B5, Letter, and Legal (for U. S. A. only) size for the paper cassette, paper of other sizes can be fed as custom sizes. When placing paper of sizes other than A5, A4, B5, Letter, or Legal (for U. S. A. only) into the paper cassette, set the size of the paper to be used into the printer by following the procedure given below. If an option paper feeder (PF-60) is installed, custom sizes for its paper cassette can be set using the same procedure.

This menu appears when the paper size dial of the paper cassette is set to **OTHER**.

Properly set the paper into the paper cassette. For details about the adjustment of the paper guides and paper stopper inside the paper cassette, see the *Installation Guide* supplied with the printer.

Setting Paper Size Dial

Use the following procedure to set the paper size dial to **OTHER**.

- 1** Pull out the paper cassette from the printer and turn the paper size dial to **OTHER**. See *step 1* in *Setting the Paper Size in Paper Cassette*.
- 2** Adjust the paper guides and paper stopper inside the paper cassette to the size of the paper to be used and load the paper into the cassette.

When using non-standard size paper, read the next section to set the paper size from the operator panel.

Setting a custom size from the Operator Panel

Set the size of the paper loaded in the paper cassette into the printer from the printer operator panel.

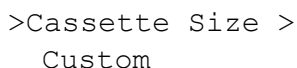
- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until `Paper Handling >` appears.

`Paper Handling >`

- 3** Press the **>** key.

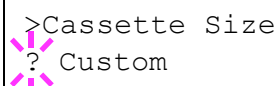
- 4** Press the \wedge or \vee key repeatedly until `>Cassette Size >` appears.

If option paper feeders are added, `Cassette 1 Size` will appear for the standard paper cassette and `Cassette 2 Size`, `Cassette 3 Size`, and `Cassette 4 Size` will appear for the option paper feeders.



```
>Cassette Size >
Custom
```

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



```
>Cassette Size
? Custom
```

- 6** Press the \wedge or \vee key to display the desired paper size. The message display toggles through the following paper sizes:

```
Custom
Oficio II
Folio
16K
C5
A5
B5
ISO B5
A4
Executive
Letter
Legal
```

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

If you selected `Custom` in step 6, be sure to set the unit of measurement and the dimensions of the paper as described in the following sections.

Selecting the Unit of Measurement

Then, use the following procedure to set the unit of measurement.

- 1 Press the > key.
- 2 Press the ^ or v key repeatedly until >>Unit appears. The unit of measurement can be selected between millimeters and inches. The current unit of measurement is displayed (the default setting is mm).

```
>>Unit
mm
```

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

```
>>Unit
? mm
```

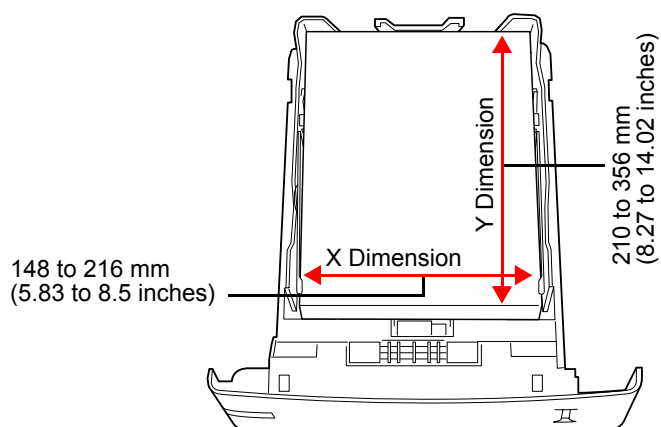
- 4 Select mm or inch using the ^ or v key.
- 5 Press the ENTER key.

Set the dimensions of paper as described in the next section.

Entering the Width and Length

Then, use the following procedure to set the paper size.

Enter the paper size for X Dimension and Y Dimension as shown in the figure.



- 1 When the unit of measurement is set, press the **▼** key.
>>X Dimension appears as shown below (the paper width setting).

>>X Dimension
216 mm

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

>>X Dimension
216 mm

- 3 Press the **^** or **▼** key to increase or decrease the value of the figure where the cursor is blinking and display the desired width. The width can be set between 148 and 216 mm (5.83 to 8.5 inches). You can use the **>** and **<** keys to move the cursor right and left.

- 4 Display the paper width and press the **ENTER** key.

- 5 When the width is set, press the **▼** key. >>Y Dimension appears (the paper length setting). Set the desired length in the same way as the width. The length can be set between 210 and 356 mm (8.27 to 14.02 inches).

- 6 Display the paper length, press the **ENTER** key.

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

To print using the custom size set above, define the same custom size on the printer driver. For details, see [KX Printer Drivers Operation Guide](#).

Setting the Paper Size in MP Tray

When using the MP tray in the cassette mode, you should set the same paper size to the MP tray as that is used to format the job to print. The factory default setting is A4 or Letter.

This menu does not appear when the option envelope feeder is installed on the printer.

For more details about the paper sizes that can be fed from the MP tray, see [Chapter 2](#).

- 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 v key repeatedly until >MP Tray Size appears.

```
>MP Tray Size
  A4
```

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

```
>MP Tray Size
? A4
```

- 6 Press the ^ or v key to display the desired MP tray size. The display changes as shown below.

```
A4
Executive
Letter
Legal
Custom
Oficio II
Statement
Folio
Youkei 2
Youkei 4
16K
Hagaki
OufukuHagaki
Monarch
Business
Comm. #9
Comm. #6 3/4
DL
C5
A6
B6
A5
B5
ISO B5
```

- 7 When the desired paper size is displayed, press the **ENTER** key.
- 8 Press the **MENU** key. The message display returns to Ready.

The paper size setting for the MP tray is completed.

Setting the Paper Type

Set the paper types according to the paper to be set in the cassette and the MP tray.

Setting the Paper Type in Paper Cassette

Make this setting to match the paper type fed from the paper cassette of the printer. If the paper type is set correctly, you can perform printing using the media type selection function from the application software (printer driver). The factory default setting is `Plain`.

For more details about the paper types that can be fed from the paper cassette, see [Chapter 2](#).

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until `Paper Handling >` appears.

`Paper Handling >`

- 3** Press the **>** key.
- 4** Press the \wedge or \vee key repeatedly until `>Cassette Type` appears.

`>Cassette Type`
`Plain`

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

`>Cassette Type`
`? Plain`

- 6** Press the \wedge or \vee key to display the desired cassette type. The display changes as shown below.

```
Plain
Preprinted
Bond
Recycled
Rough
Letterhead
Color
Prepunched
High quality
Custom(1 to 8)
```

- 7** When the desired cassette type is displayed, press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to `Ready`.

Setting the Paper Type in MP Tray

You can automatically select the paper cassette according to the selection made by the application software (printer driver). The factory default setting is Plain.

This menu does not appear when the option envelope feeder is installed on the printer.

For more details about the paper types that can be fed from the MP tray, see [Chapter 2](#).

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until Paper Handling > appears.

Paper Handling >

- 3** Press the **>** key.
- 4** Press the **^** or **v** key repeatedly until >MP Tray Type appears.

>MP Tray Type
Plain

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

>MP Tray Type
? Plain

- 6** Press the \wedge or \vee key to display the desired MP tray type. The display changes as shown below.

Plain
Transparency
Preprinted
Labels
Bond
Recycled
Vellum
Rough
Letterhead
Color
Prepunched
Envelope
Cardstock
Thick
High quality
Custom (1 to 8)

- 7** When the desired MP tray type is displayed, press the **ENTER** key.

- 8** Press the **MENU** key and the message display returns to Ready.

Creating Custom Paper Type

The following describes the procedure used to set a user-defined paper type for the printer. Eight custom user settings may be registered. After having been set, any of these may be called up when setting the paper type for a paper source.

The paper weight and duplex path can be set (see *Setting the Paper Weight* on page 1-34, and *Setting the Duplex Path* on page 1-35) after selecting the paper type to be customized as follows. For how to reset the customized settings, see *Resetting the Custom Paper Type* on page 1-36.

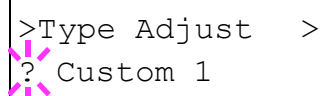
- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until Paper Handling > appears.

Paper Handling >

- 3** Press the > key.
- 4** Press the \wedge or \vee key repeatedly until >Type Adjust > appears.

>Type Adjust >
Custom 1

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



```
>Type Adjust >
? Custom 1
```

- 6** Press the **^** or **v** key to display the desired paper type. The display changes as shown below.

```
Custom (1 to 8)
Plain
Transparency
Preprinted
Labels
Bond
Recycled
Vellum
Rough
Letterhead
Color
Prepunched
Envelope
Cardstock
Thick
High quality
```

- 7** When the paper type to be customized is displayed, press the **ENTER** key.
- 8** Press the **>** key and proceed to *Setting the Paper Weight* on the following page.

Proceed to *Setting the Paper Weight* and *Setting the Duplex Path* starting from the following page.

Setting the Paper Weight

You can set the paper thickness for your custom paper type to be customized.

- 1 Display the custom paper type (see [Creating Custom Paper Type](#) on page [1-32](#)) and press the > key.

- 2 Press the ^ or v key repeatedly until >>Paper Weight appears.

```
>>Paper Weight
Normal 2
```

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

```
>>Paper Weight
? Normal 2
```

- 4 Press the ^ or v key to display the desired paper thickness. The display changes as shown below. For details of the default setting for each paper type, see [Paper Type](#) on page [2-12](#).

```
Light
Normal 1
Normal 2
Normal 3
Heavy 1
Heavy 2
Heavy 3
Extra Heavy
```

- 5 When the desired paper thickness displayed, press the **ENTER** key.

- 6 Press the **MENU** key. The message display returns to Ready.

If the paper type is set to `Custom` and the option duplexer is installed on the printer, duplex printing can be enabled and disabled. See [Setting the Duplex Path](#) on the following page.

Setting the Duplex Path



To use this function, the duplexer must be installed on the printer.

If the paper type is set to *Custom* and the option duplexer is installed on the printer, you can set whether or not to enable duplex printing as follows. The default setting is *Enable*.

1 Display the custom paper type (see *Creating Custom Paper Type* on page 1-32) and press the > key.

2 Press the ^ or v key repeatedly until >>Duplex path appears.

```
>>Duplex path
  Enable
```

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

```
>>Duplex path
? Enable
```

4 Select *Enable* or *Disable* using the ^ or v key. For details of the default setting for each paper type, see *Paper Type* on page 2-12.

5 Press the **ENTER** key.

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

The custom paper type setting is completed.

Resetting the Custom Paper Type

Resets the settings of Custom 1 to 8 that are set in *Creating Custom Paper Type* on page 1-32.

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until Paper handling > appears.

Paper Handling >

- 3** Press the **>** key.
- 4** Press the **^** or **v** key repeatedly until >Reset Type Adjust appears.

>Reset Type
Adjust

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

>Reset Type
Adjust ?

- 6** Press the **ENTER** key. All the customized paper weight and duplex path settings will be reset to the default. The message display returns to Ready.

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:

- **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.
- **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 100 sheets [A4 size, 0.11 mm thickness]), 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.

This menu does not appears when the option envelope feeder is installed on the printer.



Note

The maximum capacity for the MP tray of 100 sheets is based on A4 paper. If you use Legal size paper on the MP tray, the number of paper you use should be considerably smaller than 100 sheets to avoid possible paper jam.

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

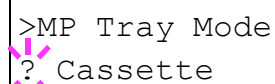
- 1 Press the **MENU** key.
- 2 Press the **^** or **v** key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```

- 3 Press the **>** key.
- 4 Press the **^** or **v** key repeatedly until `>MP Tray Mode` appears.

```
>MP Tray Mode
Cassette
```

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



```
>MP Tray Mode
? Cassette
```

- 6** Select **First** or **Cassette** using the **^** or **v** key.

- 7** Press the **ENTER** key.

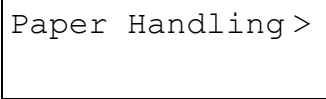
- 8** Press the **MENU** key. The message display returns to **Ready**.

Selecting the Paper Feed Source

You can select from which paper source printing will be performed. If no option units are installed, the only selections are the paper cassette and MP tray of the printer. If option paper feeders are installed, they can also be selected using the manner described below.

- 1** Press the **MENU** key.

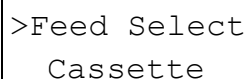
- 2** Press the **^** or **v** key repeatedly until **Paper Handling >** appears.



```
Paper Handling >
```

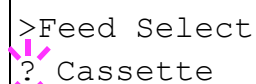
- 3** Press the **>** key.

- 4** Press the **^** or **v** key repeatedly until **>Feed Select** appears.



```
>Feed Select
Cassette
```

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



```
>Feed Select
? Cassette
```

- 6** Select **MP tray** or **Cassette** using the **^** or **v** key.

- 7** Press the **ENTER** key.

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

Selecting the Output Stack

The following procedure allows you to select whether printouts will be received by the top tray or to the rear tray. If an option sorter is installed, it can also be selected using the manner described below.

- 1 Press the **MENU** key.
- 2 Press the **^** or **v** key repeatedly until `Paper Handling >` appears.

```
Paper Handling >
```

- 3 Press the **>** key.
- 4 Press the **^** or **v** key repeatedly until `>Stack Select` appears.

```
>Stack Select
Top tray FaceDn
```

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

```
>Stack Select
?Top tray FaceDn
```

- 6 Press the **^** or **v** key to display the desired destination. The output tray changes as shown below.

```
Top tray FaceDn (Printer's top tray) [Default]
RearTray FaceUp (Printer's rear tray) [Option rear tray required]
Sorter FaceDn [Option sorter required]
```

- 7 When the desired paper source displayed, press the **ENTER** key.
- 8 Press the **MENU** key. The message display returns to `Ready`.

Overriding A4 and Letter Size Difference

This selects whether to enable or disable the difference between A4 size and Letter size. Under the default setting of **Off**, the paper size of the paper source is matched to the paper size formatting the jobs. If these differ, a corresponding error message is displayed. When this is set to **On**, printing is performed even if the actual paper size differs from the paper size formatting the jobs.

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

>Override A4/LT
? Off

- 6** Select **On** or **Off** using the **^** or **▼** key.
- 7** Press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to **Ready**.

Pagination

The items regarding pagination can be made from the operator panel. The items that can be set are shown below.

- Emulation
- Font
- Code Set
- Number of Copies
- Printing Orientation
- KIR (Kyocera Image Refinement)
- Ecoprint
- Resolution

Emulation

The following procedure allows you to select the printer's emulation mode.

Changing the Emulation

To change the emulation mode, proceed as follows:

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until **Emulation** appears. One of the emulation modes shown below appears, indicating the current emulation.

```
PCL 6 (default)
KPD L
KPD L (AUTO)
Line Printer
IBM Proprinter
DIABLO 630
EPSON LQ-850
```

KPD L is the Kyocera's implementation of the PostScript page description language.

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

Emulation
 ?PCL 6

- 4** Press the **^** or **v** key repeatedly until the desired emulation mode appears.

- 5** Press the **ENTER** key.
- 6** Press the **MENU** key. The message display returns to Ready.

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 alternative emulation can be selected using the operator panel. The default alternative emulation is PCL 6.

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until Emulation appears.

Emulation
PCL 6

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

Emulation
?PCL 6

- 4** Press the **^** or **v** key repeatedly until the message display indicated KPDL (AUTO) appears.

Emulation
?KPDL (AUTO)

- 5** Press the **ENTER** key.
- 6** Press the **>** key. When **> Print KPDL Errs** is displayed, press the **^** or **v** key. The display cycles through the emulation in the following order:

PCL 6 (default)
Line Printer
IBM Proprinter
DIABLO 630
EPSON LQ-850

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

>Alt. Emulation
?PCL 6

- 8** Press the \wedge or \vee key repeatedly until the desired alternative emulation appears.
- 9** Press the **ENTER** key.
- 10** Press the **MENU** key. The message display returns to Ready.

Printing KPD L Errors

The printer can print error descriptions when printing error occurs during KPD L emulation. The default is Off – the printer does not print KPD L errors.

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until Emulation > appears.

```
Emulation
PCL 6
```

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

```
Emulation
?PCL 6
```

- 4** Select KPD L or KPD L (AUTO) using the \wedge or \vee key.

```
Emulation
?KPD L
```

- 5** Press the **ENTER** key.

- 6** Press the > key. The message display changes to that shown below. If >Alt. Emulation is displayed when the KPD L (AUTO) emulation is selected, press the \wedge or \vee key to change it.

```
>Print KPD L Errs
Off
```

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

```
>Print KPD L Errs
? Off
```

- 8** Select **On** using the \wedge or \vee key.

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

- 9** Press the **ENTER** key.

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

Font

You can select the default font for the current interface. In addition to the internal fonts, all fonts that are downloaded to the printer memory, or fonts stored on a CompactFlash card, Microdrive, or option ROM, can be selected as the default font.

In this menu, you can also set the type and pitch for Courier and Letter Gothic.

Default font

- 1** Press the **MENU** key.

- 2** Press the \wedge or \vee key repeatedly until **Font >** appears.

```
Font >
```

- 3** Press the **>** key.

- 4** Press the \wedge or \vee key repeatedly until **>Font Select >** appears.

```
>Font Select >
  Internal
```

- 5** To select an internal font, check that **Internal** is displayed. If **Internal** is not displayed, press the **ENTER** key. Press the \wedge or \vee key repeatedly until the message display indicates **Internal** and press the **ENTER** key.

To select an option font, press the **ENTER** key. Press the \wedge or \vee key repeatedly until the message display indicates **Option** and press the **ENTER** key. This operation is possible only when option fonts are installed in the printer.

- 6** Press the > key. The message display changes to that show below.

>> I000

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

Letter	Description
I	Internal font
S	Soft (down load) font
M	Fonts in an option CompactFlash card
H	Fonts in a RAM disk or option Microdrive.
O	Fonts in an option ROM

Table 1-6

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

>> ? I000

- 8** Press the ^ or v key repeatedly until the desired font number appears. For font numbers of the internal fonts, see [List of Fonts](#) on page [5-2](#).
- 9** When the desired font is displayed, press the **ENTER** key.
- 10** Press the **MENU** key. The message display returns to Ready.

Default Font Size

The following procedure determines the size of the default font. If the default font is a fixed font such as Courier or Letter Gothic, the character pitch can be changed instead of the font size.

- 1 Press the **MENU** key.
- 2 Press the \wedge or \vee key repeatedly until `Font >` appears.

```
Font >
```

- 3 Press the `>` key.
- 4 Press the \wedge or \vee key repeatedly until `>Font Select >` appears.

```
>Font Select >
Internal
```

- 5 Check that `Internal` is displayed and press the `>` key.
- 6 Press the \wedge or \vee key repeatedly until `>>Size` appears.

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

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

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

- 8 Press the \wedge or \vee key to increase or decrease the value of the figure where the cursor is blinking. The font size can be set between 4 and 999.75 points, in 0.25-point increments. You can use the `>` or `<` key to move the cursor right and left.
- 9 When the desired size is displayed, press the **ENTER** key.
- 10 Press the **MENU** key. The message display returns to `Ready`.

Changing Type for Courier/Letter Gothic

Courier or Letter Gothic font type can be selected as Regular or Dark. For example, to change the type of Courier, proceed as follows:

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until `Font >` appears.

`Font >`
- 3** Press the `>` key.
- 4** Press the \wedge or \vee key repeatedly until `>Font Select >` appears.

`>Font Select >`
`Internal`
- 5** Check that `Internal` is displayed and press the `>` key.
- 6** Press the \wedge or \vee key repeatedly until `>>Courier` appears.

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

`>>Courier`
`? Regular`
- 8** Select `Regular` or `Dark` using the \wedge or \vee key.
- 9** Press the **ENTER** key.
- 10** Press the **MENU** key and the message display returns to `Ready`.

Setting the Character Pitch for Courier/Letter Gothic

The character pitch for fixed fonts is adjustable when the default font is Courier or Letter Gothic.

1 Press the **MENU** key.

2 Press the \wedge or \vee key repeatedly until `Font >` appears.

```
Font >
```

3 Press the `>` key.

4 Press the \wedge or \vee key repeatedly until `>Font Select >` appears.

```
>Font Select >
Internal
```

5 Check that `Internal` is displayed and press the `>` key.

6 Press the \wedge or \vee key repeatedly until `>>Pitch` appears.

```
>>Pitch
10.00 cpi
```

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

```
>Pitch
10.00 cpi
```

8 Press the \wedge or \vee key to increase or decrease the value of the figure where the cursor is blinking. The character pitch can be set between 0.44 and 99.99 characters per inch, in 0.01 character-per-inch increments. You can use the `>` or `<` 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 message display returns to `Ready`.

Code Set

You can change the character code set. Available character code sets vary depending on the current font. (The default is IBM PC-8.)

- 1** Press the **MENU** key.
- 2** Press the **^** or **▼** key repeatedly until `Font >` appears.

Font >
- 3** Press the **>** key. Press the **^** or **▼** key until `> Code Set` appears.

>Code Set
IBM PC-8
- 4** Press the **ENTER** key. A blinking question mark (?) appears.

>Code Set
?IBM PC-8
- 5** Press the **^** or **▼** key until the desired character code set appears.
- 6** Press the **ENTER** key.
- 7** Press the **MENU** key. The message display returns to `Ready`.

Number of Copies

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

- 1 Press the **MENU** key.
- 2 Press the \wedge or \vee key repeatedly until `Page set >` appears.

`Page Set >`

- 3 Press the **>** key.
- 4 Press the \wedge or \vee key repeatedly until `>Copies` appears.

`>Copies`
001

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

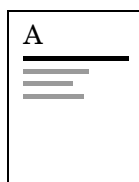
`>Copies`
001

- 6 Press the \wedge or \vee key to increase or decrease the value of the figure where the cursor is blinking. It can be set between 1 and 999. You can use the **>** and **<** keys to move the right and left.
- 7 When the desired size is displayed, press the **ENTER** key.
- 8 Press the **MENU** key. The message display returns to `Ready`.

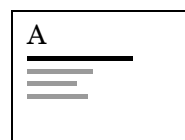
Printing Orientation

The default orientation of the page can be selected from the portrait (upright) and landscape (sideways) page orientation.

Portrait orientation



Landscape orientation



- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until `Page Set >` appears.

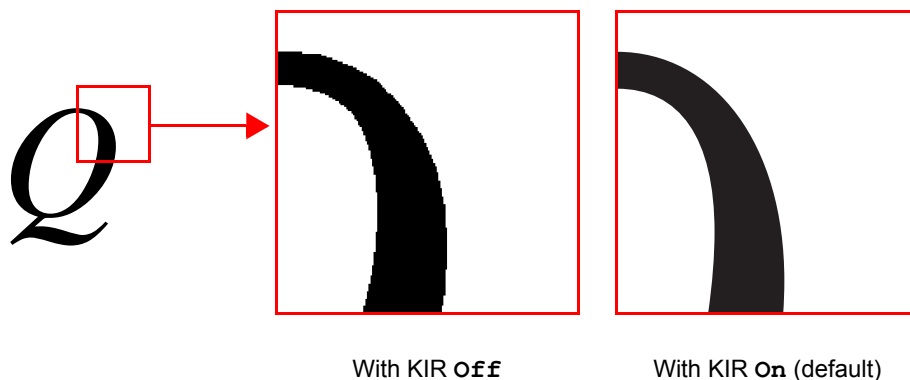
Page Set >
- 3** Press the **>** key.
- 4** Press the \wedge or \vee key repeatedly until `>Orientation` appears.

>Orientation
Portrait
- 5** Press the **ENTER** key. A blinking question mark (?) appears.

>Orientation
? Portrait
- 6** Select `Portrait` or `Landscape` using the \wedge or \vee key.
- 7** Press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to `Ready`.

KIR (Kyocera Image Refinement)

This printer incorporates the KIR (Kyocera Image Refinement) smoothing function. This function provides high print quality by providing software enhancement of print resolution.



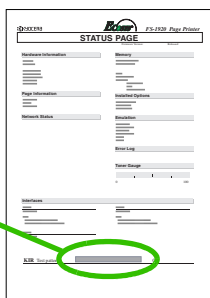
Note

Set the print density to 3 when setting the KIR mode. For details on print density, see page [1-95](#).

Look at the check line, the last line on a status page, to make the optimum KIR mode setting.

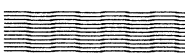
Status Page

KIR Checking Lines



Optimized stripes

The current KIR setting is optimal.



Dark vertical stripes

Set the KIR mode to **Off**. Try printing the status page again. If you still get dark vertical stripes, adjust the print density control to a lighter setting.



White vertical stripes

Set the KIR mode to **On**. Try printing the status page again. If you still get white vertical stripes, adjust the print density control to a darker setting.

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until **Print Quality >** appears.

Print Quality >
- 3** Press the **>** key.
- 4** Press the \wedge or \vee key repeatedly until **>KIR Mode** appears.

>KIR Mode
On
- 5** Press the **ENTER** key. A blinking question mark (?) appears.

>KIR Mode
? On
- 6** Select **On** or **Off** using the \wedge or \vee key.
- 7** Press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to **Ready**.

Ecoprint

The Ecoprint enables you to reduce the amount of toner consumed on the page so as to save your printing costs. You can set to Ecoprint mode on, as follows. (The factory default setting is Off.)

The Ecoprint setting has no effect on the print speed.

The Ecoprint mode setting is On when the printing image becomes lighter, yet very readable.



Ecoprint setting is **Off**
(default).



Ecoprint setting is **On**

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until **Print Quality >** appears.

Print Quality >

- 3** Press the **>** key.
- 4** Press the **^** or **v** key repeatedly until **>EcoPrint Mode** appears.

>EcoPrint Mode
Off

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

>EcoPrint Mode
? Off

- 6** Select **On** or **Off** using the **^** or **v** key.
- 7** Press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to **Ready**.

Resolution

Proceed as follows to set the default print resolution from three ways — 300 dpi, 600 dpi, and Fast 1200 mode. The clarity of printed characters and graphics becomes sharper in this order.

- 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 `>Resolution` appears.

```
>Resolution
  Fast 1200 mode
```

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

```
>Resolution
? Fast 1200 mode
```

- 6** Select `Fast 1200 mode`, `300 dpi` or `600 dpi` using the **^** or **▼** key.
- 7** Press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to `Ready`.

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 option hard disk must be installed in the printer. For details, see [Appendix A Options](#).
- The RAM disk may also be used in the Proof-and-Hold and Private Print modes. See [Activating the RAM Disk](#) on page 1-81 for details on RAM disk setup.

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 electronically store documents such as fax cover pages
Start storing by	Printer driver	Printer driver	Printer driver	Printer driver
On terminating print setting from application software	Prints simultaneously	Prints one copy simultaneously	Does not print	Does not print
Retrieved by	Operator panel	Operator panel	Operator panel	Operator panel
Default number of copies printed at retrieval	Same as storing (can be changed)	One less (can be changed)	Same as storing (can be changed)	One (can be changed)
Maximum number of jobs stored [†]	32, expandable to 50	32, expandable to 50	Depends on the hard disk capacity (Private jobs are deleted automatically once it is retrieved.)	Depends on the hard disk capacity
PIN security	No	No	Yes	Yes (if necessary)
Data after printing	Stored	Stored	Deleted	Stored
Data at power off	Deleted	Deleted	Deleted	Stored
Hard disk required	Yes	No	No	Yes

Table 1-7

[†] Jobs in excess will cause the earlier ones to be deleted.

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.

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 or the **KM-NET Printer Disk Manager utility** in the CD-ROM.

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 1-68](#).



Note

The virtual mailbox can be used in PCL 6 emulation only.

Quick Copy

This mode enables you to print the requested number of copies of a job, simultaneously storing the job on the Microdrive. 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 [KX Printer Drivers Operation Guide](#).

The default number of print jobs that can be stored on the Microdrive is 32. This value can be increased to up to 50 from the e-MPS Configuration menu. For details, see [e-MPS Configuration](#) on page 1-70. 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 v 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 v 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 v 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 v 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 displayed.
- 2** When the title of the job is displayed, e.g. *Report*, below, press the **ENTER** key. The cursor below the copy count starts to blink.



- 3** Press the **▼** key repeatedly until *Delete* appears below the title.



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

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 Microdrive. 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.



- 3** Press the **>** key.

- 4** Press the \wedge or \vee 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 \wedge or \vee 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 \wedge or \vee 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 \wedge key; to decrease the copy count, press the \vee 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.

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

To print a private job through the operator panel:

- 1 Press the **MENU** key.
- 2 Press the \wedge or \vee key repeatedly until e-MPS > appears.

```
e-MPS      >
```

- 3 Press the > key.
- 4 Press the \wedge or \vee 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 (?) before a user name appears.

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

- 6 Press the \wedge or \vee 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 \wedge or \vee 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 \wedge or \vee key.

```
>Agenda
ID      0000
```



- 10 You can set the number of copies to be printed. To increase the copy count, press the \wedge key; to decrease the copy count, press the \vee 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

To delete a stored private job, proceed as follows:

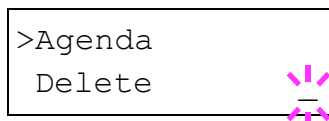
- 1 Follow steps 1 through 8 in the above section.
- 2 When the title of the job to be printed is displayed (Agenda, in this example), press the **ENTER** key. Enter the four-digit access code entered in the printer driver and press the **ENTER** key.

```
>Agenda
Copies  001
```



- 3 Press the \vee key repeatedly until Delete appears for the number of copies.

```
>Agenda
Delete
```



- 4 Press the **ENTER** key. The private job is deleted from the Microdrive.

Printing a Stored Job

The procedure below allows you to store print jobs to the Microdrive that are frequently needed such as fax cover pages, check lists, and order forms, for printing at any later time using the operator panel.

The print jobs will not be deleted when the printer is turned off.

Releasing a Stored Job

To print a stored job through the operator panel:

- 1 Press the **MENU** key.
- 2 Press the **^** or **v** key repeatedly until **e-MPS >** appears.

```
e-MPS      >
```

- 3 Press the **>** key.
- 4 Press the **^** or **v** 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 (?) before a user name appears.

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

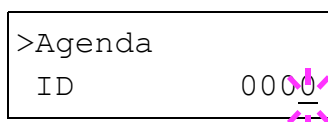
- 6 Press the **^** or **v** key to display the desired user name (**Arlen**, in this example).

```
>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 \wedge or \vee 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 \lt or \gt key to move the cursor to the number to be changed and then enter the correct number by pressing the \wedge or \vee key.



```
>Agenda
ID      0000
```

- 10 You can specify the number of copies to print. To increase the copy count, press the \wedge key; to decrease the \vee 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 Stored Job

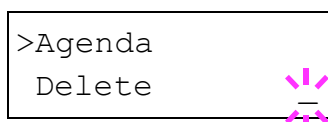
To delete a stored job, proceed as follows:

- 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 \vee key repeatedly until Delete appears for the number of copies.



```
>Agenda
Delete
```

- 4 Press the **ENTER** key. The stored job is deleted from the Microdrive.

Printing a Code Job

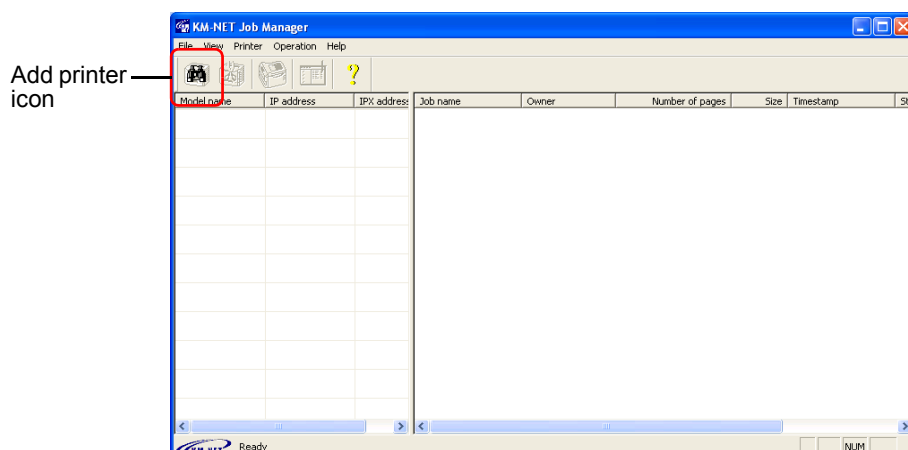
Install the KM-NET Job Manager software from the CD-ROM supplied with the printer. To do this, from the CD-ROM **Main Menu**, select **Printer Utilities > Install KM-NET Job Manager**.

- 1 Browse through Windows **Start > Programs > KYOCERA MITA > KM-Net > Job Manager**.
- 2 Enter the password for the software. **Job Manager** will start.
- 3 Click the **Add printer** icon (below). Select the **Local** or **Network** port.



Note

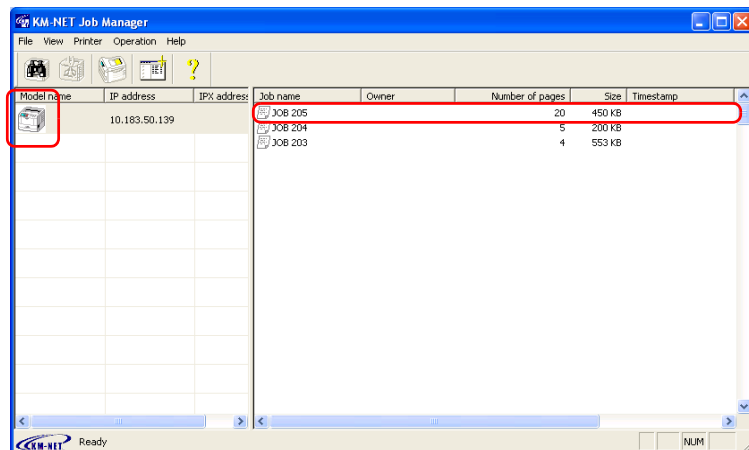
If you use the local parallel port to connect to the printer, make sure that the printer driver is set to print to a local port. To check this out, click the **Details** tab of the printer **Properties**, and note the **Print to the following port** setting.



- 4 Follow the wizard until the **Select printer** dialog box is reached. When the printer is found in the **Printer List**, click (highlight) it, then **Finish**.

- 5** Double click **Model Name** on the list. The jobs currently stored in the printer are shown. To print the job, right click **Job name** and then click **Print** on the drop down list that appears.

It is possible to select more than one job at a time by right clicking a job one by one while pressing the Shift key on the computer keyboard.



The job remains intact even after printing. To permanently delete the job in the hard disk, right click the job name on **Job Manager**, then click **Delete** on the drop down list that appears.

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.

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.

Retrieving Jobs from Virtual Mailbox (VMB)



To use this mode, an option Microdrive must be installed in the printer.

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:
```

- 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.

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



The total amount of storage areas specified must not exceed the total size of the Microdrive. 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.

- 1 Press the **MENU** key.
- 2 Press the **^** or **v** key repeatedly until e-MPS > appears.

```
e-MPS      >
```

- 3 Press the **>** key.
- 4 Press the **^** or **v** key repeatedly until >e-MPS Configuration > appears.

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

- 5 Press the **>** key.
- 6 Press the **^** or **v** key repeatedly until >>Quick Copy appears.

```
>>Quick Copy
32
```

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

```
>>Quick Copy
32
```

- 8** Press the \wedge or \vee key to increase or decrease the value at the blinking cursor. The value can be set between 0 and 50. Use the \gt and \lt 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 message display returns to Ready.

Maximum Space Assigned to Temporary Code Jobs

This changes the Microdrive 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 50 MB.

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until e-MPS \gt appears.
- 3** Press the \gt key.
- 4** Press the \wedge or \vee key repeatedly until \gt e-MPS Configuration \gt appears.

```
e-MPS      >
```

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

- 5** Press the \gt key.
- 6** Press the \wedge or \vee key repeatedly until $\gt\gt$ 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 \wedge or \vee key to increase or decrease, respectively, the value at the blinking cursor. Use the \gt and \lt 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 message display returns to Ready.

Maximum Space Assigned to Permanent Code Jobs

This changes the Microdrive 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 Microdrive space, however. The default size is 50 MB.

- 1 Press the **MENU** key.
- 2 Press the \wedge or \vee key repeatedly until e-MPS \gt appears.

```
e-MPS      >
```

- 3 Press the \gt key.
- 4 Press the \wedge or \vee key repeatedly until \gt e-MPS Configuration \gt appears.

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

- 5 Press the \gt key.
- 6 Press the \wedge or \vee key repeatedly until $\gt\gt$ Perm. Code JOB Size appears.

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

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

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

- 8 Press the \wedge or \vee key to increase or decrease, respectively, the value at the blinking cursor. Use the \gt and \lt 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 message display returns to Ready.

Maximum Space Assigned to Virtual Mailboxes

This changes the Microdrive 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 Microdrive space, however. The default size is 50 MB.

- 1 Press the **MENU** key.
- 2 Press the **^** or **v** key repeatedly until e-MPS > appears.

```
e-MPS      >
```

- 3 Press the **>** key.
- 4 Press the **^** or **v** key repeatedly until >e-MPS Configuration > appears.

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

- 5 Press the **>** key.
- 6 Press the **^** or **v** key repeatedly until >>VMB Size appears.

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

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

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

- 8 Press the **^** or **v** 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 message display returns to Ready.

Interface

The printer is equipped with both a parallel and USB interface. Option serial interface board kit and network interface card can also be installed. Various printing environment parameters such as the default emulation can be changed independently on different interfaces by using the printer's menu selection system. Before select the interface to apply the changes in the procedure described below.



This interface selection described below does not select which interface data will be received from. The printer automatically selects an interface data is received.

Parallel Interface Mode

The parallel interface mode of this printer supports a bi-directional/high-speed mode. Normally, this interface is used under the default setting AUTO. For details, see [Appendix B](#). After setting the interface, be sure to reset the printer or turn the power off at least once. The new setting will be enabled thereafter.

- 1 Press the **MENU** key.
- 2 Press the \wedge or \vee key repeatedly until `Interface >` appears. One of the interface names shown below appears, indicating the current interface.

Parallel (default)
USB
Serial (when a serial interface board kit is installed)
Option (when a network interface card is installed)

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

`Interface
? Parallel`

If `Parallel` is not displayed, press the \wedge or \vee key repeatedly until it is `Parallel`.

If you want to abandon the interface selection procedure, press the **CANCEL** key. The interface remains unchanged.

- 4 Press the **ENTER** key again.
- 5 Press the **>** key. The message display changes to the communication mode menu.

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

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

- 7** Press the \wedge or \vee key to display the desired mode. The display changes as shown below. Press the **ENTER** key.

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

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

USB Interface Mode

About USB interface, for details, see [Appendix C](#).

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key until Interface > appears. One of the interface names shown below appears, indicating the current interface.

```
Parallel (default)
USB
Serial (when a serial interface board kit is installed)
Option (when a network interface card is installed)
```

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

```
Interface
? Parallel
```

- 4** Press the \wedge or \vee key until USB appears.

```
Interface
? USB
```

- 5** Press the **ENTER** key.
- 6** Press the **MENU** key. The message display returns to Ready.

Serial Interface Parameters



This section applies to the printers having the option serial interface board kit (IB-11) installed.

The baud rate, data bits, stop bits, parity, and protocol for the serial interface can be set as follows:

- 1 Press the **MENU** key.
- 2 Press the \wedge or \vee key repeatedly until `Interface >` appears. One of the interface names shown below appears, indicating the current interface.

Parallel (default)
USB
Serial (when a serial interface board kit is installed)
Option (when a network interface card is installed)

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

```
Interface
? Parallel
```

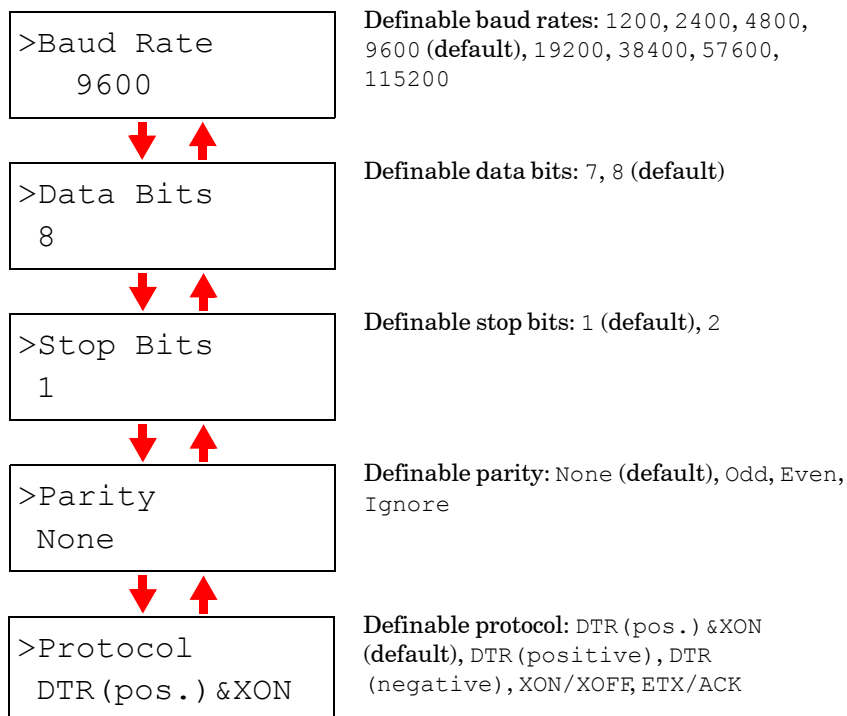
If you want to abandon the interface selection procedure, press the **CANCEL** key. The interface remains unchanged.

- 4 Press the \wedge or \vee key repeatedly until `Serial` appears.

```
Interface
? Serial
```

- 5 Press the **ENTER** key again.

- 6** Press the > key. Each time the ^ or v key is pressed, the setting item and current setting change as shown below.



- 7** Display the setting item to be changed and press the **ENTER** key. A question mark (?) appears.

The following example explains how to change the baud rate. The settings for other items can be changed in a similar manner.

>Baud Rate
? 9600

- 8** Press the ^ or v key to display the desired setting. The setting changes as shown below.

The baud rate can be selected from 1200, 2400, 4800, 9600 (default), 19200, 38400, 57600, and 115200.



Note

Some computers may not be compatible with a baud rate of 115200 bps. If you set the baud rate to 115200 and communication problems occur, lower the baud rate.

- 9** Display the desired baud rate and press the **ENTER** key.

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

Network Interface Parameters



This section applies to the printers having the option network card installed.

To make your printer supports TCP/IP, Netware, and EtherTalk networks, you will need to install the option network interface card in the printer and make the proper settings as explained in this section.

Using the operator panel, you can:

- Activate or deactivate TCP/IP, NetWare, and EtherTalk
- Activate or deactivate DHCP
- Enter IP address, subnet mask address, and default gateway address

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

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until `Interface >` appears. One of the interface names shown below appears, indicating the current interface.

```
Parallel (default)
USB
Serial (when a serial interface board kit is installed)
Option (when a network interface card is installed)
```

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

```
Interface
? Parallel
```

- 4** Press the \wedge or \vee key repeatedly until `Option` appears.

```
Interface
? Option
```

- 5** Press the **ENTER** key again.

- 6** Press the > key. Each time the ^ or v key is pressed, the display changes as shown below.

>NetWare > On	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, 802.3, and 802.3 SNAP
>TCP/IP > On	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.
>EtherTalk Off	EtherTalk must be activated (On) for networking with Macintosh computers.
>Opt. StatusPage On	When the item is set to On, the printer prints out a network status page when it prints the printer status. See page 1-19

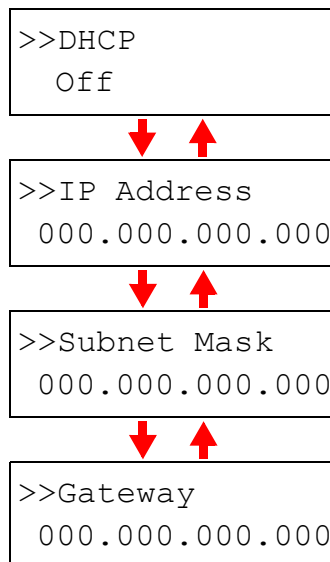
- 7** The following example explains how to activate TCP/IP protocol to connect the printer in the network. You can select Netware or EtherTalk in a similar manner.

>TCP/IP >
On

If TCP/IP is currently Off is displayed, select On using the ^ or v key. Press the **ENTER** key again.

>TCP/IP ? On		>TCP/IP > On
-----------------	--	-----------------

- 8** Press the **>** key. Each time the **^** or **∨** key is pressed, the item changes as shown below.



- 9** Display the item to be set and press the **ENTER** key. For DHCP, a question mark (?) appears. For IP Address, Subnet Mask, and Gateway, the cursor (**_**) blinks.
- 10** For DHCP, select On or Off using the **^** or **∨** key. For IP Address, Subnet Mask, and Gateway addresses, press the **^** or **∨** key to change the number (000 to 255) where the cursor is blinking. You can use the **>** and **<** key to move the cursor right and left.

To obtain these addresses, consult your network administrator.

- 11** Press the **ENTER** key.
- 12** Press the **MENU** key. The message display returns to Ready.

Operating the Storage Device

The printer supports three types of storage devices: CompactFlash card, Microdrive, and RAM disk.

The printer is equipped with a slot for a CompactFlash card and a Microdrive. By inserting a CompactFlash card or Microdrive into the printer, the following operations become available. For details about the handling of the CompactFlash card and Microdrive, see [Appendix A](#).

The following procedure assumes use of a CompactFlash card. The similar procedure can be applied when using the Microdrive.



Note

You can format the Microdrive using the operator panel when the first time you installed a new Microdrive. About formatting a new Microdrive.

Activating 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 Microdrive except that the data is effective only during the printer is powered up.

To set up the RAM disk, the option Microdrive 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 disk size = Total printer memory - 9 MB

For example, if the total memory installed in your printer is 32 MB, you can set 23 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 9 MB less than the total printer memory. Once the RAM disk size is set, the printer must be reset.

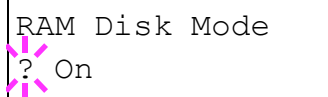
By default, the RAM disk is not activated (`Off`). To confirm the RAM disk size or activate the RAM disk, proceed as follows:

- 1** Press the **MENU** key.
- 2** Press the **^** or **▼** key repeatedly until `RAM Disk Mode >` appears.

RAM Disk Mode

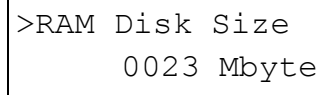
Off

- 3** The default setting is Off. Press the **ENTER** key. A blinking question mark (?) appears. Select On using the **^** or **v** key, and then press the **ENTER** key.



```
RAM Disk Mode
? On
```

- 4** Press the **>** key to display >RAM Disk Size.



```
>RAM Disk Size
      0023 Mbyte
```

- 5** Press the **ENTER** key again, and change the RAM disk size using the **^** or **v** key. It is not possible to make a setting that exceeds total printer memory. The default value for the RAM disk is the total printer memory minus 9 MB. This parameter may be set anywhere from 0001 to 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 and restart the printer. The setting will be activated after restart.

Reading Data

To read data on a CompactFlash card, Microdrive, or the RAM disk use the following procedure:

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until Memory Card >, Hard Disk > or RAM Disk Mode > appears.

`Memory Card >`

- 3** Press the **>** key.
- 4** Press the **^** or **v** key repeatedly until >Read Data appears. The data name also appears.

`>Read Data
data name`

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

`>Read Data
?data name`

- 6** Press the **^** or **v** key to display the desired data name.
- 7** Press the **ENTER** key. `Processing` appears and the reading of data from the storage device starts.

Writing Data

You can write data to a CompactFlash card, the Microdrive, or the RAM disk using the operator panel. When writing data to the storage device, a name is automatically assigned to the data. The CompactFlash card or the Microdrive or the RAM disk must be formatted. Otherwise, the >Write Data message explained below will not appear on the display. To format a CompactFlash card or the Microdrive or the RAM disk, see [Formatting a Storage Device](#) on page 1-88.



You can format the Microdrive or the RAM disk using the operator panel when the first time you installed a new Microdrive or the RAM disk. About formatting a new Microdrive.

After writing is complete, you can print a list of data stored in the storage device for confirmation. See [Printing a List of Data Names](#) on page 1-89.

To write data to a CompactFlash card, the Microdrive or the RAM disk, proceed as follows:

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until Memory Card >, Hard Disk > or RAM Disk Mode > appears.

Memory Card >

- 3** Press the **>** key.
- 4** Press the **^** or **v** key repeatedly until >Write Data appears.

>Write Data

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

>Write Data ?

- 6** Press the **ENTER** key. Processing appears, then Waiting.

7 In this state, send the file from the computer to the printer.

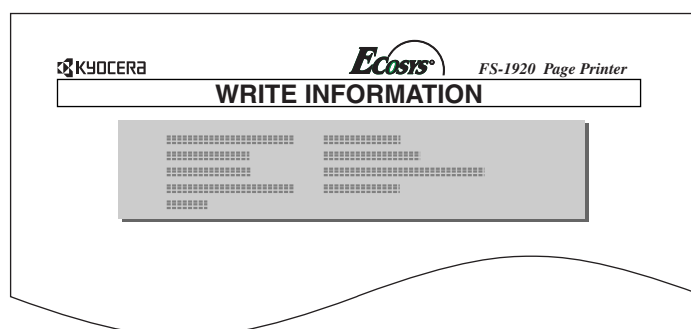
The file is written onto the storage device given a destination name (also referred to as a partition name) which the printer automatically assigns one after another as follows:

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

In the example above, if the file *TEST.TXT* is the first data to be written onto the storage device, the destination name will be *DataS001*.

As the printer receives data, the message display changes to Processing, then when the end of the data is received, the message display changes to Waiting.

8 Check that the message display has changed to Waiting, then press the GO key. This writes the file to the memory card and instructs the printer to automatically print out a CompactFlash card write information page as shown below.



Partition Type. Type of data written (currently only type 2 is supported).

Partition Name. Name of data written.

Write Partition Length. Length (size) of the data written.

Others. Additional information, such as error information.

When the write information page is printed, the message display returns to Ready.

If the writing was not completed successfully, an error code appears on the message display. For details, see [Error Messages](#) on page 4-10. If this happens, press the GO key. The message display returns to Ready.

- 9** Repeat above steps until you have transferred all data (files) that you want to write to the CompactFlash card. Each time you finish writing data, a CompactFlash card write information page is printed from the printer showing the information explained in step 4 above, but pertaining only to the data just written. To see all data contained in the CompactFlash card at once, print a list of data names as explained on page [1-89](#), *Printing a List of Data Names*.

Deleting Data

You can use the printer's operator panel to delete data from a CompactFlash card, the Microdrive or the RAM disk.

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until Memory Card >, Hard Disk > or RAM Disk Mode > appears.

```
Memory Card  >
```

- 3** Press the > key.
- 4** Press the \wedge or \vee key repeatedly until > Delete Data appears. The data name also appears.

```
>Delete Data  
data name
```

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

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

- 6** Press the \wedge or \vee key to display the desired data name.
- 7** Press the **ENTER** key. *Processing* appears and the data is deleted from the CompactFlash card.

Reading Fonts from a CompactFlash Card

If a font (CompactFlash) card is already inserted into the slot when the printer is turned on, the fonts are automatically read into the printer.

To re-read fonts into the printer from a CompactFlash card, proceed as follows.

- 1 Press the **MENU** key.
- 2 Press the **^** or **v** key repeatedly until `Memory Card >` appears.

`Memory Card >`

- 3 Press the **>** key.
- 4 Press the **^** or **v** key repeatedly until `>Read Fonts` appears.

`>Read Fonts`

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

`>Read Fonts ?`

- 6 Press the **ENTER** key. `Processing` appears and the reading of fonts from the CompactFlash card starts.
- 7 When the reading of fonts ends, the message display returns to `>Read fonts`.
- 8 Press the **MENU** key. The message display returns to `Ready`.

Formatting a Storage Device

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



Note

- **Formatting will destroy any existing data on a storage device.**
- **You can format the Microdrive using the operator panel when the first time you installed a new Microdrive. About formatting a new Microdrive.**

To format a CompactFlash card or the Microdrive, 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.

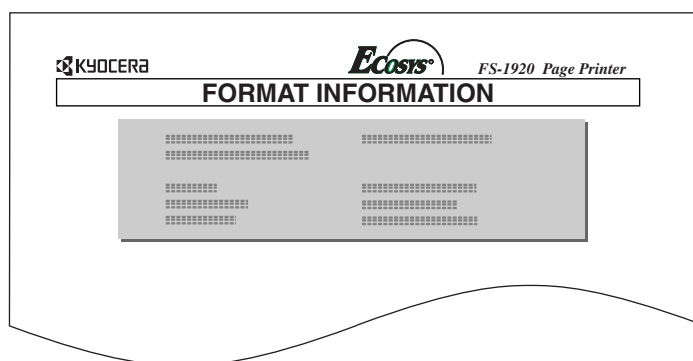
```
>Format
```

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

```
>Format  ?
```

- 6** Press the **ENTER** key. `Processing` appears and formatting of the CompactFlash card or the Microdrive starts.

When the formatting is successfully completed, the printer automatically prints out a format information page as shown below.



Capacity. The total size of the CompactFlash card or the Microdrive memory.

Used Space. The size the printer uses for its system.

Free Space. The size remaining in the CompactFlash card or the Microdrive for storing data.

When the format information is printed, the message display returns to Ready.

Printing a List of Data Names

The printer prints a list of all data names (referred to as partitions) stored in the storage device for reference. (Printing a list is also available for a font card.)

To print a list of data names for the CompactFlash card, the Microdrive, or the RAM disk proceed as follows.

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until Memory Card >, Hard Disk >, or RAM Disk Mode > appears.

```
Memory Card  >
```

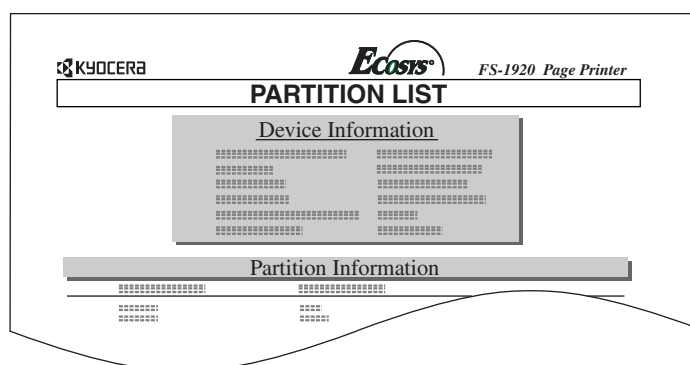
- 3** Press the **>** key.
- 4** Press the **^** or **v** key repeatedly until >List of Partitions appears.

```
>List of
Partitions
```

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

```
>List of  
Partitions ?
```

- 6** Press the **ENTER** key. Processing appears and the printing of the list starts.



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 storage device is printed, the display returns to Ready.

Configuration

This section explains the details of printer settings. The following items are covered.

- Page Protect Mode
- Linefeed (LF) Action
- Carriage-Return (CR) Action
- Wide A4 Pitch
- Print Density
- Total Printed Pages
- Toner Counter Resetting
- Message Language
- Automatic Form Feed Timeout
- Sleep Timer Setting
- Printer Resetting
- Resource Protection
- Alarm (Buzzer) Setting
- Auto Continue Setting
- Duplex Printing Error Detection Setting

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 **v** key repeatedly until **Auto** appears.

```
>Page Protect
? Auto
```

- 7** Press the **ENTER** key.

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

Linefeed (LF) Action

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

- 1** Press the **MENU** key.

- 2** Press the **^** or **v** key repeatedly until **Page set >** appears.

```
Page set      >
```

- 3** Press the **>** key.

- 4** Press the **^** or **v** 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 **v** key repeatedly until desired linefeed action appears.

LF only	A linefeed is performed. (default)
CR and LF	A linefeed and carriage return are performed.
Ignore LF	The linefeed is ignored.

- 7** When the desired action is displayed, press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to *Ready*.

Carriage-Return (CR) Action

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

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until *Page set >* appears.

Page set >

- 3** Press the **>** key.
- 4** Press the \wedge or \vee 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 \wedge or \vee key repeatedly until desired carriage-return action appears.

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

- 7** When the desired action is displayed, press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to *Ready*.

Wide A4 Pitch

Turn this to **On** to increase the maximum number of characters that can be printed in a line for A4 page (78 characters at 10 pitch) and Letter size page (80 characters at 10 pitch). This setting is effective in only PCL 6 emulation.

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until **Page set >** appears.

```
Page set      >
```
- 3** Press the **>** key.
- 4** Press the **^** or **v** key repeatedly until **>Wide A4** appears.

```
>Wide A4  
Off
```
- 5** Press the **ENTER** key. A blinking question mark (?) appears.

```
>Wide A4  
? Off
```
- 6** Select **On** or **Off** using the **^** or **v** key.
- 7** Press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to **Ready**.

Print Density

The print density can be adjusted in five steps: from 01 (light) to 05 (dark). The factory setting is 03.

- 1** Press the **MENU** key.
- 2** Press the **^** or **▼** key repeatedly until **Print Quality >** appears.

A rectangular box representing an LCD screen. Inside, the text "Print Quality >" is displayed in a monospaced font.

- 3** Press the **>** key.
- 4** Press the **^** or **▼** key repeatedly until **>Print Density** appears.

A rectangular box representing an LCD screen. Inside, the text ">Print Density" is on the top line and "03" is on the bottom line, both in a monospaced font.

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

A rectangular box representing an LCD screen. Inside, the text ">Print Density" is on the top line. On the bottom line, a question mark "?" is on the left and "03" is on the right. A pink starburst graphic is positioned to the left of the question mark, indicating a blinking cursor.

- 6** Select the print density from five steps from 01 (light) to 05 (dark) using the **^** or **▼** key.
- 7** Press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to **Ready**.

Total Printed Pages

This procedure displays the total number of printed pages.

- 1 Press the **MENU** key.
- 2 Press the \wedge or \vee key repeatedly until `Life Counters >` appears.

`Life Counters >`

- 3 Press the `>` key.
- 4 Press the \wedge or \vee key repeatedly until `>Total Print` appears, the total number of printed pages displayed.

`>Total Print`
`0012345`

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

Toner Counter Resetting

When the toner container is replaced, reset the toner counter as follows so that an accurate toner gauge measurement is indicated on the status page. Note that if this operation is performed when the toner container is not replaced, the toner gauge measurement will not be indicated correctly.

Also refer to the *[Installation Guide](#)* supplied with the toner kit when replacing the toner container.

- 1 Press the **MENU** key.
- 2 Press the \wedge or \vee key repeatedly until `Life Counters >` appears.

`Life Counters >`

- 3 Press the `>` key.
- 4 Press the \wedge or \vee key repeatedly until `>New Toner Installed` appears

`>New Toner`
`Installed`

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

```
>New Toner  
Installed ?
```

- 6** Press the **ENTER** key. The toner counter is reset. The message display returns to Ready.

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 order language. Contact your Kyocera Mita dealer for information.

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until Others > appears.

```
Others >
```

- 3** Press the **>** key.
- 4** Press the **^** or **v** 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 **∨** key. The display cycles through the available selections in the following order (The **∧** key cycles in the reverse order):

>MSG Language
? English



>Langue
? Francais



>Anzeigesprache
? Deutsch



>Lingua
? Italiano



>Berichttaal
? Nederlands



>Idioma
? Español



>Idioma da MSG
? Portugues

- 7** Press the **ENTER** key.

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


Automatic Form Feed Timeout

When the printer receives no data for a certain time, it time out and releases the current interface: it prints whatever data it has in its buffer and feeds out the page. You can adjust the time-out time as follows:

- 1 Press the **MENU** key.
- 2 Press the \wedge or \vee key repeatedly until `Others >` appears.

`Others >`
- 3 Press the `>` key.
- 4 Press the \wedge or \vee key repeatedly until `>Form Feed Time` appears. The default setting is 30 seconds.

`>Form Feed
Time Out 030sec.`
- 5 Press the **ENTER** key. A blinking cursor (`_`) appears.

`>Form Feed Time.
Time Out 030sec.`
- 6 Press the \wedge or \vee key to increase or decrease the value of the figure where the cursor is blinking and set the desired time. The time can be set between 0 and 495 seconds, in 5-second increments. You can use the `>` and `<` keys to move the cursor right and left.
- 7 Display the desired time and press the **ENTER** key.
- 8 Press the **MENU** key. The message display returns to `Ready`.

Sleep Timer Setting

The printer has a sleep timer to conserve power when the printer is not printing, processing, or receiving data. You can adjust the timer value, the length of time the printer waits before entering sleeping mode in the absence of data.

- 1** Press the **MENU** key.
- 2** Press the **^** or **v** key repeatedly until **Others >** appears.

Others >

- 3** Press the **>** key.
- 4** Press the **^** or **v** key repeatedly until **>Sleep Timer >** appears. The default setting is 015 min.

>Sleep Timer >
015 min.

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

>Sleep Timer
01**5** min.

- 6** Press the **^** or **v** key to increase or decrease the value of the figure where the cursor is blinking and set the desired time. The timer can be set between 5 and 240 min, in 5-minute increments. You can use the **>** and **<** keys to move the cursor right and left.
- 7** Press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to **Ready**.

Turning Off the Sleep Timer

You can turn off the sleep timer function by following the procedure given below.

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until `Others >` appears.

`Others >`
- 3** Press the `>` key.
- 4** Press the \wedge or \vee key repeatedly until `>Sleep Timer >` appears.

`>Sleep Timer >`
`015 min.`
- 5** Press the `>` key and display `>>Sleep Mode`.

`>>Sleep Mode`
`On`
- 6** Press the **ENTER** key. A blinking question mark (?) appears.

`>>Sleep Mode`
`? On`
- 7** Select `Off` using the \wedge or \vee key.

`>>Sleep Mode`
`? Off`
- 8** Press the **ENTER** key.
- 9** Press the **MENU** key. The message display returns to `Ready`.

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.

- 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 `>Printer Reset` appears.

`>Printer Reset`

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

`>Printer Reset ?`

- 6** Press the **ENTER** key again. `Self test` appears while the printer is resetting itself, then `Please wait` followed by `Ready`.

`Self test`



`Please wait`



`Ready`

Resource Protection

When you switch from the PCL 6 emulation to another, all downloaded fonts and macros are lost. Resource protection preserves these PCL resources in memory so that they are intact when you change the emulation back to PCL 6.



Note

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](#).

- 1** Press the **MENU** key.
- 2** Press the \wedge or \vee key repeatedly until `Others >` appears.

Others >
- 3** Press the `>` key.
- 4** Press the \wedge or \vee key repeatedly until `>Resource Prot.` appears.

>Resource Prot.
Off
- 5** Press the **ENTER** key. A blinking question mark (?) appears.

>Resource Prot.
? Off
- 6** Press the \wedge or \vee key to display the desired mode. The display changes as shown below.


Off (default)
 Permanent
 Perm / Temp
- 7** When the desired mode is displayed, press the **ENTER** key.
- 8** Press the **MENU** key. The message display returns to `Ready`.

Alarm (Buzzer) Setting

In addition to the message displayed when the paper supply is exhausted, or when paper jamming occurs, an audio warning is made to sound. This is useful, for example, when the printer is in a location some distance from the user.

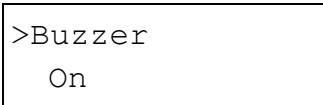
The audio alarm is set to **On** when leaving the factory. If the alarm is set to **Off**, it is made not to sound.

- 1** Press the **MENU** key.
- 2** Press the **^** or **▼** key repeatedly until **Others >** appears.



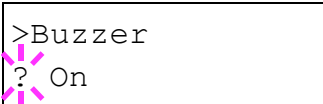
Others >

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

Auto Continue Setting

When Auto Continue is enabled, the printer will automatically print the next received data following a preset amount of time passes after any one of the following errors occurs:

```
Memory overflow Press GO
Print overrun Press GO
KPD L error Press GO
File not found Press GO
Hard disk err Press GO
RAM disk error Press GO
MemoryCard err Press GO
Duplex disabled Press GO
```

If one of the above errors is caused by someone on a network where the printer is being shared, for example, data sent from another person will be printed after a preset amount of time.

- 1 Press the **MENU** key.
- 2 Press the \wedge or \vee key repeatedly until `Others >` appears.

Others >
- 3 Press the `>` key.
- 4 Press the \wedge or \vee 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 \wedge or \vee key.
- 7 Press the **ENTER** key.
- 8 Press the **MENU** key. The message display returns to `Ready`.

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 \wedge or \vee key repeatedly until `Others >` appears.

```
Others      >
```

- 3** Press the `>` key.
- 4** Press the \wedge or \vee key repeatedly until `Auto Continue Mode >` appears.

```
>Auto Continue >  
Mode      On
```

- 5** Press the `>` key and display `>>Auto Continue Timer.`
- 6** Press the **ENTER** key. A blinking cursor (`_`) appears.

```
>>Auto Continue  
Timer      000Sec.
```

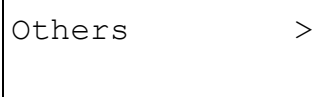
- 7** Press the \wedge or \vee key to increase or decrease the value of the figure where the cursor is blinking and set the desired time. The time must be set between 000 and 495 seconds, in 5-second increments. If set to 000, printing will be continued immediately without allowing any time interval. You can use the `>` and `<` keys to move the cursor right and left.
- 8** Display the desired time and press the **ENTER** key.
- 9** Press the **MENU** key. The message display returns to `Ready`.

Duplex Printing Error Detection Setting

If the error detection setting for duplex printing has been turned On, and you attempt to print onto a paper size and paper type that cannot be used for duplex printing, the Duplex disabled Press GO error message will be displayed and printing will stop. To print onto one-side of the paper only when this message is displayed, press the **GO** key. The default setting is Off.

1 Press the **MENU** key.

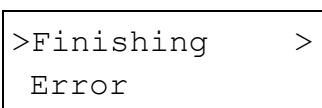
2 Press the **^** or **v** key repeatedly until Others > appears.



```
Others      >
```

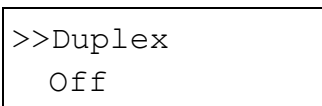
3 Press the **>** key.

4 Press the **^** or **v** key repeatedly until >Finishing Error > appears.



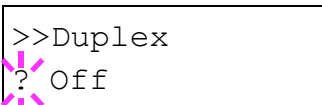
```
>Finishing  >  
Error
```

5 Press the **>** key and display >>Duplex.



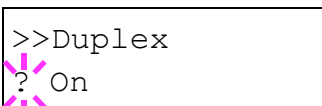
```
>>Duplex  
Off
```

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



```
>>Duplex  
? Off
```

7 Press the **^** or **v** key to change Off to On.



```
>>Duplex  
? On
```

8 Press the **ENTER** key.

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

Chapter 2 **Paper Selection**

This chapter explains the following topics:

- **General Guidelines**
- **Special Paper**
- **Paper Type**

General Guidelines

The printer is designed to print on high-quality copier bond paper (the kind used in ordinary dry copier machines), but it can also accept a variety of other types of paper within the limits specified below.



Note

The manufacturer assumes no liability for problems that occur when paper not satisfying these requirements is used.

Selection of the right paper is important. Using the wrong paper can result in paper jams, misfeeding, curling, poor print quality, and paper waste, and in extreme cases can damage the printer. The guidelines given below will increase the productivity of your office by ensuring efficient, trouble-free printing and reducing wear and tear on the printer.

Paper Availability

Most types of paper are compatible with a variety of machines. Paper intended for xerographic copiers can also be used with the printer.

There are three general grades of paper: economy, standard, and premium. The most significant difference between grades is the ease with which they pass through the printer. This is affected by the smoothness, size, and moisture content of the paper, and the way in which the paper is cut. The higher the grade of paper you use, the less risk there will be of paper jams and other problems, and the higher the level of quality your printed output will reflect.

Differences between paper from different suppliers can also affect the printer's performance. A high-quality printer cannot produce high-quality results when the wrong paper is used. Low-priced paper is not economical in the long run if it causes printing problems.

Paper in each grade is available in a range of basis weights (defined later). The traditional standard weights are 16, 20, and 28 pounds (60 to 105 g/m²).

Paper Specifications

The following table summarizes the basic paper specifications. Details are given on the following pages.

Item	Specification
Weight	Cassette: 60 to 105 g/m ² (16 to 28 lb/ream) MP tray: 60 to 200 g/m ² (16 to 53 lb/ream)
Thickness	0.086 to 0.110 mm (3.4 to 4.3 mils)
Dimensional accuracy	±0.7 mm (±0.0276 inches)
Squareness of corners	90° ±0.2°
Moisture content	4 to 6 %
Direction of grain	Long grain
Pulp content	80 % or more

Table 2-1

Selecting the Right Paper

Laser printing is a process involving laser light, electrostatic discharge, toner, and heat. In addition, as the paper passes through the printer it undergoes considerable sliding, bending, and twisting motions. A high-quality printing paper matching the printer's requirements withstands all these stresses, enabling the printer to turn out clean, crisp printed copies consistently.

Remember that all paper is not the same. Some of the factors to consider when selecting paper for the printer are as follows:

Condition of the Paper

Avoid using paper that is bent at the edges, curled, dirty, torn, embossed, or contaminated with lint, clay, or paper shreds.

Use of paper in these conditions can lead to illegible printing, misfeeding, and paper jams, and can shorten the life of the printer. In particular, avoid using paper with a surface coating or other surface treatment. The paper should have as smooth and even a surface as possible.

Composition

Do not use paper that has been coated or surface-treated and contains plastic or carbon. The heat of fusing can cause such paper to give off harmful fumes.

Bond paper should contain at least 80 % pulp. Not more than 20 % of the total paper content should consist of cotton or other fibers.

Paper Size

Cassettes and an MP tray are available for the paper sizes listed in the table below. The dimensional tolerances are ± 0.7 mm (± 0.0276 inches) for the length and width. The angle at the corners must be $90^\circ \pm 0.2^\circ$.

Multi-purpose tray	Size	Cassette or multi-purpose tray	Size
Monarch	3-7/8 × 7-1/2 inches	Legal	8-1/2 × 14 inches
Business	4-1/8 × 9-1/2 inches	Letter	8-1/2 × 11 inches
ISO A6	10.5 × 14.8 cm	ISO A4	21 × 29.7 cm
ISO DL	11 × 22 cm	ISO A5	14.8 × 21 cm
Commercial 9	3-7/8 × 8-7/8 inches	ISO C5	16.2 × 22.9 cm
Commercial 6-3/4	3-5/8 × 6-1/2 inches	ISO B5	17.6 × 25 cm
JIS B6	12.8 × 18.2 cm	JIS B5	18.2 × 25.7 cm
Statement	5-1/2 × 8-1/2 inches	Executive	7-1/4 × 10-1/2 inches
Hagaki	10 × 14.8 cm	Oficio II	8-1/2 × 13 inches
Ofuku-Hagaki	14.8 × 20 cm	Folio	21 × 33 cm
Youkei 2	11.4 × 16.2 cm	16K	19.7 × 27.3 cm
Youkei 4	10.5 × 23.5 cm		
Custom	Cassette: 14.8 to 21.6 cm × 21 to 29.7 cm For U. S. A.: 5-13/16 to 8-1/2 inches × 8-1/4 to 14 inches MP tray: 7 to 21.6 cm × 14.8 to 29.7 cm (2-13/16 to 8-1/2 inches × 5-13/16 to 11-11/16 inches)		

Table 2-2

Smoothness

The paper should have a smooth, uncoated surface. Paper with a rough or sandy surface can cause voids in the printed output. Paper that is too smooth, however, can cause multiple feeding and fogging problems. (Fogging is a gray background effect.)

Basis Weight

Basis weight is the weight of a standard quantity of paper. In the traditional system, the standard quantity is a ream consisting of 500 sheets measuring 17 × 22 inches each. In the metric system the standard quantity is 1 square meter.

Paper that is too light or too heavy can cause misfeeding, jams, and premature wear of the printer. Uneven paper weight can cause multiple feeds, print defects, poor toner fusing, blurring, and other print quality problems. The proper weight is 60 to 105 g/m² for the paper cassette, and 60 to 200 g/m² for the MP tray.

Paper Weight Equivalence Table

Paper weight is listed with expression in U.S. bond weight (lb) and European metric (g/m²). The shaded point indicates the standard weight.

U. S. Bond Weight (lb)	16	17	20	21	22	24	27	28	32	34	36	39	42	43	47	53
Europe Metric Weight (g/m ²)	60	64	75	80	81	90	100	105	120	128	135	148	157	163	176	199

Table 2-3

Thickness (Caliper)

Thick paper is referred to as high-caliper paper and thin paper as low-caliper paper. The paper used with the printer should be neither extremely thick nor extremely thin. If you are having problems with paper jams, multiple feeds, and faint printing, the paper you are using may be too thin. If you are having problems with paper jams and blurred printing, the paper may be too thick. The proper thickness is 0.086 to 0.110 mm (3.4 to 4.3 mils).

Moisture Content

Moisture content is defined as the percent ratio of moisture to the dry mass of the paper. Moisture can affect the paper's appearance, feedability, curl, electrostatic properties, and toner fusing characteristics.

The moisture content of the paper varies with the relative humidity in the room. When the relative humidity is high and the paper absorbs moisture, the paper edges expand, becoming wavy in appearance. When the relative humidity is low and the paper loses moisture, the edges shrink and tighten, and print contrast may suffer.

Wavy or tight edges can cause misfeeding and alignment anomalies. The moisture content of the paper should be 4 to 6%.

To ensure the proper moisture content, it is important to store the paper in a controlled environment. Some tips on moisture control are:

- Store paper in a cool, dry location.
- Keep the paper in its wrapping as long as possible. Rewrap paper that is not in use.
- Store paper in its original carton. Place a pallet, etc., under the carton to separate it from the floor.
- After removing paper from storage, let it stand in the same room as the printer for 48 hours before use.
- Avoid leaving paper where it is exposed to heat, sunlight, or damp.

Paper Grain

When paper is manufactured, it is cut into sheets with the grain running parallel to the length (long grain) or parallel to the width (short grain). Short grain paper can cause feeding problems in the printer. All paper used in the printer should be long grain.

Other Paper Properties

Porosity: Refers to the density of the paper structure; that is, how openly or compactly the fibers are bonded.

Stiffness: Limp paper can buckle inside the printer, while paper that is too stiff may bind. Either way the result is a paper jam.

Curl: Most paper has a natural tendency to curl in one direction. The paper should be loaded so that the natural curl is downward, to counteract the upward curl imparted by the printer. Printed sheets will then come out flat. Most paper also has a top and bottom surface. Loading instructions are usually given on the paper package.



If the paper is considerably curled in one direction, e.g. when the paper was used to print on one side, try to roll the paper in the opposite direction to counteract the curl. Printed sheets will then come out flat.

Electrostatic properties: During the printing process, the paper is electrostatically charged to attract the toner. The paper must be able to release this charge so that printed sheets do not cling together in the output tray.

Whiteness: The contrast of the printed page depends on the whiteness of the paper. Whiter paper provides a sharper, brighter appearance.

Quality control: Uneven sheet size, corners that are not square, ragged edges, welded (uncut) sheets, and crushed edges and corners can cause the printer to malfunction in various ways. A quality paper supplier should take considerable care to ensure that these problems do not occur.

Packaging: Paper should be packed in a sturdy carton to protect it from damage during transport. Quality paper obtained from a reputable supplier is usually properly packaged.

Special Paper

This section explains printing on special paper. The page printer can use the following types of special paper. In this case, set the media type according to the table below.

Paper type	Media type
Colored paper	Color
Preprinted paper	Preprinted
Overhead projector transparencies	Transparency
Postcards	Cardstock
Envelopes	Envelope
Labels	Labels

Table 2-4

When using the above types of paper, be sure to use products that are specified for use with photocopiers and/or page printers. Feed paper other than colored paper or pre-printed paper from the MP (multi-purpose) tray.

Use paper that is sold specifically for use with copiers (heat-fusing type). Label paper and envelopes should not be placed in the cassette; they must be fed manually and delivered in the face up stack.

Since the composition and quality of special paper vary considerably, special paper is more likely than white bond paper to give trouble during printing. No liability will be assumed if moisture, etc., given off in printing on special paper causes harm to the machine or operator.



Note

Before purchasing any type of special paper, test a sample on the printer and check that print quality is satisfactory.

Specifications for each type of special paper are given below.

Transparency (Overhead Projection Film)

Transparency must be able to withstand the heat of fusing during the printing process. It should satisfy the conditions given in the table below.

Item	Specification
Tolerance of heat	Must tolerate at least 190 °C (374 °F)
Thickness	0.100 to 0.110 mm (3.9 to 4.3 mils)
Material	Polyester
Dimensional accuracy	±0.7 mm (±0.0276 inch)
Squareness of corners	90° ± 0.2°

Table 2-5

To avoid trouble, transparency must be delivered face-up.

If transparency jams frequently, pull the top of the sheet very gently as it leaves the printer.

Adhesive-Backed Labels

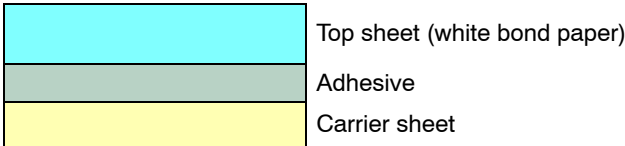
The basic rule for printing on adhesive labels is that the adhesive must never come into contact with any part of the printer. Adhesive paper sticking to the drum or rollers will damage the printer.



Note

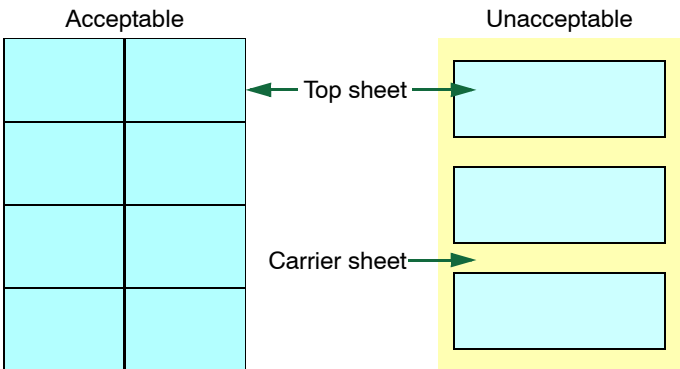
Be sure to feed label paper from the MP tray. Feeding label paper from a paper cassette may cause printer failure.

Label paper has a structure comprised of three layers, as shown in the figure below. The top sheet is printed on. The adhesive layer consists of pressure-sensitive adhesives. The carrier sheet (also called the linear or backing sheet) holds the labels until use. Due to the complexity of its composition, adhesive-backed label paper is particularly likely to give trouble in printing.



Adhesive label paper must be entirely covered by its top sheet, with no spaces between the individual labels. Labels with spaces in between are apt to peel off, causing serious paper jam problems.

Some label paper is manufactured with an extra margin of top sheet around the edge. Do not remove the extra top sheet from the carrier sheet until after printing is finished.



The table below lists the specifications for adhesive label paper.

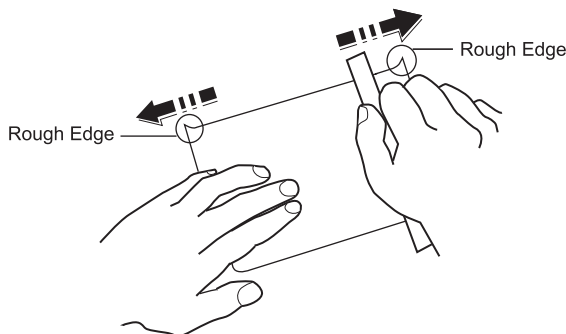
Item	Specification
Weight of top sheet	44 to 74 g/m ² (12 to 20 lb/ream)
Composite weight	104 to 151 g/m ² (28 to 40 lb/ream)
Thickness of top sheet	0.086 to 0.107 mm (3.9 to 4.2 mils)
Composite thickness	0.115 to 0.145 mm (4.5 to 5.7 mils)
Moisture content	4 to 6 % (composite)

Table 2-6

Postcards

Fan the stack of postcards and align the edges before loading them in the MP tray. Make sure the postcards you are going to set are not curled. Feeding curled postcards may cause paper jams.

Some postcards have rough edges on the back (those are created when the paper is cut). In this case, put the postcards on a flat place and rub the edges with, for example, a ruler to smooth them.



Envelopes

The printer can print on envelopes using paper with a basis weight of 60 to 79 g/m² (16 to 21 lb/ream). Envelopes must be manually fed.

An envelope is a more complex object than a single sheet of paper. For this reason, it may not be possible to obtain consistent print quality over the entire envelope surface.

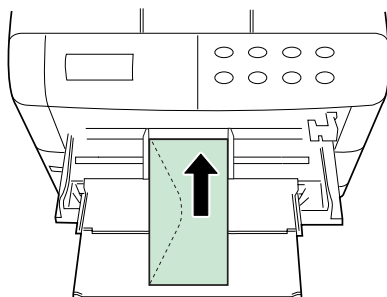
Many envelopes have a diagonal grain orientation (See [Paper Grain](#) on page 2-6). This orientation is more likely to wrinkle and crease on its way through the printer. Before purchasing envelopes for use with the printer, test a sample to verify the envelope's suitability.

Do not use envelopes that have an encapsulated liquid adhesive.

Avoid long printing runs consisting of envelopes only. Extensive envelope printing can cause premature printer wear.

To avoid jamming due to curled envelopes, do not leave more than approximately 10 printed envelopes stacked in the paper trays during multiple envelope printing.

Envelopes should be fed in the face-up position, right edge first.

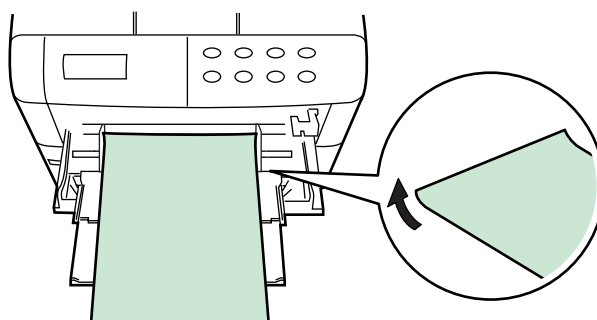


Thick Paper

Fan the stack of paper and align the edges before loading them in the MP tray. Some types of paper have rough edges on the back (those are created when the paper is cut). In this case, put the paper on a flat place and rub the edges once or twice with, for example, a ruler to smooth them in the same way as described in [Postcards](#) on page 2-9. Feeding rough edged paper may cause paper jams.



If the paper jams even after you smooth it out in such a way, set the paper in the MP tray with the leading edge raised up a few millimeters as shown in the illustration.



Colored Paper

Colored paper should satisfy the same conditions as white bond paper, listed in *Paper Specifications* on page 2-2. In addition, the pigments used in the paper must be able to withstand the heat of fusing during the printing process (up to 200 °C or 392 °F).

Preprinted Paper

Preprinted paper should have a bond paper base. The preprinted ink must be able to withstand the heat of fusing during the printing process, and must not be affected by silicone oil.

Do not use paper with any kind of surface treatment, such as the type of paper commonly used for calendars.

Recycled Paper

Select recycled paper that meets the same specifications as the white bond paper (see *Paper Specifications* on page 2-2) except whiteness.



Note

Before purchasing recycled paper, test a sample on the printer and check that the print quality is satisfactory.

Paper Type

The printer is capable of printing under the optimum setting for the type of paper being used.

Setting the paper type for the paper source from the printer's operator panel will cause the printer to automatically select the paper source and print in the mode best suited to that type of paper.

A different paper type setting can be made for each paper source including the MP tray. Not only can preset paper types be selected, but it is also possible for you to define and select customized paper types. See [Creating Custom Paper Type](#) on page 1-32.

The following types of paper can be set.

Paper source Paper Type	MP tray	Paper Cassette	Paper Weight	Duplex path (MP tray available only in Cassette mode)
Plain	Yes	Yes	Normal 2	Yes
Transparency	Yes	No	Extra Heavy	No
Preprinted	Yes	Yes	Normal 1	Yes
Labels	Yes	No	Heavy 1	No
Bond	Yes	Yes	Normal 3	Yes
Recycled	Yes	Yes	Normal 2	Yes
Vellum	Yes	No	Light	No
Rough	Yes	Yes	Normal 3	Yes
Letterhead	Yes	Yes	Normal 3	Yes
Color	Yes	Yes	Normal 3	Yes
Prepunched	Yes	Yes	Normal 1	Yes
Envelope	Yes	No	Heavy 3	No
Cardstock	Yes	No	Heavy 3	No
Thick	Yes	No	Heavy 1	No
High quality	Yes	Yes	Normal 2	Yes
Custom 1 (to 8) [†]	Yes	Yes	Normal 2	Yes

Table 2-7

[†] This is a paper type defined and registered by the user. Up to eight types of user settings may be defined. For details on [Creating Custom Paper Type](#) on page 1-32.

Yes: Can be stored No: Cannot be stored

Chapter 3 **Maintenance**

This chapter explains how to replace the toner container and how to clean parts such as the registration roller and charger wire.

This chapter explains the following topics:

- **Toner Container Replacement**
- **Waste Toner Box Replacement**
- **Cleaning**

Toner Container Replacement

The toner container in the printer should be replaced as soon as the message display shows `Toner low` or soon after. If you continue to use the printer, eventually the toner supply will be exhausted at which point the printer will stop printing and the `Replace toner Clean printer` message will be shown instructing you to install a new toner kit.

Toner Container Replacement Interval

Assuming an average toner coverage of 5% and Ecoprint mode turned off, the toner container will need replacing approximately once every 15,000 pages.[†]

[†] For a new printer with a toner kit installed for the first time, the number of copies that can be printed will be approximately 7,500.

Toner Kits to be Used

Contents: Toner container
 Waste toner box
 Wiper cloth
 Grid cleaner
 2 plastic bags (for disposal of the old toner container and waste toner box)
 Installation Guide

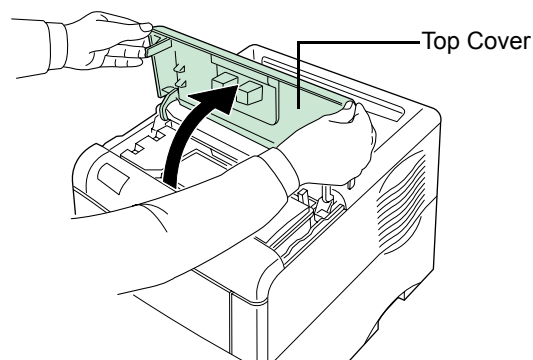


Note

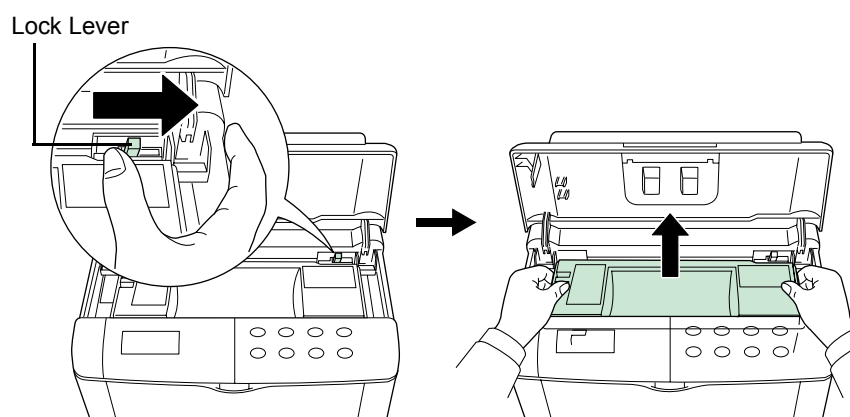
- Be sure to distance items such as floppy disks during toner container replacement.
- Be sure to clean the inside of the printer when replacing the toner container. For details, see [Cleaning](#) on page 3-9.
- Use of original Kyocera Mita toner kits is highly recommended to prevent printer trouble and ensure the long life of the printer.

Replenishing Toner

- 1 Open the printer top cover all the way.



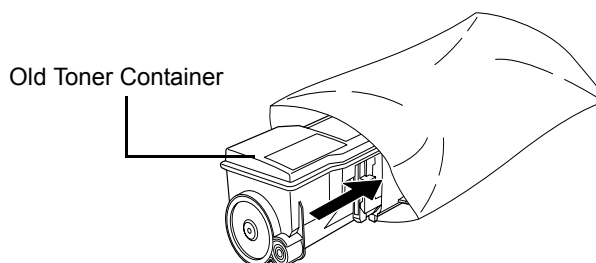
- 2 Pull the lock lever (blue colored) to the right and gently lift the old toner container.



Note

Keep the toner container as level as possible while removing.

- 3 Put the old toner container in the plastic bag supplied with the toner kit and dispose of it.

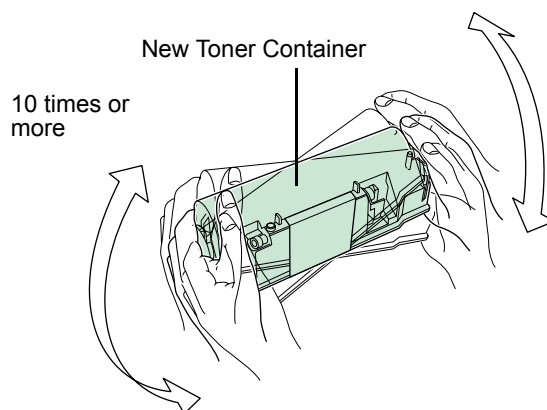


Note

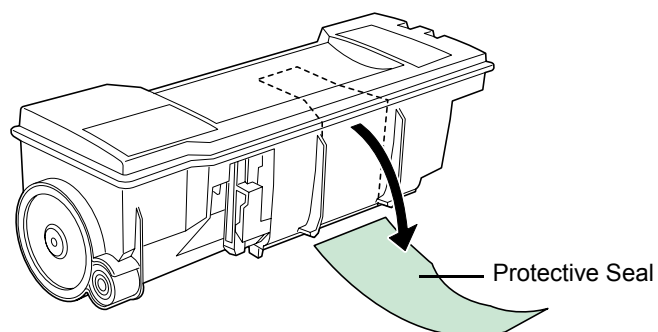
The old toner container may be incinerated without the risk of generating harmful gas.

4 Take the new toner container from the bag.

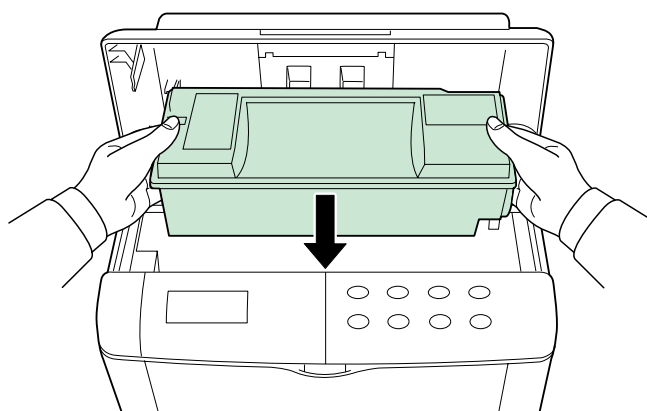
5 With the label side down, thoroughly shake the toner container (in the direction of the arrows) ten times or more. This ensures that the toner is evenly distributed inside.



6 Carefully remove the protective seal (orange colored).

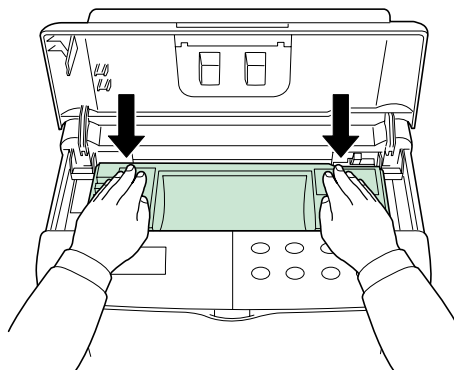


7 Install the toner container into the printer.

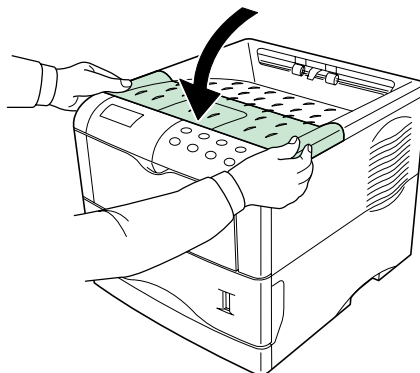


- 8** Push firmly on the top of the toner container at the positions marked **PUSH HERE**.

When the toner container fits into place, it will lock with a clicking sound.



- 9** Close the top cover.



Note

It is necessary to clean the inside of the printer after replacing the toner container. If the toner container is replaced when **Replace toner Clean printer** is displayed, **Clean printer Press GO** will appear after replacement. After cleaning the inside of the printer (see [Cleaning](#) on page 3-9), the message will disappear when the GO key is pressed, and the printer will be ready for printing.

Waste Toner Box Replacement

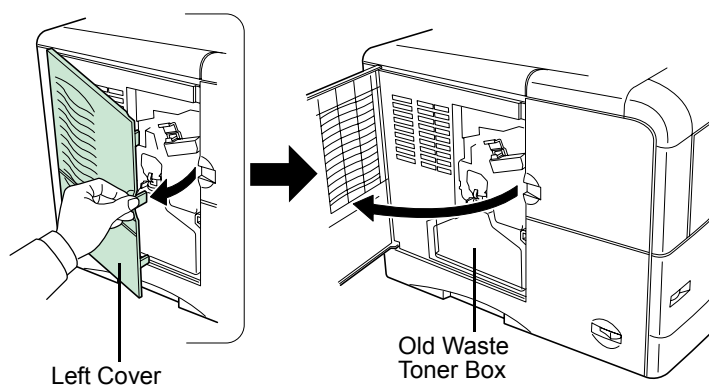
Replacing the Waste Toner Box



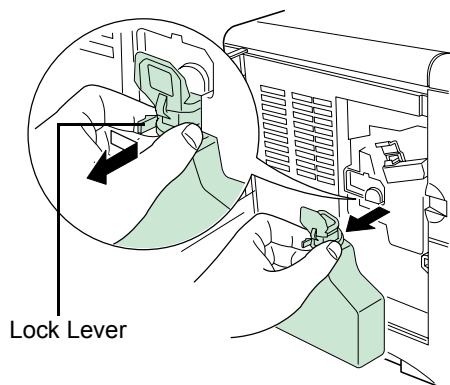
Note

When replacing the toner container, the used waste toner box in the printer should also be replaced with the new one from the new toner kit.

- 1 Open the left cover on the left side of the printer.



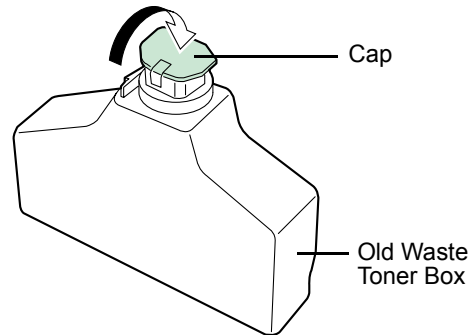
- 2 While holding the waste toner box, press the lock lever and then gently remove the waste toner box.



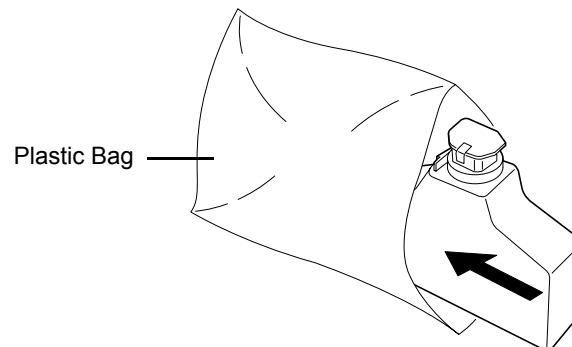
Note

Remove the waste toner box as gently as possible so as not to scatter the toner inside. Do not let the opening of the waste toner box face downward.

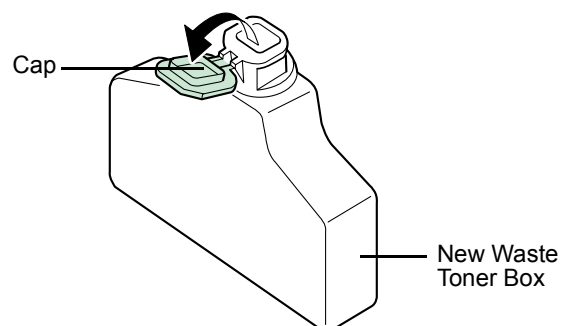
- 3** Cap the waste toner box after removing from the printer.



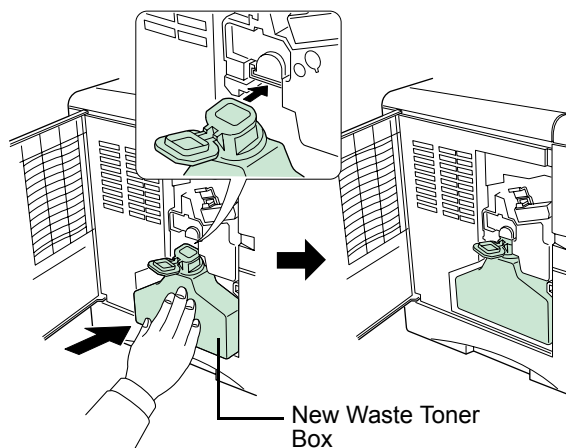
- 4** To avoid toner spillage, place the capped waste toner box in the plastic bag supplied before proper disposal.



- 5** Open the cap of the new waste toner box.



- 6** Insert the new waste toner box as shown in the figure below. The box will be locked when it fits into place.



- 7** Ensure that it is correctly inserted and close the left cover.



The printer parts must be cleaned when replacing the toner container. See [Cleaning](#) on page [3-9](#).

- 8** When the toner container is replaced, reset the toner counter (see [Toner Counter Resetting](#) on page [1-96](#)).

Cleaning

To avoid print quality problems, the following printer parts must be cleaned with every toner container replacement. In addition, the charger wire and paper transfer unit should be cleaned from time to time, or whenever print quality problems occur.



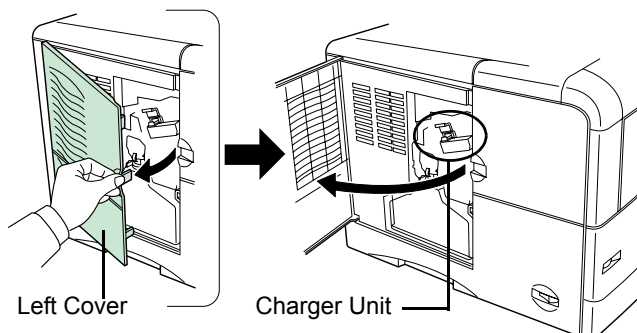
Note

If the toner container was replaced when **Replace toner Clean printer** was displayed, **Clean printer Press GO** will appear after replacement. After cleaning the inside of the printer following the procedure shown below, press the GO key; the message will disappear and the printer will be ready for printing.

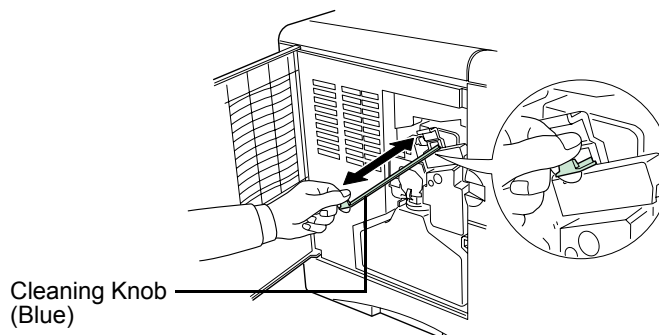
Cleaning the Charger Wire

The charger wire is a part in the drum unit that needs to be periodically cleaned. You can clean the charger wire by pulling the cleaning knob as instructed below.

- 1 Open the left cover on the left side of the printer.



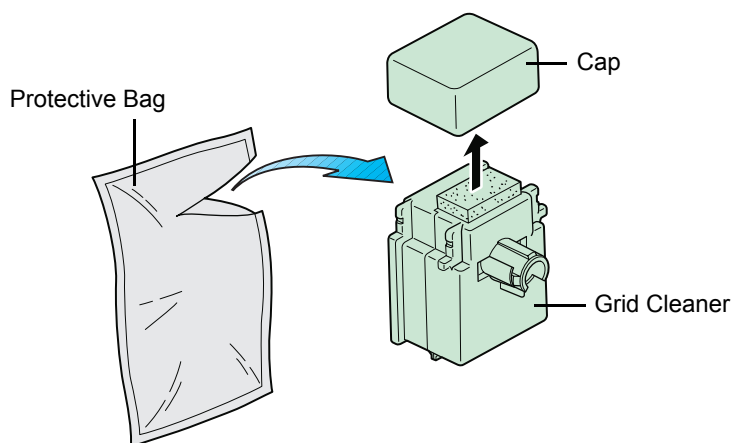
- 2 Pull the cleaning knob (blue colored) slowly in and out a few times. This cleans charger wire inside the printer.



Cleaning the Charger Grid

The charger grid is a part located at the bottom of the charger unit, which also needs to be cleaned. You should use a grid cleaner attaching it to the printer and pull out the charger unit as instructed below.

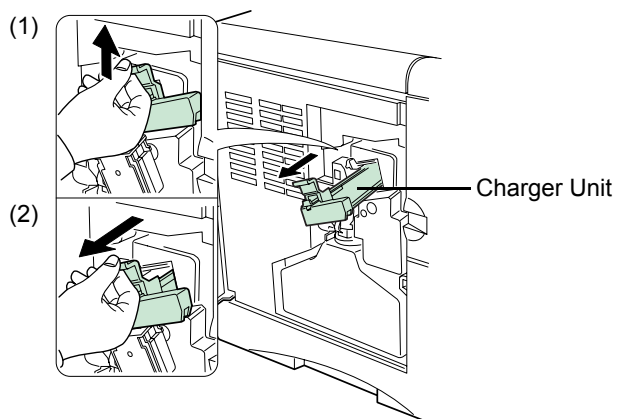
- 1 Take the grid cleaner from protective bag in the new toner kit, and remove the cap.



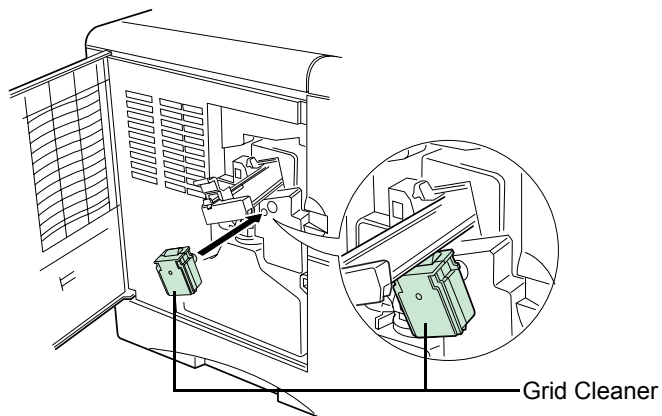
Note

The grid cleaner pad is supplied with water soaked. Perform the following procedure before the pad dries.

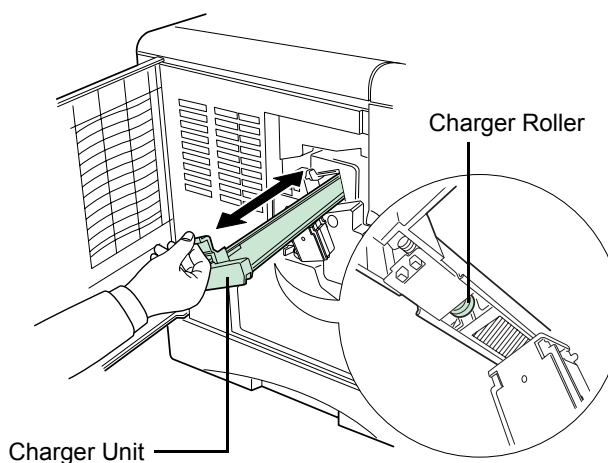
- 2 Pull out the charger unit approximately 5 cm (2 inches).



- 3** Attach the grid cleaner to the printer with the pad at the top, as shown in the figure.



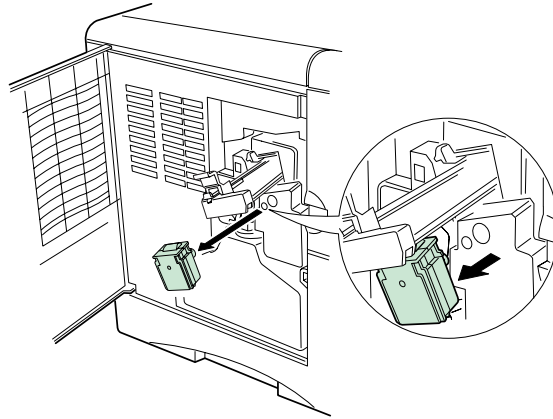
- 4** Making sure that the charger roller does not come into contact with the grid cleaner pad, repeat a few times the action of slowly pulling out and pushing back in the charger unit, as shown in the figure. This cleans grid part underneath the charger unit.



Note

Do not push the charger unit all the way in. Otherwise, water from the pad will cause the charger unit to become wet and this may affect printing.

- 5** Remove the grid cleaner from the printer and dispose of it. The grid cleaner is not re-usable.



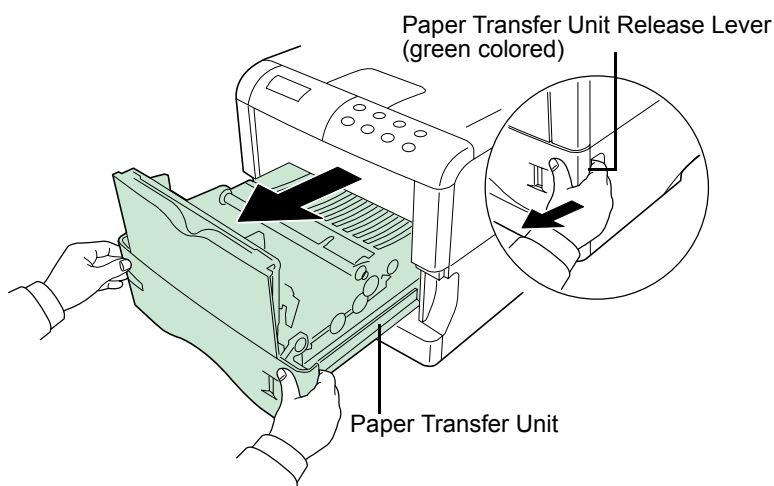
- 6** After cleaning the charger wire and grid, push the charger unit all the way in and close the left cover.



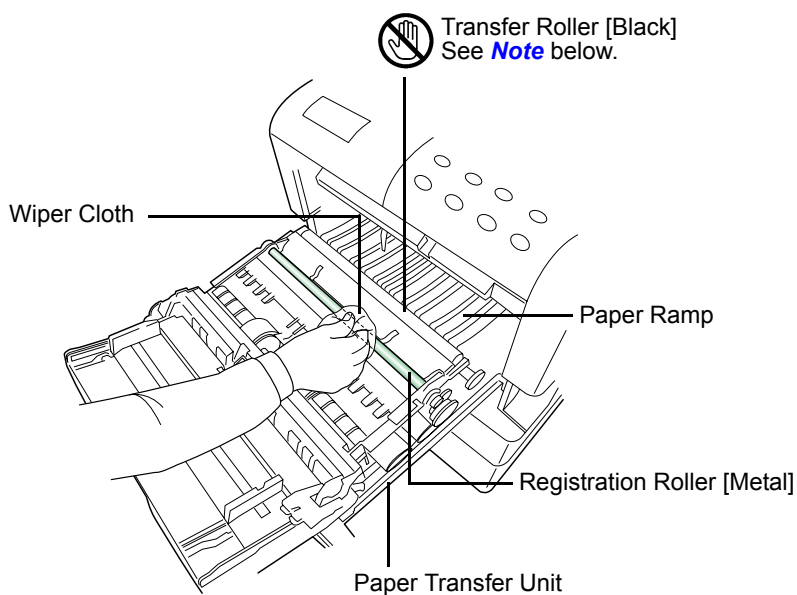
Paper Transfer Unit

To avoid print quality problems due to paper dust and debris, clean the paper transfer unit in the following manner.

- 1 While pulling the paper transfer unit release lever (green colored), pull out the paper transfer unit.



- 2 Wipe away the paper dust on the registration roller and the paper ramp using the wiper cloth included in the toner kit.



Be careful not to touch the transfer roller (the black roller) during cleaning as this may adversely affect print quality.

Chapter 4 **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 Guide**
- **Print Quality Problems**
- **Indicators and Messages**
- **Correcting a Paper Jam**

General Guide

There are quite a few printer problems that you can deal with by yourself. This section explains how to correct these problems. Therefore, if some kind of problem should occur, check the following before concluding the printer is broken.


Symptom	Check Items		Corrective Action
The printer will not print from the computer.	Check the READY  indicator.	Off	Look through the items below and check anything that seems appropriate.
		Flashing	An error has occurred. For details on error warnings and remedies, see <i>Indicators</i> on page 4-6 .
		Lit	See the appropriate item below.
	Check the ATTENTION indicator.	Flashing	See <i>Indicators</i> on page 4-6
		Lit	
	A maintenance message appears in the message display.		See <i>Maintenance Messages</i> on page 4-7
Print quality is not good.			See <i>Print Quality Problems</i> on page 4-3 .
Paper is jammed.			See <i>Correcting a Paper Jam</i> on page 4-12 .
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 really in the ON () position.		
The printer prints a status page, but data from the computer is not being printed normally.	Check the interface cable.		Connect both ends of the interface cable securely. Try replacing the printer cable. For details on the parallel interface for this printer, see <i>Appendix B</i> .
	Check program files and application software.		

Table 4-1

If you still cannot correct a printer problem even after checking the above, please contact your Kyocera Mita dealer.

Print Quality Problems

As the following table shows, there are many possible causes of print quality problems, such as blank output as. The troubleshooting procedure for each type of problem is explained below. If you still can not solve the problem, contact your Kyocera Mita dealer.

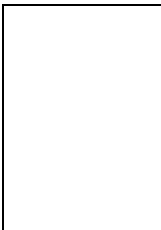

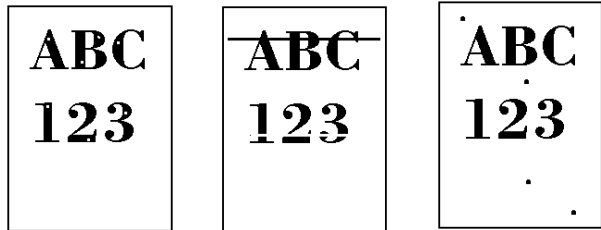
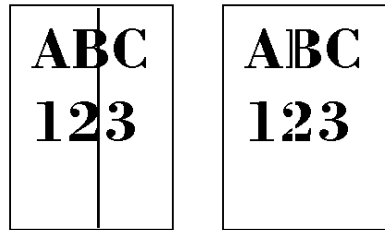
Printed Results	Corrective Action
Completely blank printout 	<p>Check the developer unit. Open the printer top cover and check that the developer unit is inserted correctly and check that the developer's connector is connected properly.</p> <p>Check the toner container. Open the printer top cover and check that the toner container is correctly installed in the printer. See Toner Container Replacement on page 3-2.</p>
All-black printout 	<p>Check the charger unit. Open the printer left cover and check that the charger unit is correctly installed.</p>
Dropouts, horizontal streaks, stray dots 	<p>Clean the charger wire. Open the printer left cover. Pull the cleaning knob (green colored) slowly in and out a few times. See Cleaning on page 3-9.</p>
Black or white vertical streaks 	<p>Check the operator panel. If the Toner low message is displayed and the ATTENTION indicator is flashing, install a new toner kit. See Toner Container Replacement on page 3-2.</p> <p>Clean the charger wire. Open the printer left cover. Pull the cleaning knob (green colored) slowly in and out a few times. See Cleaning on page 3-9.</p>

Table 4-2

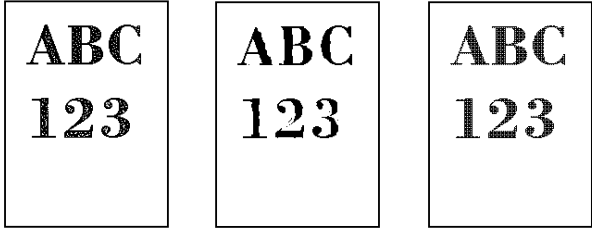
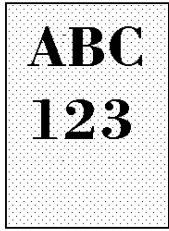
Printed Results	Corrective Action
<p>Faint or blurred printing</p> 	<p>Check the Ecoprint setting. When this setting is On, switch it to Off on the Operator Panel. (See Ecoprint on page 1-54)</p> <p>Check the operator panel.</p> <ul style="list-style-type: none"> If the Toner low message is displayed and the ATTENTION indicator is flashing, install a new toner kit. See Toner Container Replacement on page 3-2. Set the print density from the operator panel to a higher level than the current setting. See Print Density on page 1-95. Make sure the paper type setting is correct. See Paper Type on page 2-12 <p>Clean the charger wire. Open the printer left cover. Pull the cleaning knob (green colored) slowly in and out a few times. See Cleaning on page 3-9</p>
<p>Grey background.</p> 	<p>Check the operator panel. If the Toner low TK-50 message is displayed and the ATTENTION indicator is flashing, install a new toner kit. See Toner Container Replacement on page 3-2.</p> <p>Check the print density. Display the print density menu from the operator panel and select a lighter density setting. See Print Density on page 1-95.</p> <p>Clean the charger wire. Open the printer's left cover. Pull the cleaning knob (green colored) slowly in and out a few times. See Toner Container Replacement on page 3-2.</p> <p>Check the charger unit installation. Open the printer left cover and check that the charger unit is correctly installed and seated as far as it will go. See Cleaning on page 3-9.</p>

Table 4-2 (Continued)

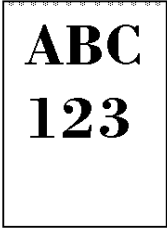
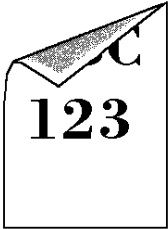
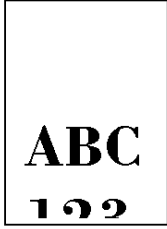
Printed Results	Corrective Action
<p>Dirt on the top edge or back of the paper</p> <div data-bbox="177 439 344 667">  </div> <div data-bbox="392 439 560 667">  </div>	<p>Check the paper chute and the ramp. Pull out the paper transfer unit and check for toner on the paper ramp. Clean the paper ramp using a soft, dry, lint-free cloth. See Cleaning on page 3-9.</p> <p>Check the transfer roller. If the transfer roller is dirty with toner, try printing several pages.</p>
<p>Characters out of position.</p> <div data-bbox="177 766 344 994">  </div>	<p>Check the file or program. Check whether the problem is being caused by a PRESCRIBE command error. If the problem occurs only with a specific file or program, the most likely cause is an error in a parameter to a command or command syntax.</p>

Table 4-2 (Continued)

Indicators and Messages

The tables on the following pages indicate how to respond to problems indicated by the operator panel indicators and messages.

Indicators








Indicator	Name	Condition	Description
  READY	Ready indicator	Flashing	An error occurs that you can clear by yourself.
		Lit	The printer is on-line. The printer is ready to print.
		Off	The printer is off-line. The printer stores but does not print received data. Also indicates when printing is automatically stopped due to occurrence of an error.
  DATA	Data indicator	Flashing	Data transfer is taking place.
		Lit	Either data is being processed, or data is being written onto the option CompactFlash card or Microdrive.
  ATTENTION	Attention indicator	Flashing	The printer needs maintenance attention or the printer is warming up (Please wait).
		Lit	A problem or an error occurs that you can clear by yourself. (For example, a paper jam occurs.)
		Off	Operations are normal.

Table 4-3

Maintenance Messages

The following table lists maintenance messages that you can deal with by yourself. If Call service person appears, turn off the printer, disconnect the power cord, and contact your Kyocera Mita dealer.

Message	Corrective Action
Add paper (paper source)	The paper has run out. Supply paper according to the paper source displayed (paper cassette, MP tray, or option paper feeder). Messages indicating the printer status (Ready, Please wait, Processing [†] , Waiting, and FormFeed Time Out [†]) are displayed alternately.
Call service F000	The ATTENTION indicator turns on and the READY indicator goes off. Indicates a problem with the controller and the operator panel. Call a service person. The printer does not operate when this message is displayed.
Call service ####	The ATTENTION indicator turns on. Indicates a controller error. Call a service person. The printer does not operate when this message is displayed.
Call service ####:0123456	The ATTENTION indicator turns on. Indicates a mechanical error. Or an unsupported option hardware has been installed. Be sure to install proper option hardware compatible with the FS-1920. Call a service person. 0123456 indicates the number of printed pages.
Cassette # not loaded	The paper cassette may not be properly inserted into the printer. Reinsert the paper cassette. The paper source number (#) is only displayed when there is an option paper feeder installed.
Check waste toner box	The waste toner box is not installed. After installing the waste toner box, you should be able to print. Replace the old waste toner box with the new one which is included in the toner kit. The message will also be shown if the waste toner box has become full. The waste toner box should be replaced when the message display eventually shows  Toner low. See Toner Container Replacement on page 3-2.
Clean printer Press GO	Please clean the inside of the printer. See Cleaning on page 3-9. This message will be displayed when replacing the toner container after the message Replace toner TK-50 is displayed. After cleaning the inside of the printer, press the GO key and the printer will be ready for printing. If Auto Continue is set to On, printing will be automatically resumed after a preset period of time.
Close duplexer rear cover	Open the option duplexer rear cover, then close tightly.
Close left cover	Open the left cover, then close tightly.
Close sorter rear cover	Open the sorter rear cover, then close tightly.
Close stacker cover	Open the stacker cover, then close tightly.
Close top cover	Open the top cover, then close tightly.
Close paper transfer unit	Open the paper transfer unit, then close tightly.
Duplex disabled Press GO	You attempted to print with a paper size and paper type that cannot be used for duplex printing. Press the GO key to print onto one-side of the paper only.


 :Alarm buzzer sounds when an error occurs. Press the **CANCEL** key to stop the alarm buzzer.

Table 4-4

Message	Corrective Action
Load Cassette # (paper size)/(paper type) ^{††}	<p>There is data for printing that matches with a paper cassette setting (paper size, paper type), but there is no paper in the paper cassette. Set paper into the paper source as displayed on the operator panel, and press the GO key to restart printing. However, the paper source number (#) is only displayed when there is an option paper feeder installed.</p> <p>Or, if you want to print from a different paper source press the ^ and v key to display <i>Use alternative?</i> and you can change the source for paper feeding.</p> <p>After selecting a paper source and pressing the MENU key, <i>Paper Handling ></i> appears. By pressing the > key, the paper type settings menu appears. After setting the correct paper type, press the ENTER key and printing starts.</p>
Load MP tray (paper size)/(paper type) ^{††}	<p>There is no paper cassette set (paper size, paper type) that matches with the data for printing, so printing is done from the MP tray. Set paper into the MP tray that matches the paper size and type shown on the display and press the GO key to restart printing.</p> <p>Or, if you want to print from a different paper source press the ^ and v key to display <i>Use alternative?</i> and you can change the source for paper feeding.</p> <p>After selecting a paper source and pressing the MENU key, <i>Paper Handling ></i> appears. By pressing the > key, the paper type settings menu appears. After setting the correct paper type, press the ENTER key and printing starts.</p>
Missing duplex drawer	The duplex drawer is either not installed or incorrectly inserted. Insert the duplex drawer securely.
Option interface Error	A failure has occurred with the option network interface card. Check the option interface installed in the printer.
Paper jam #####	Open the top cover or the paper transfer unit and correct the paper jam (or paper mis-feeding in the paper cassette). The location of the paper jam is also indicated in place of the #'s. Online help messages which are useful for correcting the paper jam will be displayed by pressing the ? key. (See Correcting a Paper Jam on page 4-12)
Remove paper sorter tray ##	There is still paper in the option sorter's tray indicated by # when the power was turned on or the sorter's mode was switched. Remove all the paper inside the sorter.
Replace toner Clean printer	Replace the toner container using a new toner kit. The printer does not operate when this message is displayed. See Toner Container Replacement on page 3-2.
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.)
Sorter tray ## paper full	The sorter tray indicated by # is now full. Remove some of the paper from the sorter tray concerned.
Toner low	Replace the toner container using a new toner kit. See Toner Container Replacement on page 3-2.
Top tray paper full	The top tray has become full (approx. 250 pages). You must remove all printed pages from the top tray. When the printer senses that the top tray is empty again, it will continue printing into the top tray.


 :Alarm buzzer sounds when an error occurs. Press the **CANCEL** key to stop the alarm buzzer.

Table 4-4 (Continued)

Message	Corrective Action
Warning image adapt	Printing job cannot be done in current resolution because there is not enough internal memory. Try adding more memory or changing resolution. See Appendix A .
Warning low memory	The printer's internal memory is running low due to the number of fonts and macros downloaded. Print a status page to see how much user memory is left, and try deleting unnecessary fonts and macros. See Appendix A .

Table 4-4 (Continued)

† These messages will not appear if the number of copies is set to 2 or more.

†† (paper size) and (paper type) are displayed flashing alternately.

Error Messages

The following table lists error messages that can be dealt with by the user.

Message	Corrective Action
File not found Press GO	VMB: A VMB tray that was specified for output does not contain any jobs, or the VMB tray is not being used. Confirm the VMB tray. If Auto Continue is set to On, printing will be automatically resumed after a preset period of time. See Auto Continue Setting on page 1-105 .
Format error Memory card	This message appears when the printer is in the ready state and the CompactFlash (memory) card is not formatted, and therefore cannot be read or written. Follow the procedure in Formatting a Storage Device on page 1-88 to format the card.
Format error Hard disk	Initialization (formatting) of the Microdrive is required. Initialize the Microdrive. (See Operating the Storage Device on page 1-81 .)
Hard disk err ## Press GO	Look at the error code given in place of ## and refer to the corresponding description given below. 01: Microdrive format error. If this error recurs even if the power has been turned off and then on, reformat the Microdrive. 02: The disk system is not installed. Recheck the requirements for using the system and the devices. 04: There is no available Microdrive space. Delete unnecessary files, etc., in order to free up space. 05: The specified file does not exist in the Microdrive. 06: There is no memory available to the Microdrive system. Increase the available memory. 10: Formatting is not possible because host data is being spooled on the Microdrive. Wait until the Microdrive is ready, and then format. 85: VMB; Alias error (the alias setting was lost, or the VMB tray corresponding to the alias does not exist). Set the alias again. 97: Code job; The number of permanent code job reached the limit value, and no more can be saved. Either delete some unnecessary jobs, etc., or increase the limit. 99: A print job for the specified ID does not exist in the Microdrive.
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 ID entered for a private job, or a stored job is not correct. Check the ID that is set using the printer driver.
Insert the same memory card	You have inserted the wrong CompactFlash (memory) card when the Insert again message was displayed. Remove the wrong CompactFlash card from the printer's CompactFlash card slot and insert the correct CompactFlash card. The printer again reads it from the beginning of the data.
KPDL error ## Press GO	Current print processing cannot continue. To print out an error report, display > Print KPDL errs from the mode select menu, 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. See Auto Continue Setting on page 1-105 .


 :Alarm buzzer sounds when an error occurs. Press the **CANCEL** key to stop the alarm buzzer.

Table 4-5

Message	Corrective Action
Memory card err Insert again	The CompactFlash 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. Note: We recommend that you follow the reading procedure from the beginning to ensure correct reading of the 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 (expansion DIMM). 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. See Auto Continue Setting on page 1-105.
MemoryCard err## Press GO	This message appears when an error occurs during access to the CompactFlash card using the PRESCRIBE RWER command or from the printer's operator panel. Look at the error code given in place of ## and refer to the corresponding description given below. 01: The CompactFlash card does not meet specifications. This CompactFlash card cannot be used by this printer. Insert a CompactFlash card which can be used by this printer. (See CompactFlash (Memory) Card on page A-30.) 02: The CompactFlash card is not installed. Recheck the requirements for using the CompactFlash card. 04: The capacity of the CompactFlash card is insufficient. Clean up files. 05: Specified file not on CompactFlash card. 06: No memory for use by CompactFlash card. Expand printer memory.
Paper path error	There is no paper cassette in the feeder, or the cassette is not inserted properly. After reinserting the paper cassette, you should be able to print. When two or more option feeders are installed and the lowest one is selected, the same message will appear if any of the upper paper feeder and the printer cassette is improperly installed.
Print overrun Press GO	The data 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. Note: After this message is displayed, page protect mode will be On. To maintain optimum use of memory during printing, display >Page protect from the operator panel, and re-select Auto. See Page Protect Mode on page 1-91. If Auto Continue is set to On, printing will be automatically resumed after a preset period of time. See Auto Continue Setting on page 1-105.
RAM disk error## Press GO	Look at the error code given in place of ## and refer to the corresponding description given below. 01: Abnormal format. Try turning the power off and on again. 02: RAM disk mode is Off. Turn RAM disk mode On. 04: No disk space. Clean up files. 05: Specified file not on disk. 06: No memory for use by disk system. Expand printer memory.
Virtual mail box full	The storage area for the VMB is full. Print out accumulated VMB data.


 :Alarm buzzer sounds when an error occurs. Press the **CANCEL** key to stop the alarm buzzer.

Table 4-5 (Continued)

Correcting a Paper Jam

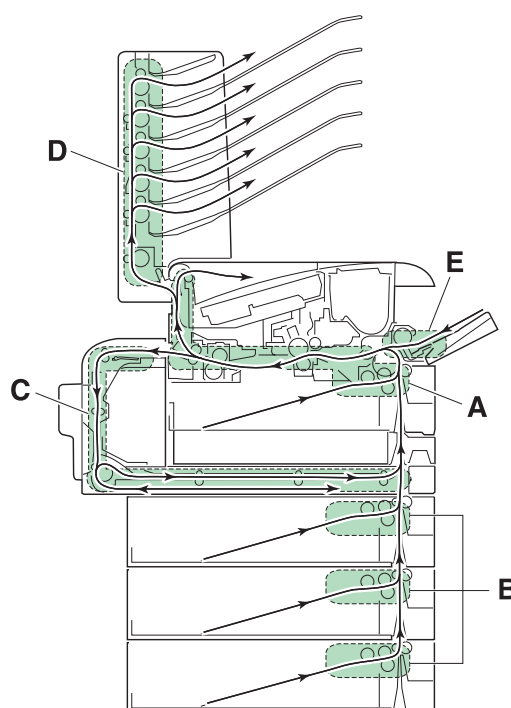
The Paper jam message is displayed on the message display when paper becomes stuck in the paper transport system, the paper feed timing is incorrect, or paper fails to feed at all. The jam can be corrected by removing the paper.

The printer goes off-line when the Paper jam message is displayed.

When a paper jam occurs, a paper jam message and the paper jam location are indicated on the message display. Details of the messages and paper jam locations are as follows:

Paper jam message	Paper jam location	Description	Reference page
Paper jam Cassette 1	A	Paper is jammed at the paper cassette or inside the printer.	4-14
Paper jam Cassette 2 (to 4)	B	Paper is jammed at the option paper feeder's cassette.	4-14
Paper jam Duplexer	C	Paper is jammed inside the rear cover of the option duplexer or at the duplexer drawer.	4-16
Paper jam Sorter	D	Paper is jammed at the option sorter.	4-18
Paper jam MP Tray	E	Paper is jammed at the MP tray.	4-20

Table 4-6



When the jammed paper has been removed, open and close the printer's top cover or the paper transfer unit. Then the printer automatically warms up, goes on-line, and continues printing. Depending on the point at which the jam occurred, the printer may or may not print the jammed page.

If paper jams occur frequently, try using a different type of paper, replace with paper from another ream, turn the stack of paper over, or turn the paper the other way around. Read the information in **Chapter 2**. Also, look for tiny pieces of paper that may have been torn off and overlooked when the jammed paper was removed.

If you cannot solve the problem by changing the paper, there may be a problem with the printer. Call a service person.



When pulling the paper, pull it gently so as not to tear it. Torn pieces of paper are difficult to remove and may be easily overlooked, deterring the jam recovery.

Online help messages

With the online help message function, this printer can display the procedure to correct a paper jam on the message display. When a paper jam message is displayed, press the **2** key. The display will show `Please wait` after the jammed paper has been removed.

Pressing the **✓** key at the online help message display shows the next step; pressing the **∧** key shows the previous step.

To exit the online help message display, press the **2** key. The previously shown paper jam message appears.

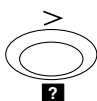
Online help messages that can be displayed when a paper jam occurs and their respective corrective actions are given below:

Jam at the Paper Cassette or Inside the Printer

Paper jam
Cassette 1



-- HELP START --
Press **?** key



Paper is jammed at the paper cassette or inside the printer. Remove the jammed paper using the procedure given below.

While the display alternates between the paper jam message and HELP START, press the **?** key. An online help message appears.

Examples of online help messages

Open
▼cassette 1 and



▲pull out paper
▼transfer unit



▲then remove
▼the paper jam.

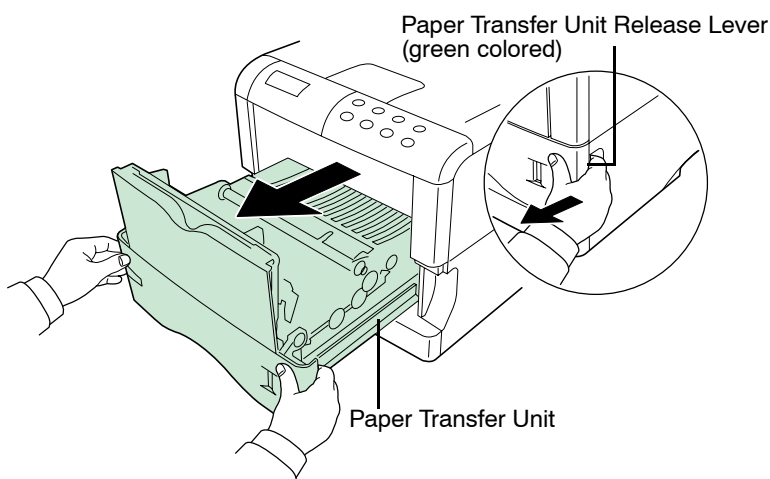
1

Pull out the paper cassette and remove the jammed paper.

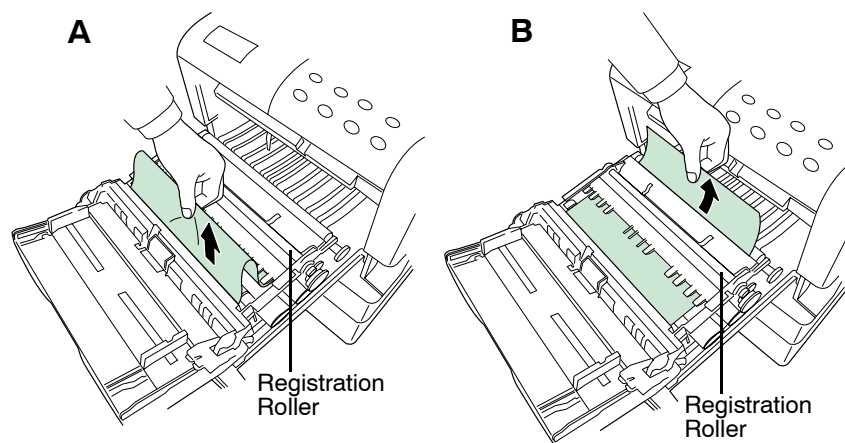


2

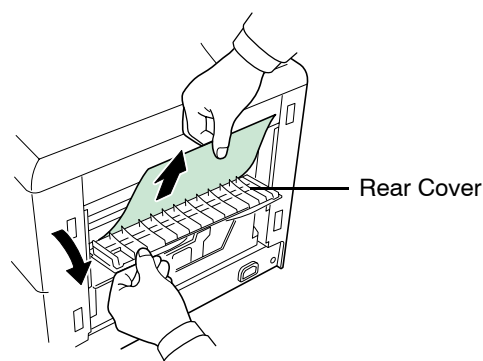
Push the paper cassette back in. While pulling the paper transfer unit release lever (green colored), pull out the paper transfer unit.



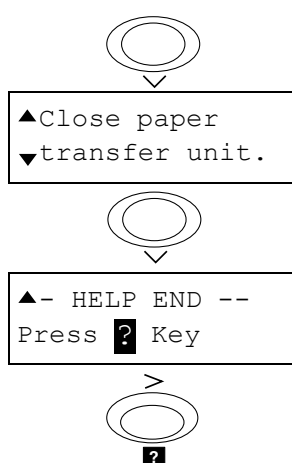
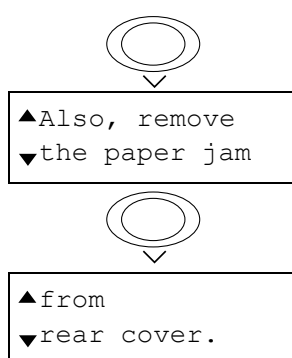
- 3** If paper is jammed before the registration roller, remove it as shown in **A**. If paper is jammed under the registration roller, remove it as shown in **B**.



- 4** Open the rear cover and remove the jammed paper.



- 5** Push the paper cassette and paper transfer unit back in and close the rear cover.

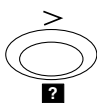


Paper Jam at the Option Duplexer

Paper jam
Duplexer



-- HELP START --
Press **?** key



Examples of online help
messages

Open duplexer
▼rear cover and



▲remove
▼the paper jam.

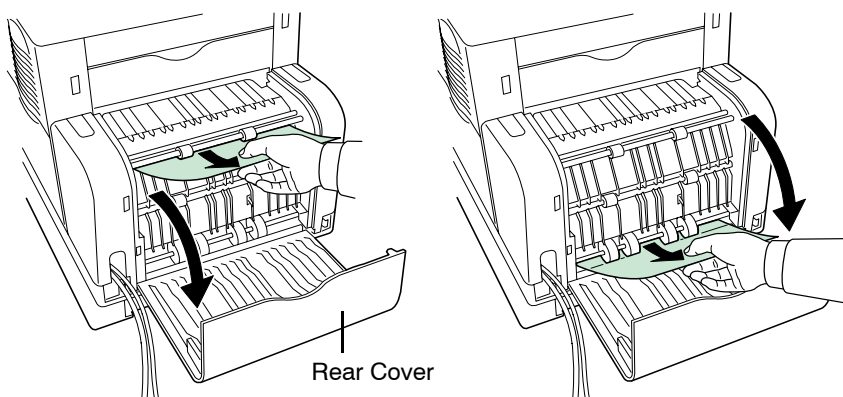


▲Pull out
▼duplex drawer,

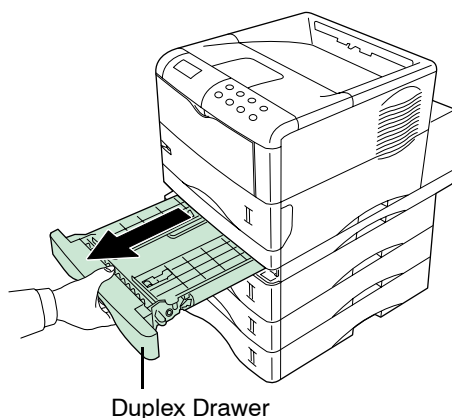
Paper is jammed inside the rear cover of the option duplexer or at the duplexer drawer. Remove the jammed paper using the procedure given below.

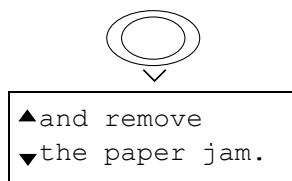
While the display alternates between the paper jam message and **HELP START**, press the **?** key. An online help message appears.

- 1** Open the rear cover of the duplexer and remove the jammed paper.

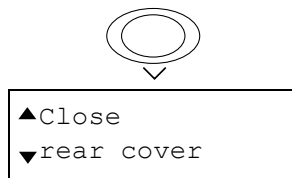
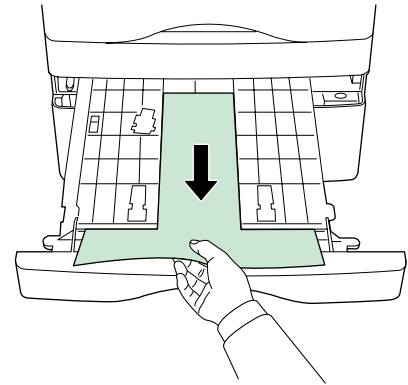
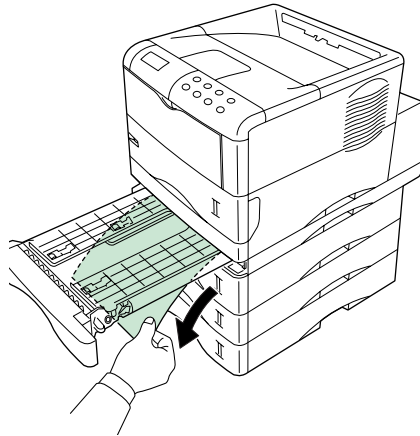


- 2** Pull out the duplex drawer.

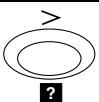
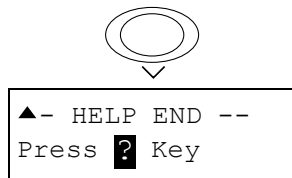
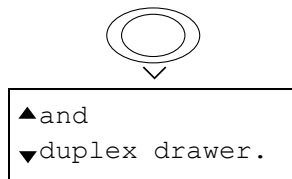




3 Remove the jammed paper.



4 Close the rear cover of the duplexer and the duplex drawer.

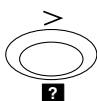


Paper Jam at the Option Sorter

Paper jam
Sorter



-- HELP START --
Press **?** key



Examples of online help
messages

Open sorter
▼rear cover

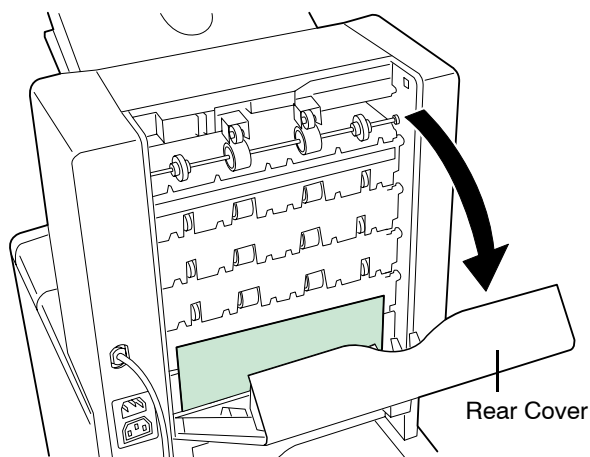


▲and remove
▼the paper jam

Paper is jammed at the option sorter. Remove the jammed paper using the procedure given below.

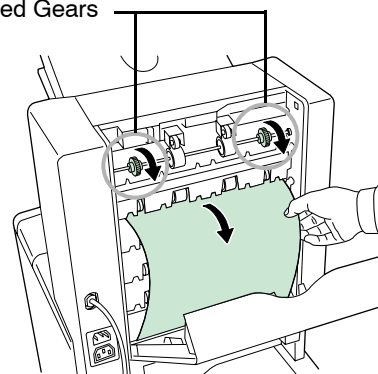
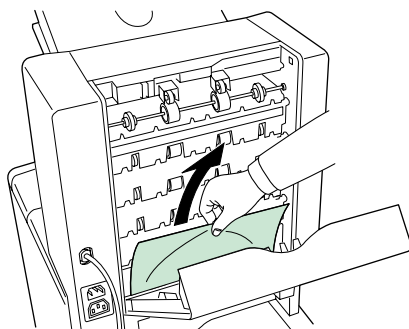
While the display alternates between the paper jam message and HELP START, press the **?** key. An online help message appears.

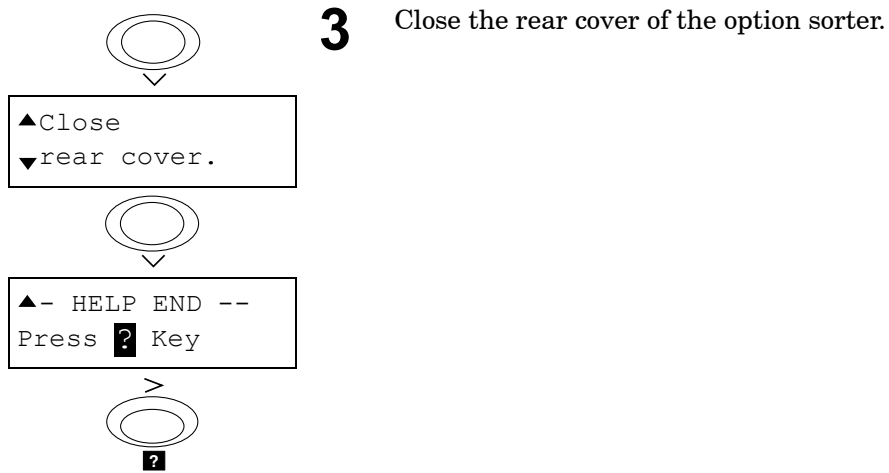
1 Open the rear cover of the option sorter.



2 Remove the jammed paper. If both ends of the paper are inside the sorter, turn the paper feed gears in the direction of the arrows. The paper can then be removed easily.

Paper Feed Gears



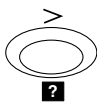


Jam at the MP Tray

Paper jam
MP tray



-- HELP START --
Press **?** key



Paper is jammed at the MP tray. Remove the jammed paper using the procedure given below.

While the display alternates between the paper jam message and HELP START, press the **?** key. An online help message appears.

Examples of online help messages

Check the
▼MP tray and



▲remove
▼the paper jam.



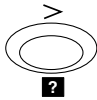
▲Open and close
▼top cover to



▲release paper
▼jam error.



▲- HELP END --
Press **?** Key



- 1** Remove the paper jammed at the MP tray.
- 2** Open and close the top cover (the paper jam error will be reset).

Chapter 5 **Fonts**

This appendix explains the types of fonts you can use with the printer. A font is a set of characters of a particular design. The design is referred to as a *typeface*. Several characteristics identify a font. These include the code set (For details on the code sets, read the ***Programming Manual*** on the supplied CD-ROM), spacing, pitch, height, style, stroke weight, and typeface family.

List of Fonts

This section contains a full list of the printer's internal fonts. The printer has 80 PCL fonts, 1 bitmap font, and 80 PostScript Level 3 compatible fonts. You can print the font list from the printer by using the printer's operator panel key. To print a list of fonts, see [Font Lists](#) on page 1-21. Font may be downloaded to the printer's memory from an option memory card or a hard disk.

PCL (Scalable and Bitmap) Fonts

Font number	Font samples
0	This is a sample of Courier font.
1	This is a sample of CGTimes font.
2	This is a sample of CGTimes-Bd font.
3	<i>This is a sample of CGTimes-It font.</i>
4	<i>This is a sample of CGTimes-BdIt font.</i>
5	This is a sample of CGOmega font.
6	This is a sample of CGOmega-Bd font.
7	<i>This is a sample of CGOmega-It font.</i>
8	<i>This is a sample of CGOmega-BdIt font.</i>
9	<i>This is a sample of Coronet font.</i>
10	This is a sample of Clarendon-Cd font.
11	This is a sample of Univers-Md font.
12	This is a sample of Univers-Bd font.
13	<i>This is a sample of Univers-MdIt font.</i>
14	<i>This is a sample of Univers-BdIt font.</i>
15	This is a sample of Univers-MdCd font.
16	This is a sample of Univers-BdCd font.
17	<i>This is a sample of Univers-MdCdIt font.</i>
18	<i>This is a sample of Univers-BdCdIt font.</i>
19	This is a sample of AntiqueOlive font.
20	This is a sample of AntiqueOlive-Bd font.
21	<i>This is a sample of AntiqueOlive-It font.</i>
22	This is a sample of GaramondAntiqua font.
23	This is a sample of Garamond-Hlb font.
24	<i>This is a sample of Garamond-Krsv font.</i>
25	<i>This is a sample of Garamond-HlbKrsv font.</i>
26	<i>This is a sample of Marigold font.</i>
27	This is a sample of Albertus-Md font.

Font number	Font samples
28	This is a sample of Albertus-ExBd font.
29	This is a sample of Arial font.
30	This is a sample of Arial-Bd font.
31	<i>This is a sample of Arial-It font.</i>
32	<i>This is a sample of Arial-BdIt font.</i>
33	This is a sample of TimesNewRoman font.
34	This is a sample of TimesNewRoman-Bd font.
35	<i>This is a sample of TimesNewRoman-It font.</i>
36	<i>This is a sample of TimesNewRoman-BdIt font.</i>
37	This is a sample of Helvetica font.
38	This is a sample of Helvetica-Bd font.
39	<i>This is a sample of Helvetica-Ob font.</i>
40	<i>This is a sample of Helvetica-BdOb font.</i>
41	This is a sample of Helvetica-Nr font.
42	This is a sample of Helvetica-NrBd font.
43	<i>This is a sample of Helvetica-NrOb font.</i>
44	<i>This is a sample of Helvetica-NrBdOb font.</i>
45	This is a sample of Palatino font.
46	This is a sample of Palatino-Bd font.
47	<i>This is a sample of Palatino-It font.</i>
48	<i>This is a sample of Palatino-BdIt font.</i>
49	This is a sample of ITCAvantGardeGothic-Bk font.
50	This is a sample of ITCAvantGardeGothic-Dm font.
51	<i>This is a sample of ITCAvantGardeGothic-BkOb font.</i>
52	<i>This is a sample of ITCAvantGardeGothic-DmOb font.</i>
53	This is a sample of ITCBookman-Lt font.
54	This is a sample of ITCBookman-Dm font.
55	<i>This is a sample of ITCBookman-LtIt font.</i>
56	<i>This is a sample of ITCBookman-DmIt font.</i>
57	This is a sample of NewCenturySchoolbook-Rom font.
58	This is a sample of NewCenturySchoolbook-Bd font.
59	<i>This is a sample of NewCenturySchoolbook-It font.</i>
60	<i>This is a sample of NewCenturySchoolbook-BdIt font.</i>
61	This is a sample of Times-Rom font.
62	This is a sample of Times-Bd font.
63	<i>This is a sample of Times-It font.</i>
64	<i>This is a sample of Times-BdIt font.</i>
65	<i>This is a sample of ITCZapfChancery-MdIt font.</i>
66	Τηισ ισ α σαμπλε οφ Σψμβολ φοντ. (Symbol)
67	Τηισ ισ α σαμπλε οφ ΣψμβολΠΣ φοντ. (SymbolPS)

Font

number	Font samples
--------	--------------

```
68  ❄️⚡️❖ ⚡️❖ ☞ ☞☐◻●♣️ ◻↗️ ✎(■)₃₂✎(■)₃₂ ✎◻■◆ (Wingdings)
69  ***▲ *▲ 🌀 ▲🌀◻◻●* ◻* ☆*:🌟🌀◻*🍀*🌀▼▲ *◻ (ITC Zapf Dingbats)
70  This is a sample of Courier-Bd font.
71  This is a sample of Courier-It font.
72  This is a sample of Courier-BdIt font.
73  This is a sample of LetterGothic font.
74  This is a sample of LetterGothic-Bd font.
75  This is a sample of LetterGothic-It font.
76  This is a sample of CourierPS font.
77  This is a sample of CourierPS-Bd font.
78  This is a sample of CourierPS-Ob font.
79  This is a sample of CourierPS-BdOb font.
80  This is a sample of LinePrinterBM8.5-Roman font.
```

KPDL Fonts (1)

This is a sample of Albertus-ExtraBold font.

This is a sample of Albertus-Medium font.

This is a sample of AntiqueOlive font.

This is a sample of AntiqueOlive-Bold font.

This is a sample of AntiqueOlive-Italic font.

This is a sample of Arial font.

This is a sample of Arial-Bold font.

This is a sample of Arial-BoldItalic font.

This is a sample of Arial-Italic font.

This is a sample of AvantGarde-Book font.

This is a sample of AvantGarde-BookOblique font.

This is a sample of AvantGarde-Demi font.

This is a sample of AvantGarde-DemiOblique font.

This is a sample of Bookman-Demi font.

This is a sample of Bookman-DemiItalic font.

This is a sample of Bookman-Light font.

This is a sample of Bookman-LightItalic font.

This is a sample of CGOmega font.

This is a sample of CGOmega-Bold font.

This is a sample of CGOmega-BoldItalic font.

This is a sample of CGOmega-Italic font.

This is a sample of CGTimes font.

This is a sample of CGTimes-Bold font.

This is a sample of CGTimes-BoldItalic font.

This is a sample of CGTimes-Italic font.

This is a sample of Clarendon-Condensed-Bold font.

This is a sample of Coronet font.

This is a sample of Courier font.

This is a sample of Courier-Bold font.

This is a sample of Courier-BoldOblique font.

This is a sample of Courier-Oblique font.

This is a sample of CourierPCL font.

This is a sample of CourierPCL-Bd font.

This is a sample of CourierPCL-BoldItalic font.

This is a sample of CourierPCL-Italic font.

This is a sample of Garamond-Antiqua font.

This is a sample of Garamond-Halbfett font.

This is a sample of Garamond-Kursiv font.

This is a sample of Garamond-KursivHalbfett font.

KPDL Fonts (2)

This is a sample of Helvetica font.

This is a sample of Helvetica-Bold font.

This is a sample of Helvetica-BoldOblique font.

This is a sample of Helvetica-Narrow font.

This is a sample of Helvetica-Narrow-Bold font.

This is a sample of Helvetica-Narrow-BoldOblique font.

This is a sample of Helvetica-Narrow-Oblique font.

This is a sample of Helvetica-Oblique font.

This is a sample of LetterGothic font.

This is a sample of LetterGothic-Bold font.

This is a sample of LetterGothic-Italic font.

This is a sample of Marigold font.

This is a sample of NewCenturySchlbk-Bold font.

This is a sample of NewCenturySchlbk-BoldItalic font.

This is a sample of NewCenturySchlbk-Italic font.

This is a sample of NewCenturySchlbk-Roman font.

This is a sample of Palatino-Bold font.

This is a sample of Palatino-BoldItalic font.

This is a sample of Palatino-Italic font.

This is a sample of Palatino-Roman font.

Τηισ ις α σαμπλε οφ Σψμβολ φοντ. (Symbol)

Τηισ ις α σαμπλε οφ ΣψμβολΠΧΛ φοντ. (Symbol MT)

This is a sample of Times-Bold font.

This is a sample of Times-BoldItalic font.

This is a sample of Times-Italic font.

This is a sample of Times-Roman font.

This is a sample of TimesNewRoman font.

This is a sample of TimesNewRoman-Bold font.

This is a sample of TimesNewRoman-BoldItalic font.

This is a sample of TimesNewRoman-Italic font.

This is a sample of Univers-Bold font.

This is a sample of Univers-BoldItalic font.

This is a sample of Univers-Condensed-Bold font.

This is a sample of Univers-Condensed-BoldItalic font.

This is a sample of Univers-Condensed-Medium font.

This is a sample of Univers-Condensed-MediumItalic font.

This is a sample of Univers-Medium font.

This is a sample of Univers-MediumItalic font.

⌘ ⌚ ⌛ ⌜ ⌝ ⌞ ⌟ ⌠ ⌡ ⌢ ⌣ ⌤ ⌥ ⌦ ⌧ ⌨ 〈 〉 ⌫ ⌬ ⌭ ⌮ ⌯ ⌰ ⌱ ⌲ ⌳ ⌴ ⌵ ⌶ ⌷ ⌸ ⌹ ⌺ ⌻ ⌼ ⌽ ⌾ ⌿ Ⓚ Ⓛ Ⓜ Ⓝ Ⓟ Ⓡ Ⓢ Ⓣ Ⓤ Ⓥ Ⓦ Ⓧ Ⓨ Ⓩ ⓐ ⓑ ⓓ ⓔ ⓖ ⓗ ⓘ ⓙ ⓚ ⓛ ⓜ ⓝ ⓞ ⓟ ⓠ ⓡ ⓢ ⓣ ⓤ ⓥ ⓦ ⓧ ⓨ ⓩ ⓪ ⓫ ⓬ ⓭ ⓮ ⓯ ⓰ ⓱ ⓲ ⓳ ⓴ ⓵ ⓶ ⓷ ⓸ ⓹ ⓺ ⓻ ⓼ ⓽ ⓾ ⓿ (Wingdings-Regular)

This is a sample of ZapfChancery-MediumItalic font.

* ** ▲ ▴ ● ○ □ ■ ✱ ✲ ✳ ✴ ✵ ✶ ✷ ✸ ✹ ✺ ✻ ✼ ✽ ✾ ✿ ⬤ ⬥ ⬦ ⬧ ⬨ ⬩ ⬪ ⬫ ⬬ ⬭ ⬮ ⬯ ⬰ ⬱ ⬲ ⬳ ⬴ ⬵ ⬶ ⬷ ⬸ ⬹ ⬺ ⬻ ⬼ ⬽ ⬾ ⬿ (ZapfDingbats)

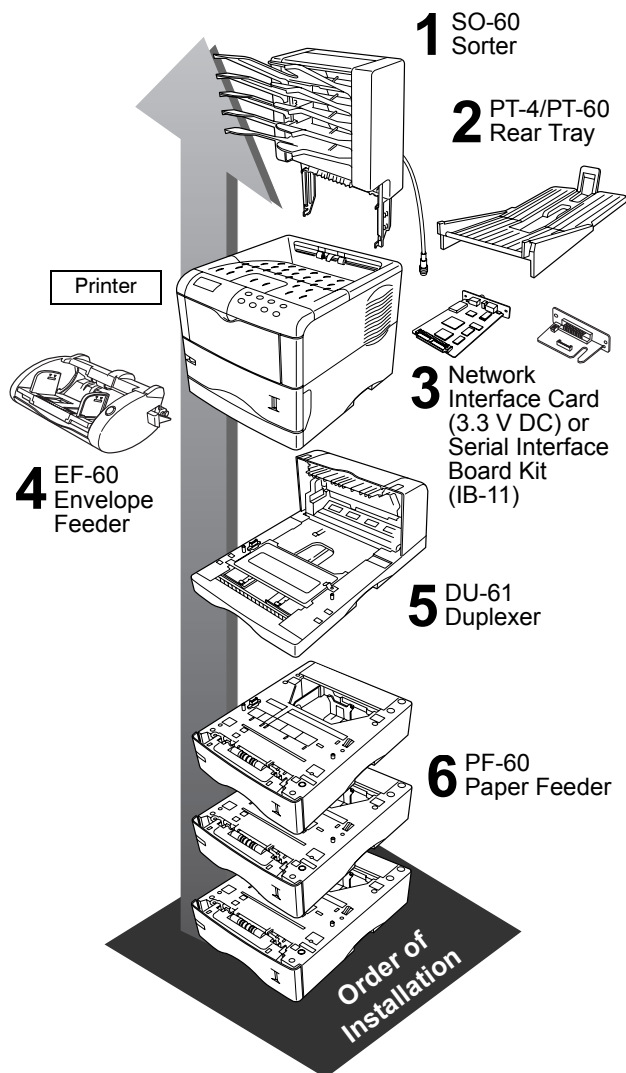
Appendix A **Options**

This appendix explains how to expand the printer's memory and how to install each option unit. Also refer to the manuals of the respective option units.

This appendix explains the following option units:

- **Expanding the Printer Memory**
- **PF-60 Paper Feeder**
- **DU-61 Duplexer**
- **SO-60 Sorter**
- **EF-60 Envelope Feeder**
- **PT-4/PT-60 Rear Tray**
- **Network Interface Card**
- **Microdrive (Hard Disk)**
- **CompactFlash (Memory) Card**

Available Options



Printer combined with options

1 SO-60 Sorter

Equipped with five trays each with 200 sheets capacity. Performs sorting, collating, and mailbox functions. Attaches to the top of the printer.

2 PT-4/PT-60 Rear Tray

It attaches to the rear of the printer.

3 Network Interface Card (IB-20/21E/22)

Enables printing from multiple computers via a network if you install the special-purpose utility KPrint (KPrint is included in the CD-ROM supplied with IB-20/21E/22.). For details, see [User's Manual](#) in the CD-ROM supplied with IB-20/21E/22.

Serial Interface Board Kit (IB-11)

Connect to the computer's serial printer port with a serial cable.

4 EF-60 Envelope Feeder

Holds more envelopes at a time than the MP tray. It can be attached to the front of the printer after the MP tray has been removed.

5 DU-61 Duplexer

Performs duplex printing for short edge and long edge binding. Attaches to the bottom of the printer.

6 PF-60 Paper Feeder

Holds approximately 500 sheets of A5 to A4/Letter and Legal size paper. Up to three paper feeders can be attached to the bottom of the printer.

Other Options

Paper Cassette (PC-60LG)

Holds A5 to A4/Letter and Legal size paper.

Microdrive (Hard Disk Unit)

Enables the electronic sorting and job retention functions. To be inserted into the slot designed for it on the main circuit board of the printer. See your dealer for purchasing information regarding the Microdrives that are best suited for use with this printer.

CompactFlash Card

This is a microchip card that may contain option fonts, macros, and forms. Insert the card into the card slot located near the handle on the right of the printer. See your dealer for purchasing information regarding the CompactFlash Cards that are best suited for use with this printer.

Memory DIMM

See your dealer for purchasing information of the DIMM that are best suited for use with this printer. See [Expanding the Printer Memory](#) for the installation procedure.

Expanding the Printer Memory

This section explains how to expand the printer's memory. Expanded printer memory enables you to print more complex pages, download more fonts, and define more macros.

This section first explains how to remove the main circuit board and then how to install a DIMM (Dual In-line Memory Module) on the main circuit board.

This printer comes supplied with 32 MB of memory installed. The DIMM socket is provided for expanding the printer memory to allow more complex printing jobs and increase the printing speed. By installing DIMM into your printer, the memory in the printer can be increased to a maximum of 288 MB.



The expansion memory should be installed only by a Kyocera Mita authorized dealer or Kyocera Mita certified technician. Kyocera Mita shall not be liable for damage due to improper installation of the expansion memory.

Removing the Main Circuit Board

The main circuit board of the printer is equipped with two sockets for memory expansion. Expansion memory is available in the form of DIMM.



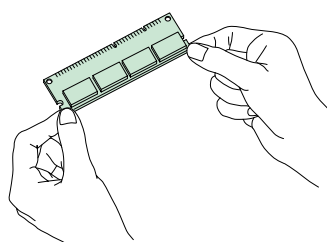
Note

The following instructions are intended for the technician only.

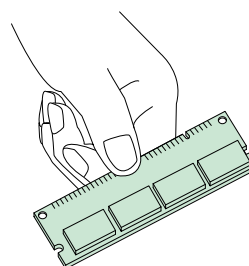
Notes on Handling the Main Circuit Board and DIMM

Protect the electronics by taking these precautions:

- Before touching the main circuit board and DIMM, touch a water pipe or other large metal object to discharge yourself of static electricity. While doing the work, it is recommended that you wear an antistatic wrist strap.
- Touch the main circuit board and DIMM only at the edges.



YES



NO

Removing the Main Circuit Board from the Printer

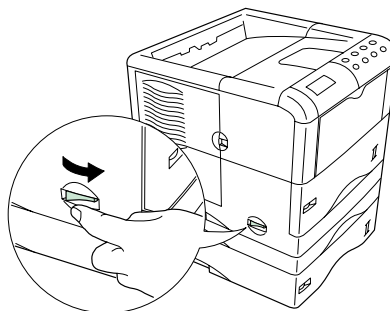


Note

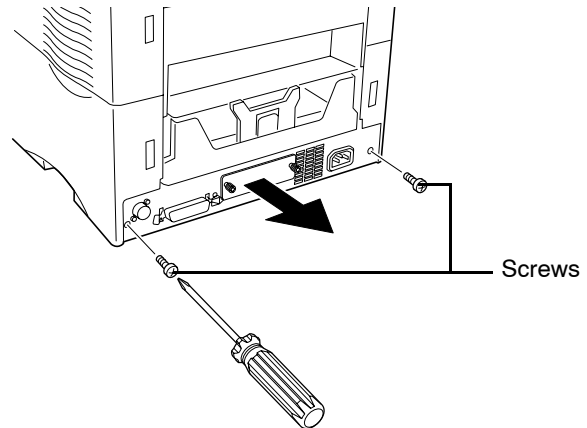
Be sure to remove the CompactFlash Card (memory card) first if inserted in the printer's card slot.

Remove the main circuit board completely from the printer as follows:

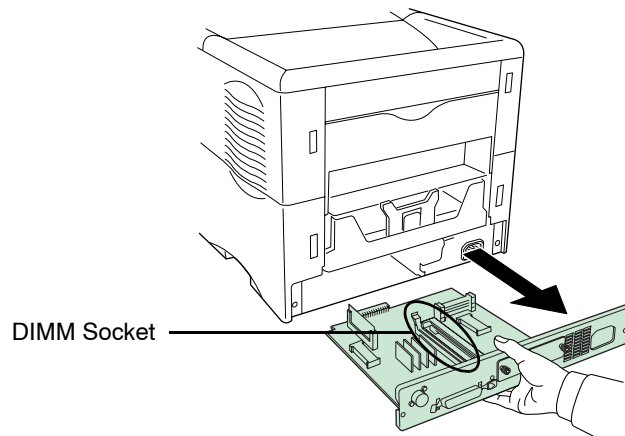
- 1 Turn the printer off and unplug its power cord. Disconnect the printer from the host computer.



- 2** Remove the two screws from the printer's rear panel.



- 3** Pull the main circuit board all the way out of the printer.



Note

Before pulling the main circuit board out, clear away the area, behind the printer. Foreign objects, accidentally sticking to the back of the main circuit board, can cause serious damage to the printer.

Install the DIMM as described on the following page.

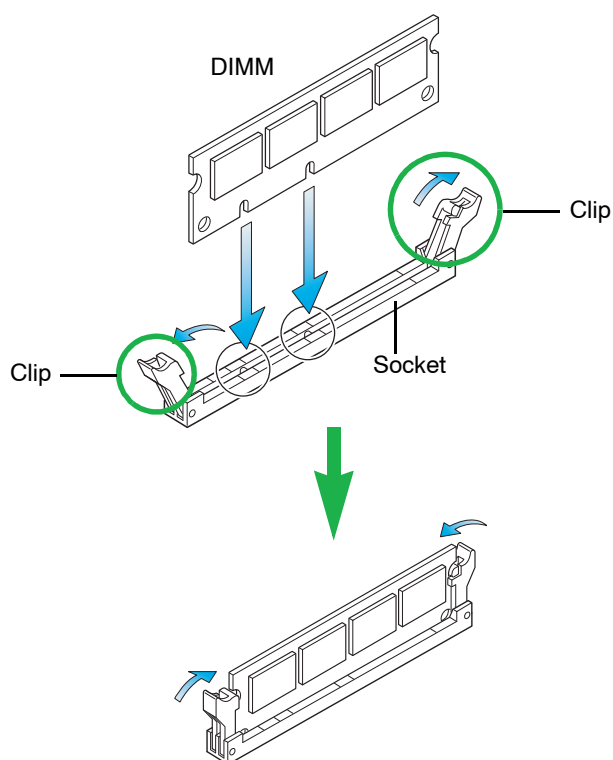
DIMM to be used

32 MB, 64 MB, 128 MB, and 256 MB DIMM can be used for memory expansion. See your Kyocera Mita dealer for purchasing information of the DIMM that are best suited for use with this printer.

Installing DIMM

Insert the DIMM into the socket as shown below.

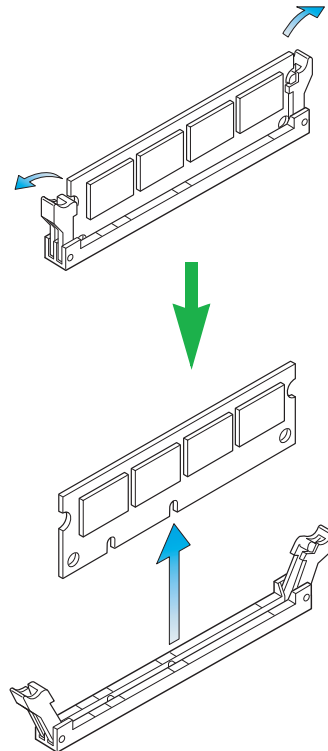
- 1** Remove the DIMM from its package.
- 2** Open the clips on both ends of the DIMM socket.
- 3** Insert the DIMM into the socket, so that the notches on the DIMM align with the corresponding protusions in the socket.
- 4** Close the clips of the DIMM socket to secure the DIMM.
- 5** When you finish installing the DIMM, reinsert the main circuit board into the printer by reversing the removal procedure.



Removing DIMM

To remove a DIMM, carefully pull the end clips outwards, then pull the DIMM out of the socket.

Return the main circuit board to the printer by reversing the procedure explained in *Removing the Main Circuit Board from the Printer*.



Testing the Expansion Memory

After you finish installing DIMM in the printer, test the printer to see if the installation was successful.

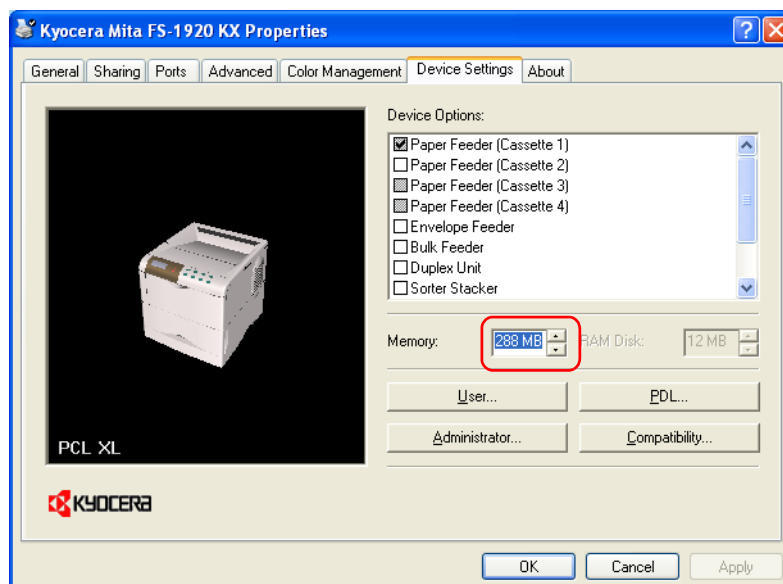
To test the expansion memory, proceed as follows:

- 1** Make sure printer is turned off. Plug the power cord into the printer and turn the printer on.
- 2** Press the **MENU** key on the operator panel.
- 3** Press the **^** and **v** key repeatedly until Print Status Page appears.
- 4** Press the **ENTER** key twice.
- 5** If the installation was successful, the amount of memory shown on the status page will correspond with the amount of expanded memory. (The factory installed memory size is 32 MB.)

Adjusting the Memory on the Printer Driver

After you install the additional memory to the printer, follow the instructions below to set the printer driver so that the printer can use the memories efficiently.

- 1** Click the Windows **start** button, and click **Printers and Faxes**.
- 2** Right click the **Kyocera Mita FS-1920 KX** icon, and click **Properties**.
The **Properties** dialog box will open. Click the **Device Settings** tab.
- 3** Enter the total memory size installed to the printer (up to 288 MB) in the **Memory** box.



- 4** Click the **OK** button to close the window.

Installing Option Units

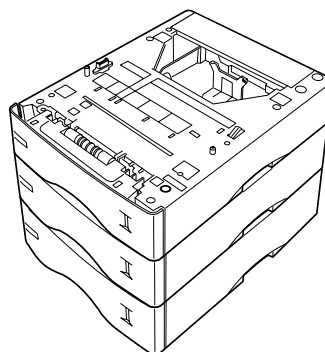
PF-60 Paper Feeder

Up to three option paper feeders can be installed below the printer. A paper feeder can hold approximately 500 sheets of paper at a time. By using option paper feeders in conjunction with the printer paper cassette, which can also hold approximately 500 sheets of paper, up to approximately 2,000 sheets of paper can be fed continuously. The paper cassette of the paper feeder can feed Legal size paper.

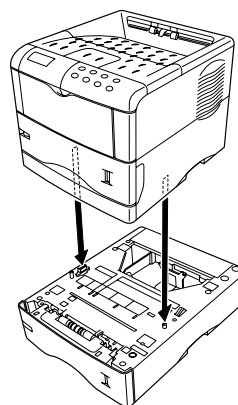


Note

When installing more than one paper feeder, first stack the paper feeders together.

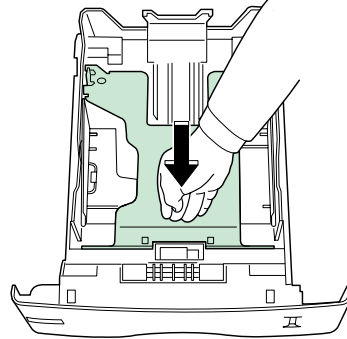


- 1** Turn off the printer and disconnect the power cord and printer cable.
- 2** Gently place the printer on top of the paper feeder(s).

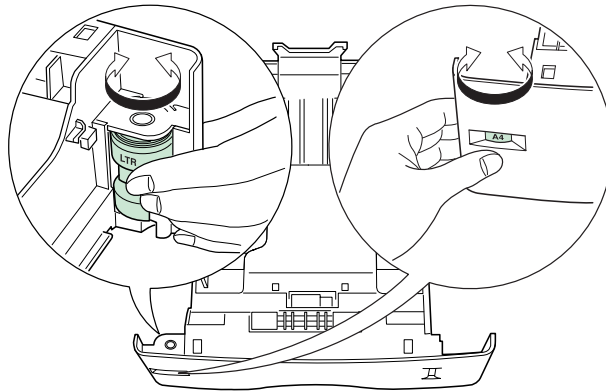


- 3** Pull the paper cassette all the way out of the paper feeder.

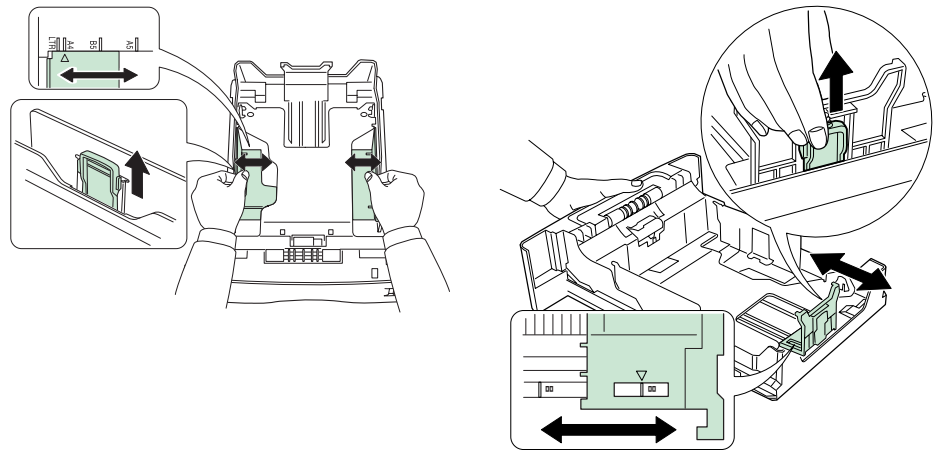
- 4** Push down the bottom plate until it locks.



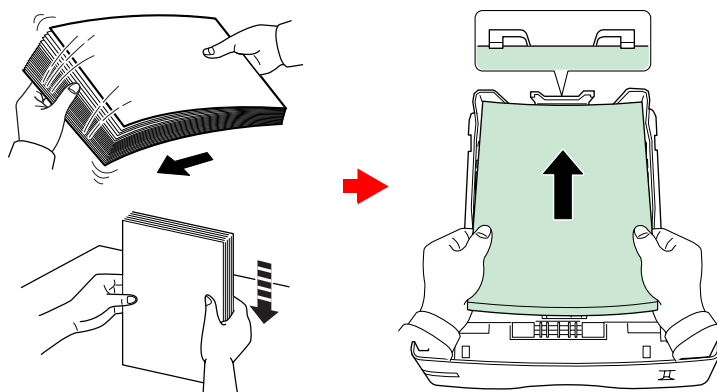
- 5** Set the paper size dial to the size of paper to be used.



- 6** Adjust the paper guides and paper stopper to the size of paper to be used.

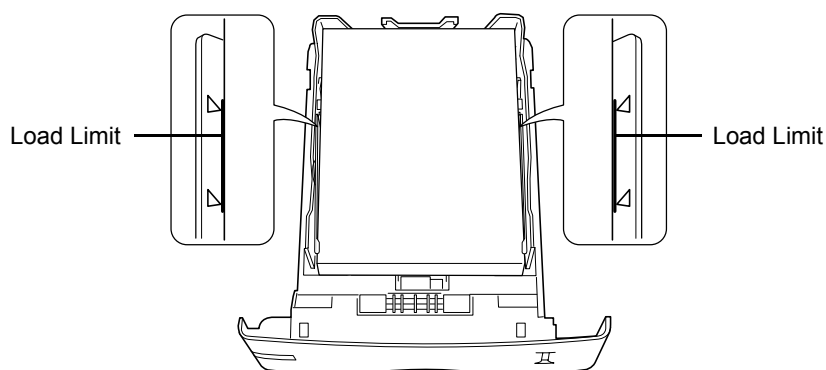


7 Load paper.

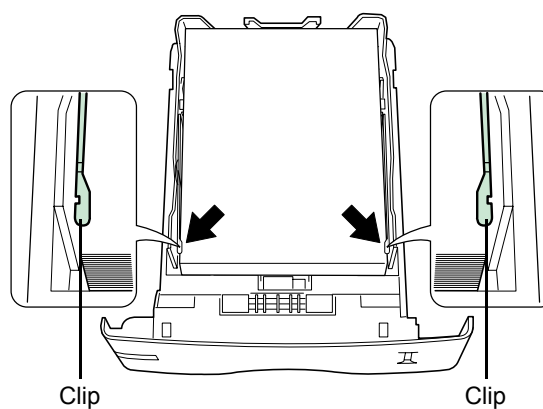


Note

- Do not load more paper than will fit under the load limits on the paper guides.
- The paper cassette will hold approximately 500 sheets of paper with a 80 g/m² (21 lb) basis weight, or with a thickness of 0.11 mm.



8 Set the stack of paper so that it is under the clips as shown in the figure.

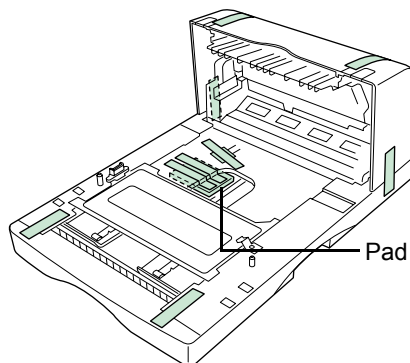


9 Insert the paper cassette back in.

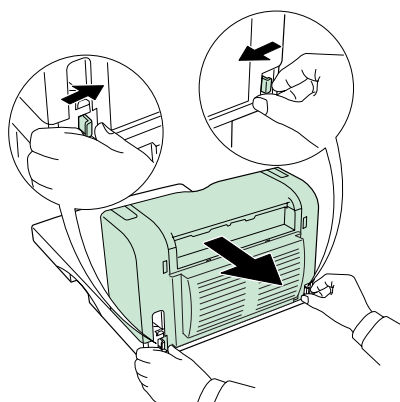
DU-61 Duplexer

Install the option duplexer immediately below the printer. By combining the two binding modes (short edge bind and long edge bind) with the two printing orientations (portrait and landscape), duplex printing is possible in four different methods. Duplex printing can be specified from the application (printer driver).

- 1** Remove the tape and the pad from the duplexer.

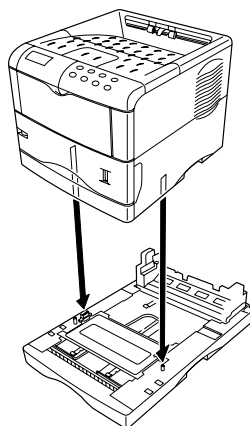


- 2** While pushing the rear cover release lever inward, remove the duplexer rear cover.

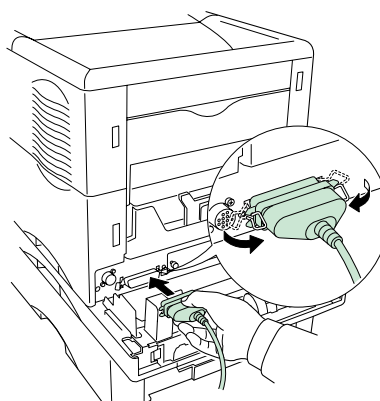


- 3** Turn off the printer and disconnect the power cord and printer cable.

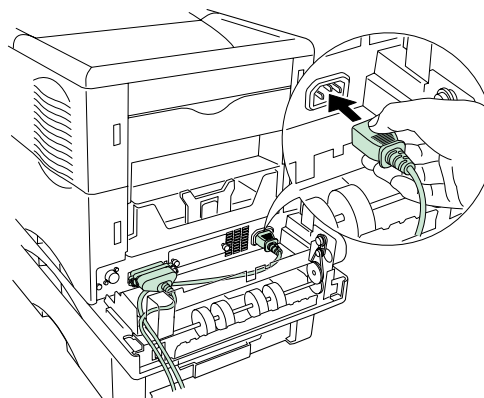
- 4** Gently place the printer on top of the duplexer.



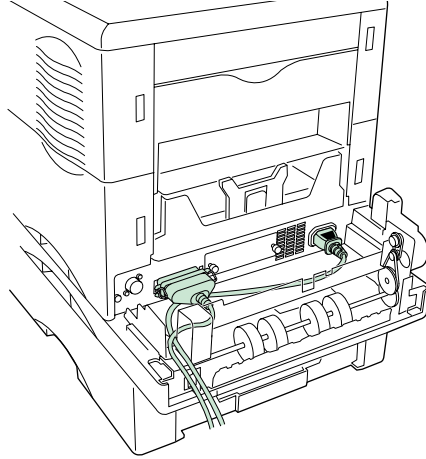
- 5** Connect the printer cable (parallel interface cable, USB interface cable, serial interface cable or network interface cable) according to your operation environment. If you are using a paper cassette for Legal size paper, be sure to pull the cassette out towards you first before you connect the printer cable.



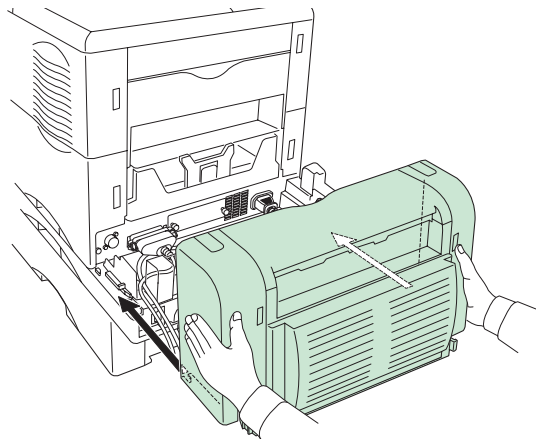
- 6** Connect the power cord to the printer.



- 7** Pass the connected cable and power cord through the opening in the duplexer.



- 8** Install the duplexer rear cover.

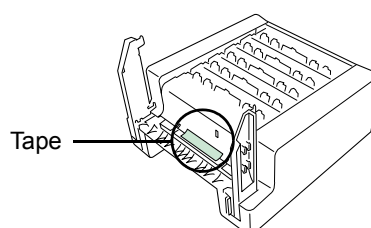
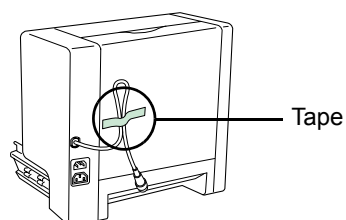


SO-60 Sorter

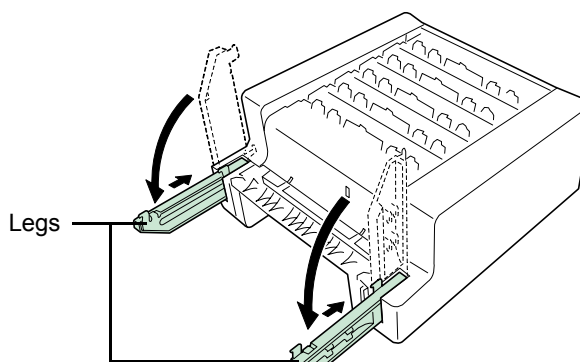
Install the option sorter on top of the printer. It is equipped with five sorter trays, with a capacity of 200 sheets each. There are three modes in which printouts can be received: the sorter mode, the collator mode, and the mail box mode (for details about the modes, see [KX Printer Drivers Operation Guide](#)).

The following installation procedure explains how to install the sorter when the option paper feeder (PF-60) and duplexer (DU-61) have already been installed.

- 1 Unpack the sorter and place it on its side.
- 2 Remove the tapes from the sorter.

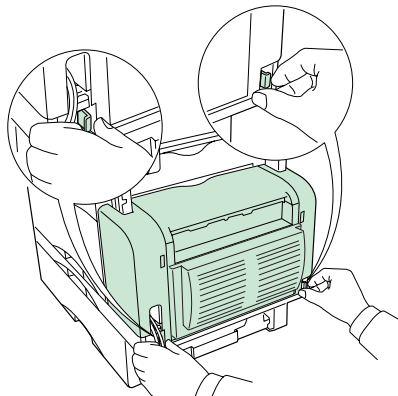


- 3 Unfold the two attachment legs of the sorter.

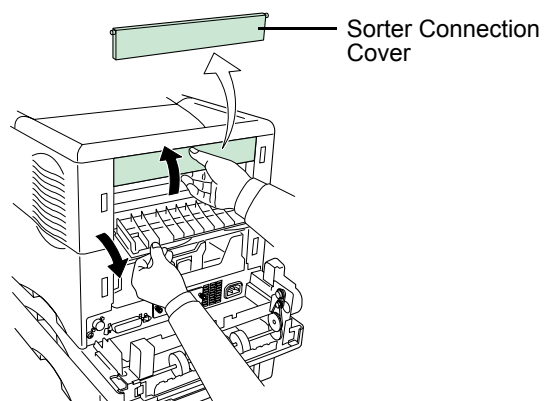


- 4 Turn off the printer and disconnect the power cord and printer cable.

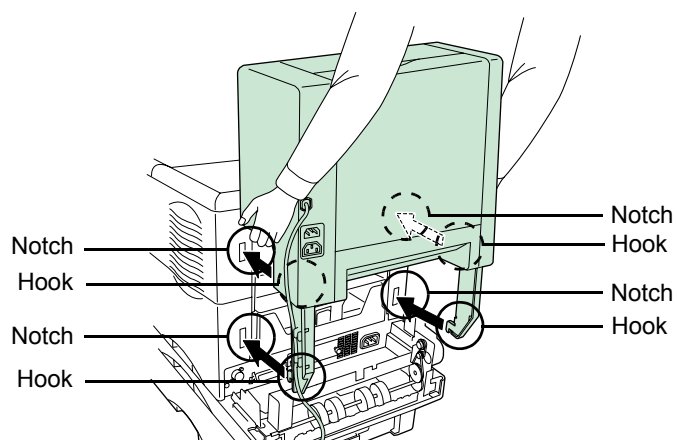
- 5** If the duplexer is installed, remove the duplexer rear cover, power cord, and printer cable.



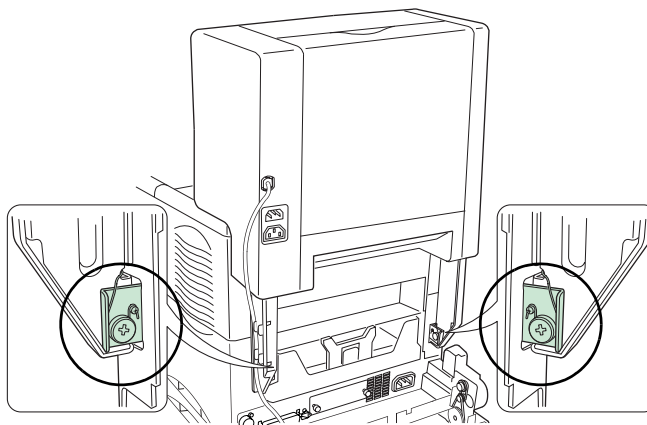
- 6** Remove the sorter connection cover from the printer. Store the removed cover in a safe place.



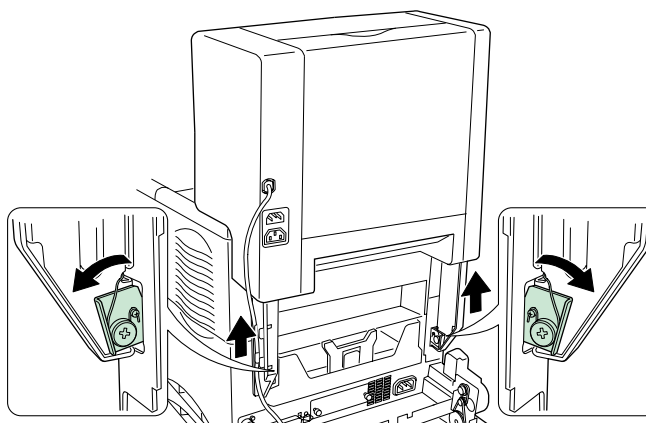
- 7** Install the sorter by inserting the four hooks on its attachment legs into the notches in the printer.



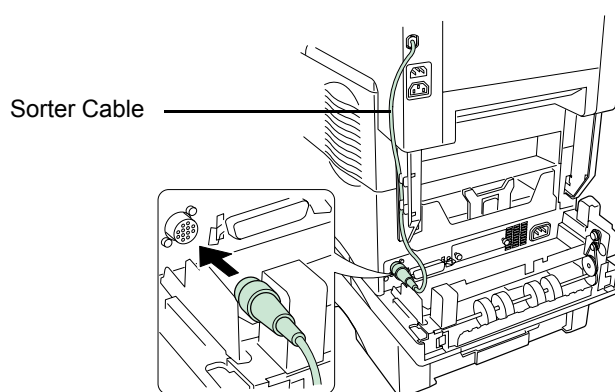
- 8** Push the sorter down. The levers of the attachment legs are in the lock position.



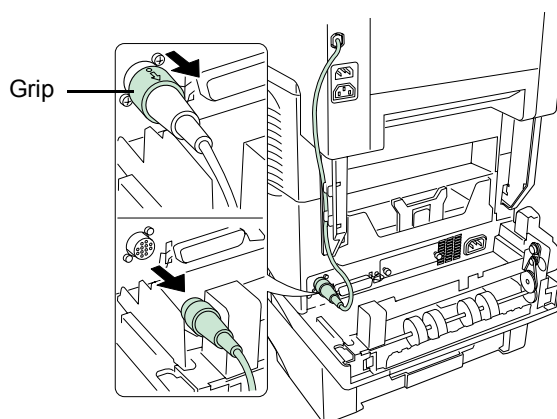
When removing the sorter, unlock the attachment legs by releasing the levers as shown in the figure one by one, and then lift the sorter.



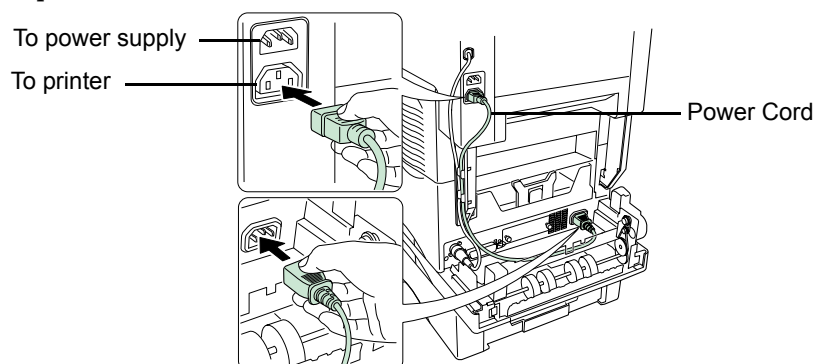
- 9** Connect the sorter cable to the printer.



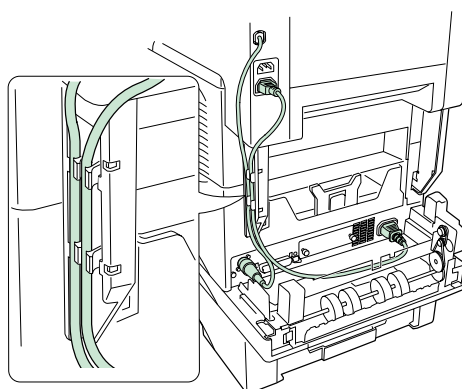
When disconnecting the sorter cable, hold the grip on the connector as shown in the figure and then pull it out.



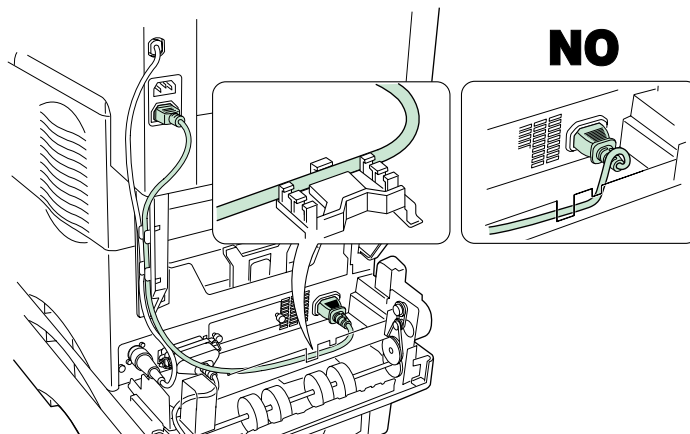
- 10** The sorter is equipped with two power cord sockets. The upper one is to be connected to a power outlet and the lower one is to be connected to the printer. If you are using a paper cassette for Legal size paper, be sure to pull the cassette out towards you first before you connect the printer cable.



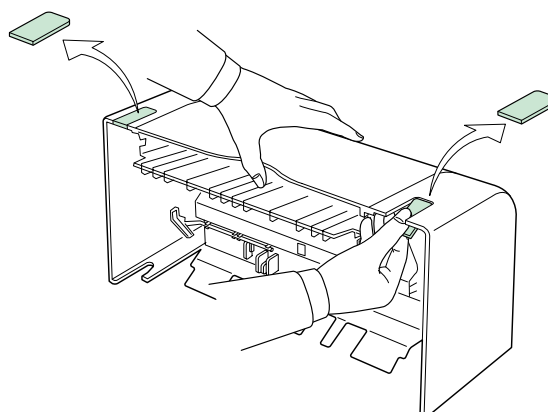
- 11** Secure the connected sorter cable and power cord to an attachment leg on the sorter.



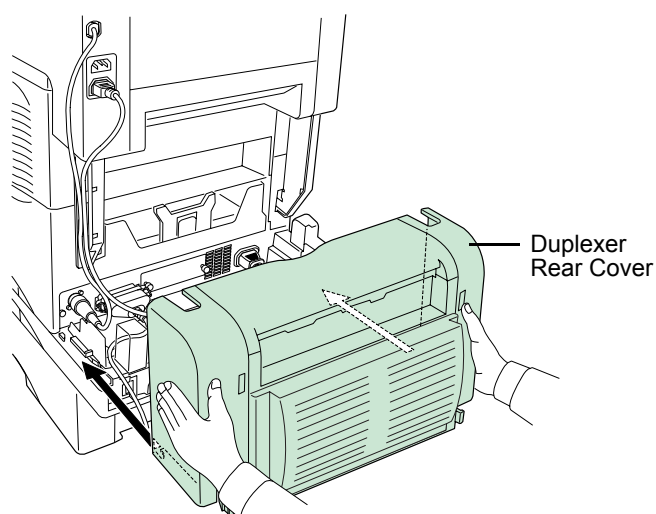
- 12** If the duplexer is installed, secure the power cord to the duplexer. Take care not to loosen the power cord.



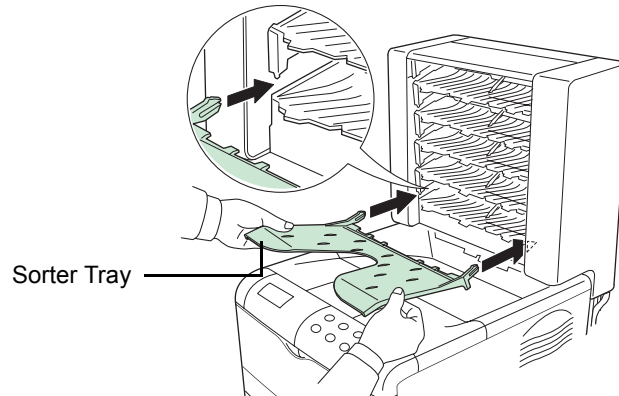
- 13** If the duplexer is installed, remove the two cut-out portions from the upper part of the duplexer rear cover removed in step 5.



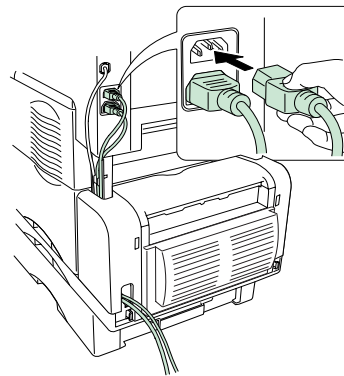
- 14** Reinstall the duplexer rear cover.



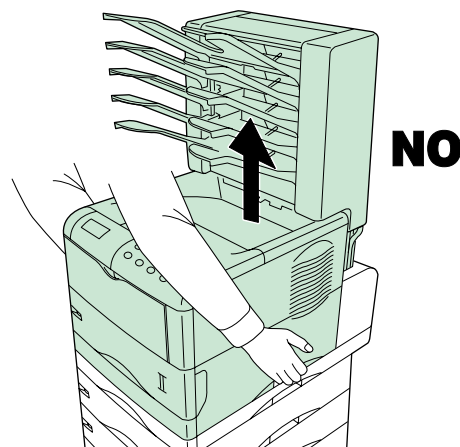
15 Install the five sorter trays to the sorter.



16 Connect the power cord supplied with the printer to the sorter.



Do not move or lift the printer with the sorter installed.



EF-60 Envelope Feeder

Install the option envelope feeder at the front of the printer. By installing the envelope feeder, you can print on a wide variety of different envelope sizes. And the EF-60 feeds envelopes automatically, making it easy to print on large quantities of envelopes at one time.

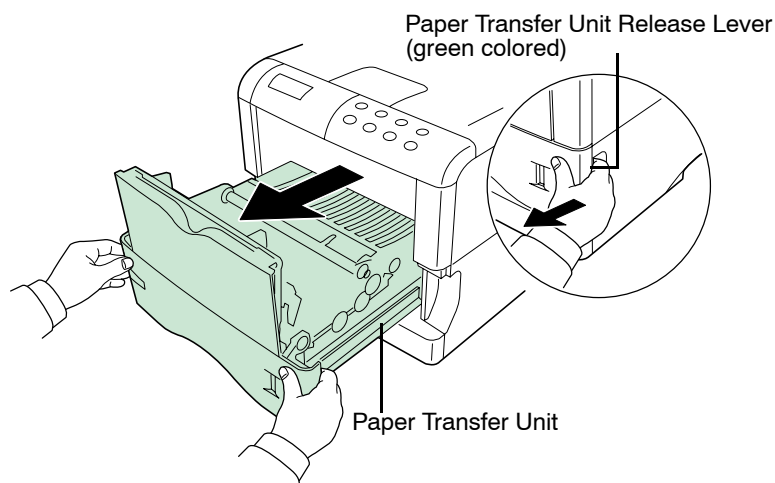
Installing the envelope feeder on the printer



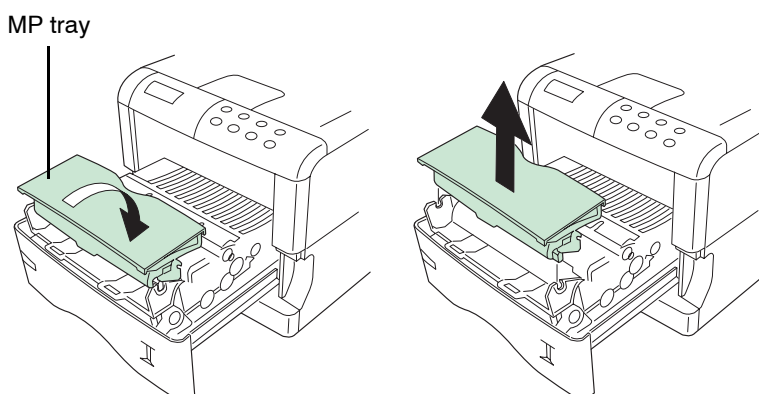
Note

Turn OFF the power to the printer before installing the envelope feeder.

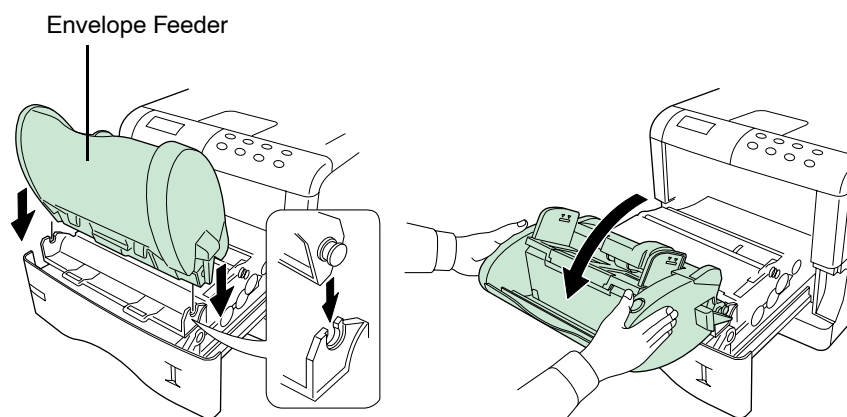
- 1 Pull the printer's paper transfer unit release lever (green colored), then draw the paper transfer unit fully out of the printer.



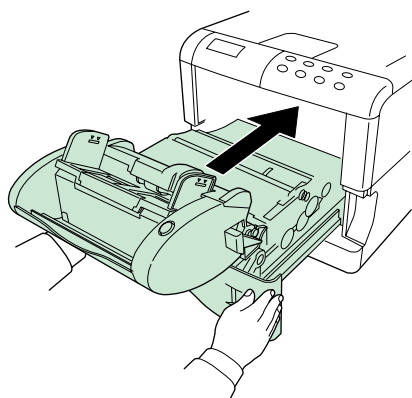
- 2 Gently tilt the MP tray toward the printer until that it rests on its side as shown in the figure, and remove the MP tray from the printer by lifting it straight upward.



- 3** Fit both ends of the envelope feeder into their mountings on the paper transfer unit as shown in the figure and lay the envelope feeder down toward you.

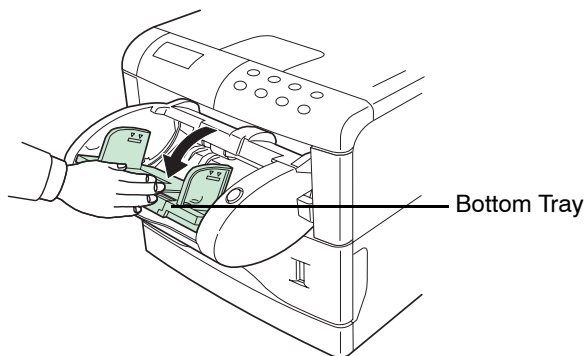


- 4** Return the paper transfer unit into the printer with the envelope feeder mounted.

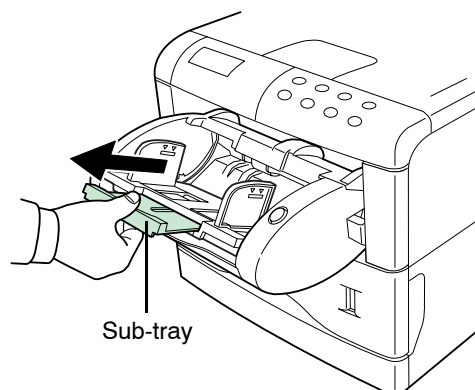


Load envelopes into the envelope feeder

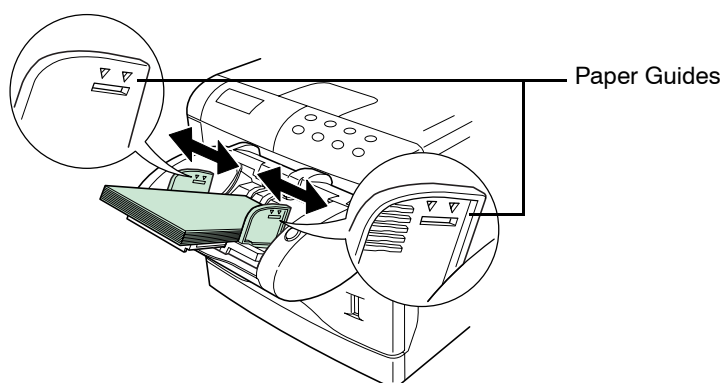
- 1** Push the bottom tray downward, as shown in the figure, until you hear a clicking sound to secure it.




- 2** Pull out the sub-tray that matches the size of the envelopes.



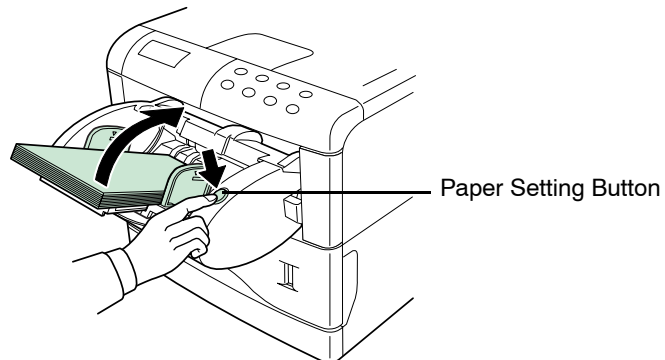
- 3** Load envelopes into the envelope feeder so that they feed in face up, right edge first. Then adjust the envelope feeder's paper guides to the width of the envelope.




Note

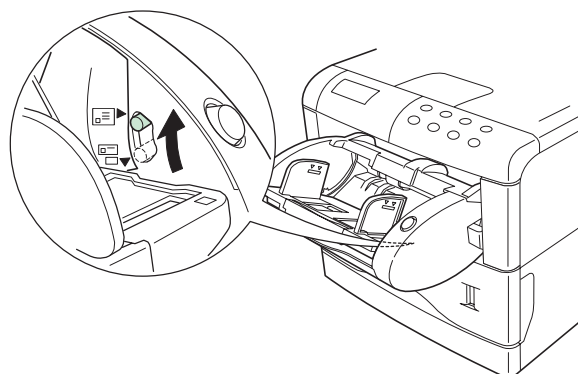
- Do not set different types of envelopes into the feeder at the same time.
- Do not load envelopes into the envelope feeder higher than the limitation marks () on either side of the feeder.
- Do not force paper into the envelope feeder. Damage to the mechanism may result.

- 4** Press the paper setting button. The envelope feeder's bottom tray is lifted and envelopes that are fed are secured to the envelope feeder.



Note

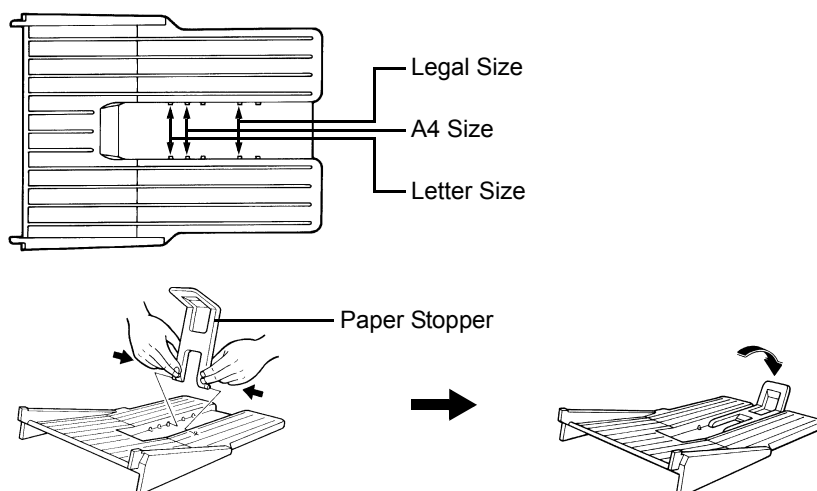
- Paper feed errors may occur when using large envelopes. If this happens, remove the envelopes and move the switch to the up () position as shown in the figure. This improves seating of the envelopes in the envelope feeder.
- Do not touch envelopes while they are being fed, or attempt to pull an envelope back once it starts being fed. Damage to the mechanism may result.
- To avoid trouble, we recommend that envelopes be delivered face-up using the option rear tray. Refer to *next page*.



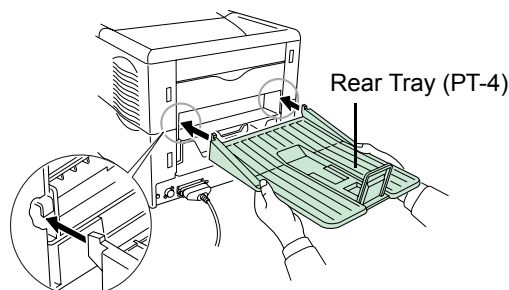
PT-4/PT-60 Rear Tray

Use the rear tray when you wish paper to be stacked with the printed side facing up (reverse order), or when you are printing on envelopes, postcards, transparencies, or thick paper. When installing it directly to the printer, use PT-4. If an option duplexer has been installed, use PT-60.

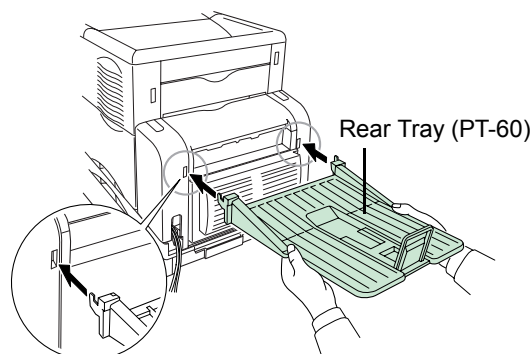
- 1 Install the paper stopper according to the size of paper to be used.
(same for both PT-4 and PT-60)



- 2 Install the rear tray on the rear of the printer.



When installing directly to the printer

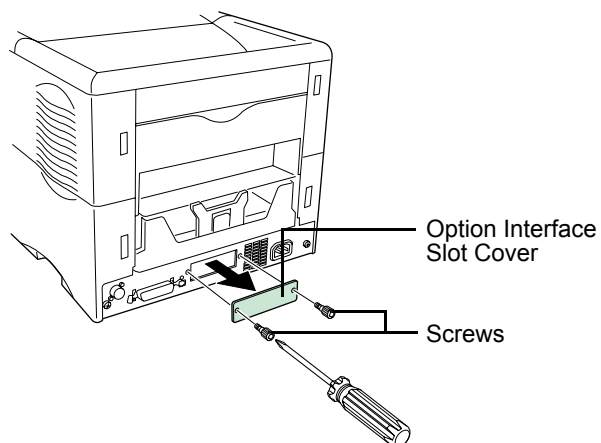


If a duplexer has been installed to the printer

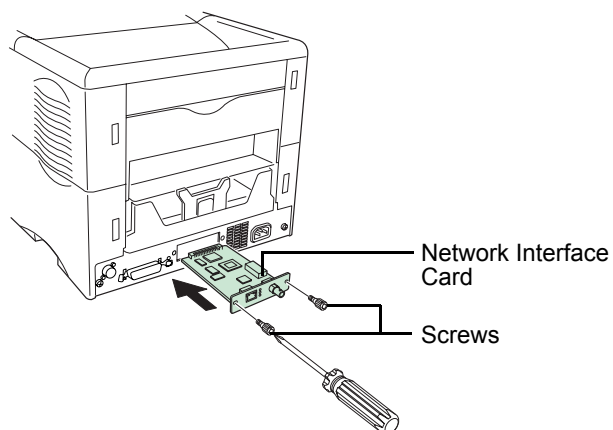
Network Interface Card

Insert the option network interface card into the option interface slot at the rear of the printer. The network interface card enables the printer to be used in a network.

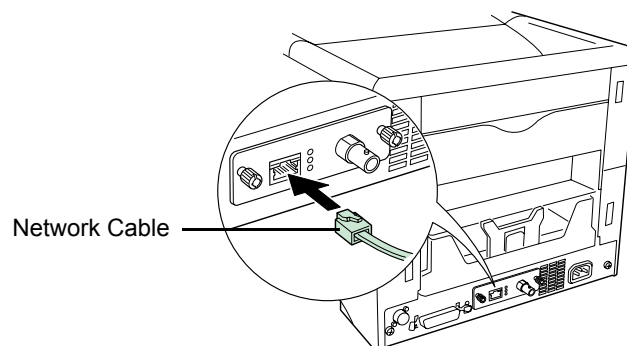
- 1** Turn off the printer and disconnect the power cord and printer cable.
- 2** Remove the two screws from the option interface slot cover.



- 3** Insert the network interface card and secure it with the screws removed in step 2.



4 Connect the network cable.



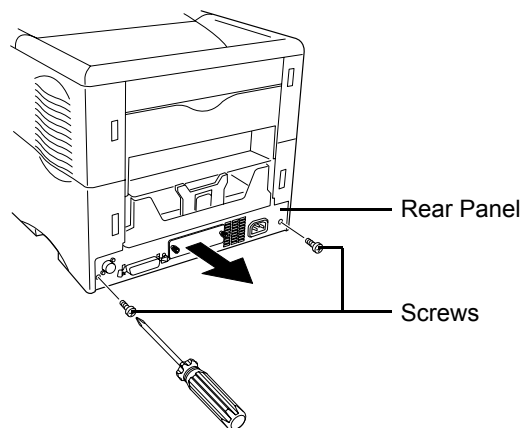
5 Set the network address from the printer operator panel (for details about the modes, see [Network Interface Parameters](#) on page [1-78](#)).

Microdrive (Hard Disk)

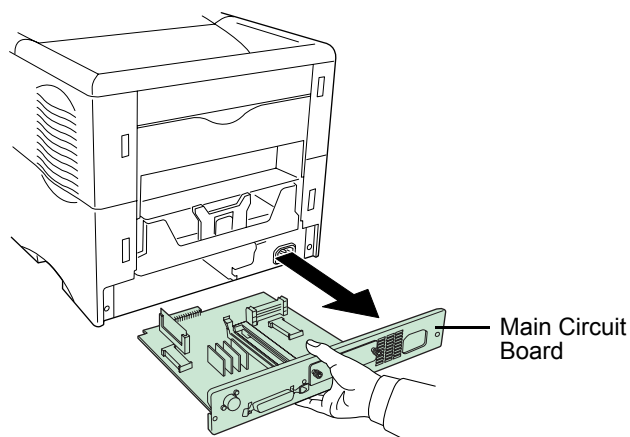
Insert the Microdrive into its slot on the main circuit board of the printer. If a Microdrive is installed in the printer, received data can be rasterized and stored on this Microdrive. This enables high-speed printing of multiple copies using an electric sort function. Also, you can use the e-MPS functions. For details, see [e-MPS](#) on page [1-56](#).

For details of available Microdrives, see your dealer.

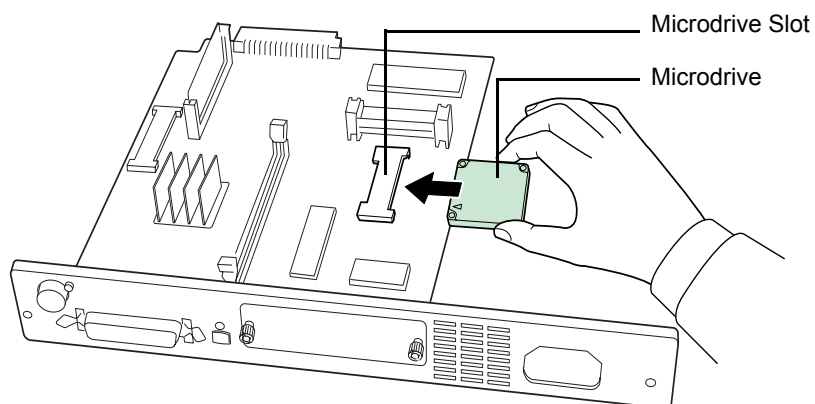
- 1** Turn off the printer and disconnect the power cord and printer cable.
- 2** Remove the two screws from the rear panel.



- 3** Pull the main circuit board all the way out of the printer.



- 4** Install the Microdrive into its slot on the main circuit board.



- 5** Return the main circuit board to the printer by reversing the procedure followed when removing it.

CompactFlash (Memory) Card

Insert the CompactFlash card into the card slot located near the handle on the right of the printer. A CompactFlash card is a microchip card that may contain option fonts, macros, forms, etc. The printer reads the contents of the card into its internal memory when printer is turned on. The presence of this data in the printer memory can be confirmed on the status printout.

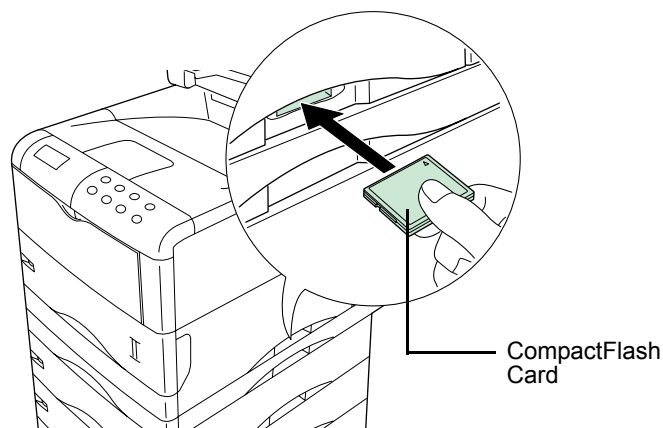
For details of available CompactFlash cards, see your dealer.

- 1 Turn off the printer.



Do not insert or remove a CompactFlash card while power is on. If the CompactFlash card is removed while the printer is on, damage could result in the printer's electronics or the CompactFlash card.

- 2 Insert the CompactFlash card in the slot. Insert it face up, connector end first. Push it in all the way.



Appendix B Host Computer Interface

This appendix explains the signals used in the printer's parallel and RS-232C interfaces. It also lists pin assignments, signal functions, timings, connector specifications, and voltage levels. The RS-232C protocols are also covered. Finally, it explains how to use the printer in a multi-computer environment.

This appendix explains the following topics:

- **Parallel Interface**
- **USB Interface**
- **Serial Interface (Option)**
- **RS-232C Protocol**
- **RS-232C Cable Connection**

Parallel Interface

Parallel Interface Communication Modes

The printer features fast data transmission with the parallel interface. The parallel interface mode can be activated from the operator panel. See [Parallel Interface Mode](#) on page 1-74.



Note

Use a parallel printer cable that complies with the IEEE1284 standard.

You can choose from four communication modes:

Communication Mode	Reception	Transmission
Auto [default]	High-speed/ECP	Nibble/ECP
Nibble (high)	High-speed	Nibble
Normal	High-speed	—
High-speed	Normal	—

Table B-1

Interface Signals

The pins of the parallel interface connector carry the signals listed in the table in [Parallel Connector Pin Assignment](#) on page B-3. Asterisks in the table indicate signals that are active low. The table also indicates whether each signal is incoming or outgoing with respect to the printer.

Pin	In/out	Description
1	In	Strobe* [nStrobe]
2	In/Out	Data 0 [Data 1]
3	In/Out	Data 1 [Data 2]
4	In/Out	Data 2 [Data 3]
5	In/Out	Data 3 [Data 4]
6	In/Out	Data 4 [Data 5]
7	In/Out	Data 5 [Data 6]
8	In/Out	Data 6 [Data 7]
9	In/Out	Data 7 [Data 8]
10	Out	Acknowledge* [nAck]
11	Out	Busy [Busy]
12	Out	Paper Empty [PErr], returns paper empty status if FRPO O2=2
13	Out	Select (Online) [nSelect], returns off-line status if FRPO O2=2
14	In	Auto-feed [nAutoFd]
15	-	Not connected
16	-	0 V DC
17	-	Chassis GND
18	-	+5 V DC
19	-	Ground
20	-	Ground
21	-	Ground
22	-	Ground
23	-	Ground
24	-	Ground
25	-	Ground
26	-	Ground
27	-	Ground
28	-	Ground
29	-	Ground
30	-	Ground
31	In	Ignored [nInit]
32	Out	Error*, returns error status if FRPO O2=2 [nFault]
33	-	Not connected
34	-	Not connected
35	Out	Power Ready
36	In	Ignored [nSelectIn]

Table B-2 Parallel Connector Pin Assignment

[*]: Signal names in the Auto mode and Nibble (high) mode (IEEE1284). In the Auto mode and Nibble (high) mode, these signals are bi-directional.

Detailed descriptions of the signals follow.

Strobe* [nStrobe] (Pin 1)

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.

Data 0 [1] to Data 7 [8] (Pins 2 to 9)

These eight signals form the data byte sent from the host computer to the printer. Data 7 [8] is the most significant bit.

Acknowledge* [nAck] (Pin 10)

This negative-going pulse acknowledges the previous character received by the printer.

Busy [Busy] (Pin 11)

This signal is high when the printer is busy and low when it is able to accept more data.

Paper Empty [PError] (Pin 12)

This signal goes high when the printer has received a print job and run out of paper.

Select [Online] (Pin 13)

This signal is high when the printer is online and low when the printer is offline. It goes low when the **GO** key is pressed to set the printer offline.

+5 V DC (Pin 18)

This line is connected to the printer's +5 V DC line (+5 V \pm 0.5 V, maximum 400 mA, fused).

Error* [nFault] (Pin 32)

When the high-speed parallel line control is on (FRPO O2=2), this line returns error status.

Power Ready (Pin 35)

This signal is high when the printer is turned on.



Note

The Paper Empty, Online, and Error signals are not used unless enabled by the FRPO command (O2 parameter).

USB Interface

This printer supports the Full-Speed 2.0 USB. USB (Universal Serial Bus) interface specifications and interface signals are as follows.

Specifications

Basic specification

Complies with the Full-Speed USB 2.0.

Connectors

Printer: B-type receptacle (female) with upstream port

Cable: B-type plug (male)

Cable

Use shielded cable that complies with the USB Revision 1.1 standards and not longer than 5 meters (16 feet).

Transfer Mode

Full speed (max. 12 Mbps)

Power Control

Self-power device

Interface Signals

Pin	Signal	Description
1	Vbus	Power supply (+5 V)
2	D-	Data transmission
3	D+	Data transmission
4	GND	Signal ground
Shell	—	Shield

Table B-3

Serial Interface (Option)

Installing the option serial interface board kit (IB-11) in the printer enables connection to a computer with an RS-232C standard serial interface.

RS-232C Interface

Interface Signals

The pins of the printer's RS-232C interface connector carry the signals listed in table below. The table also indicates whether each signal is incoming or outgoing with respect to the printer.

Pin	In/out	Signal	Description
1	-	FG	Frame ground
2	Out	TXD	Transmit Data
3	In	RXD	Receive Data
4	Out	RTS	Request To Send
5	In	CTS	Clear To Send
6	In	DSR	Data Set Ready
7	-	SG	Signal Ground
20	Out	DTR	Data Terminal Ready

Table B-4

Brief descriptions of the signals follow.

FG - Frame Ground - (Pin 1)

This pin is connected directly to the printer frame.

TXD - Transmit Data - (Pin 2)

This output carries asynchronous data sent by the printer to the computer. It is used mainly in handshaking protocols.

RXD - Receive Data - (Pin 3)

This input carries serial asynchronous data sent by the computer to the printer.

RTS - Request To Send - (Pin 4)

This output is always held high (above 3 volts).

CTS - Clear To Send - (Pin 5)

DSR - Data Set Ready - (Pin 6)

Unused.

SG - Signal Ground - (Pin 7)

All signals can transmit between the printer and the host computer to send each signal with a signal ground.

DTR - Data Terminal Ready - (Pin 20)

This output is used as a buffer nearly-full handshake line. It is held high (above 3 volts) when the buffer can accept more data.

RS-232C Interface Voltage Levels

The voltage levels of the interface signals conform to EIA RS-232C specifications. SPACE is from 3 volts to 15 volts. MARK is from -3 volts to -15 volts. Voltages between -3 volts and 3 volts are undefined.

RS-232C Protocol

A protocol is a set of rules the computer follows in sending data to the printer. The RS-232C parameters are stored in battery backed-up memory. They are indicated on the status printout. They can be changed by the FRPO (firmware reprogram) command described in the *Programming Manual* provided on the CD-ROM supplied with the printer. The parameters and their identification codes are given below.

H1: Baud rate

Parameter value	Baud rate
12	1200
24	2400
48	4800
96	9600
19	19200
38	38400
57	57600
11	115200

Table B-5

The factory setting is 9600 baud.

H2: Data bits

7 or 8, factory-set to 8.

H3: Stop bits

1 or 2, factory-set to 1.

H4: Parity

Parameter value	Meaning
0	None
1	Odd
2	Even
3	Ignore

Table B-6

The factory setting is “None” (0 on the status printout).

H5: Protocol logic

Parameter value	Meaning
0	Combination of 1 and 3 below
1	DTR/DSR, positive logic
2	DTR/DSR, negative logic
3	XON/XOFF
4	ETX/ACK
5	XON/XOFF recognized only as protocol

Table B-7

The factory setting is 0.

H6: Buffer nearly-full threshold

This is a percentage from 0 to 99. The factory setting is 90.

H7: Buffer nearly-empty threshold

This is a percentage 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 notification.

The gap 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

This is the size of the input buffer, specified in units of 10 Kbytes. The factory-set value is 6, meaning 60 Kbytes.



Since DTR/DSR protocol is not used with the RS-422A standard, select a parameter value other than 0, 1, or 2 for the H5 setting when using the RS-422A interface.

PREScribe FRPO D0 Command

The PREScribe FRPO D0 command provides control over XON/XOFF operation when an error occurs on the serial interface. The following table 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-8

RS-232C Cable Connection

Obtain a Suitable RS-232C Cable

Make sure that the RS-232C cable is wired correctly. The cable must be a null modem cable; that is, one in which pin 2 on either end of the cable is connected to pin 3 on the other end. You cannot use a straight cable such as IBM communication adapter cable type 1502067 unless you purchase a null modem adapter.

Connecting the Printer to the Computer

Check that the power of both the printer and the computer is switched off.

- 1** Discharge yourself of static electricity by touching a metal object such as a doorknob.
- 2** Plug the printer end of the RS-232C interface cable into the printer's RS-232C connector and screw it in place.
- 3** Plug the other end of the cable into the computer's RS-232C interface connector.
- 4** Switch on the printer's power.
- 5** The printer's RS-232C parameters are factory-set to the following values:

Baud rate=9600 bps, data bits (character length)=8 bits, stop bits=1, parity=none

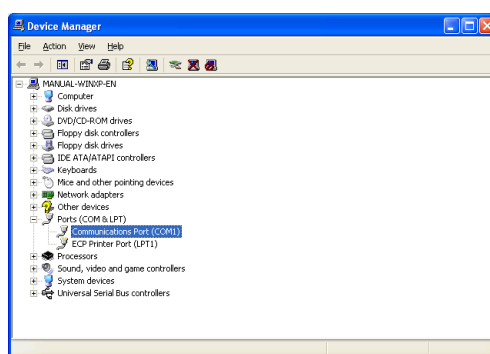
The two RS-232C protocols are XON/XOFF and DTR. The printer performs both of them simultaneously, using positive logic for DTR.

If you are uncertain as to the printer's current parameter settings, you can reset them to the values listed above. See [*Serial Interface Parameters*](#) on page [1-76](#).

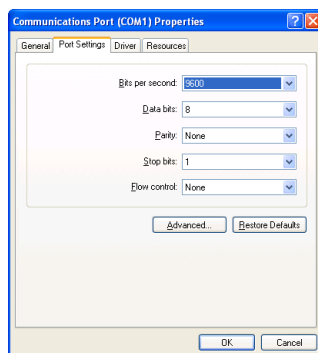
- 6** Set the computer to the same parameters as the printer. On many computers this can be done by setting DIP switches before the power is turned on. Another method is as follows:

With Windows XP, make settings as follows:

- 1 Click on the **Start** button in the Windows XP task bar and align the cursor with **Settings**, then click on **Control Panel** from among the items displayed.
- 2 The **Control Panel** window opens. Double click on **System**.
- 3 **System Properties** window opens. Click on the **Hardware** tab, then click on the **Device Manager** button, and double click on **Ports (COM & LPT)**.



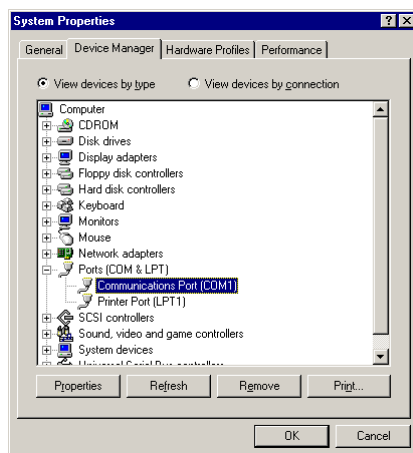
- 4 Double click on **Communications Port**.
- 5 The **Communications Port Properties** dialog is displayed for the selected COM port. Click on the **Port Settings** tab and set the port properties.



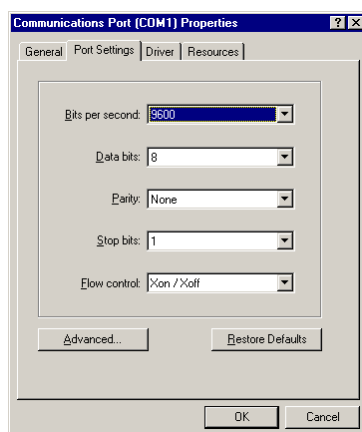
- 6 After setting the properties, click the **OK** button.

With Windows 95/98/Me, make settings as follows:

- 1** Click on **Start** button in the Windows 95/98/Me Task Bar and align the cursor with **Settings**, then click on **Control Panel** from among the items displayed.
- 2** The control panel folder opens. Double click on **System**.
- 3** **System Properties** opens. Click on the **Device Manager** tab, then click on the **COM** port to be used.



- 4** Click on **Properties** button.
- 5** The Properties sheet is displayed for the selected **COM** port. Click on the **Port Settings** tab and set the port properties.



- 6** After setting the properties, click **OK** button.

In DOS, enter the following commands:

```
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
```

The software settings made using the above procedures are temporary. On most computers, permanent settings must be made with DIP switches.

Appendix C Specifications

Specifications

Item	Description
Printing method	Electrophotography, laser scan
Printing speed	28 pages/minute (A4 size) when printing multiple copies of the same page
Resolution	Fast 1200 mode with KIR [Kyocera Image Refinement] 600 dpi with KIR (Kyocera Image Refinement) 300 dpi with KIR (Kyocera Image Refinement)
First print	Approx. 19.5 seconds or less (A4 size), depending on input data
Warm-up time	Approx. 10 seconds or less (from sleep mode) Approx. 18 seconds or less (from power on) at 23 °C, 120 or 230 V
Controller	PowerPC 405 (266 MHz)
Main memory	32 MB, expandable up to 288 MB
Interfaces	Parallel: IEEE1284, 1 USB: Full-Speed 2.0, 1 Option: Serial interface/Network interface card, 1
Memory card slot	1 (CompactFlash card)
Hard disk slot	1 (Microdrive)
Self test	Performed at power-up
Maximum duty cycle	100,000 pages/month
Drum	Amorphous silicon drum
Developer	Mono-component dry developer
Main charger	Positive scorotron charger
Transferring	Negative charger roller
Separation	Curvature separation
Drum cleaning	Blade cleaner
Drum discharging	Illumination by eraser LED array
Fuser	Heat roller and pressure roller
Toner saving	Ecoprint mode
Paper	Plain paper (See Chapter 2)
Paper feed trays	Cassette: A5 to A4/Letter universal cassette 148 to 216 mm × 210 to 297 mm. Holds 500 sheets of thickness 0.11 mm For U. S. A.: A5 to A4/Letter and Legal universal cassette 5-13/16 to 8-1/2" × 8-1/4 to 14" MP tray: 70 to 216 mm (2-3/4 to 8-1/2") × 148 to 297 mm (5-13/16 to 11-11/16") (see page 2-4). Holds 100 sheets of thickness 0.11 mm
Capacity of output trays	Top tray — 250 sheets of thickness 0.11 mm Rear tray (Option) — PT-4: 250 sheets of thickness 0.11 mm PT-60: 100 sheets of thickness 0.11 mm

Table C-1

Item	Description
Ambient conditions	Temperature: 10 to 32.5 °C (50 to 90.5 °F) Humidity: 20 to 80 % RH Optimum conditions: 23 °C (73.4 °F), 60 % RH Altitude: Max. 2,000 m (6,500 feet) Illumination: Max. 1,500 lux
Power requirements	120 V, 60 Hz, max. 8.0 A (U. S. A./Canada) 220–240 V, 50 Hz/60 Hz, max. 3.9 A (European countries) Max. allowable voltage fluctuation: ±10 % Max. allowable frequency fluctuation: ±2 %.
Power consumption	Max.: 979 W (U. S. A./Canada) 987 W (European countries) During printing: 422 W (U. S. A./Canada) 425 W (European countries) During sleep mode: 5.6 W (U. S. A./Canada) 5.3 W (European countries)
Operating noise (in accordance with ISO 7779 [Bystander Position, sound pressure level at the front])	During printing: LpA = 55 dB (A) During standby: LpA = 33 dB (A) During sleep mode: Immeasurably low
Dimensions	345 (13-9/16) wide × 300 (11-13/16) high × 390 mm (18-1/4") deep [(): U. S. A.]
Weight	13.2 kg (29-9/16 lb) [(): U. S. A.]

Table C-1 (Continued)

Glossary

Cassette mode

This is an operation mode for the MP tray. When this mode is used, approximately 100 sheets of plain paper can be fed continuously, the same as for the cassette.

dpi (dots per inch)

This indicates the number of dots printed per inch, and is the unit of printer resolution.

Ecoprint

This is a printing mode that controls toner consumption. Pages printed in the Ecoprint mode are lighter than pages printed in the normal mode. The default setting is Off.

Emulation

This refers to emulation of manufacturers' printers. The printer emulates operation of the following printers: PCL, Line printer, IBM Proprinter, DIABLO 630, EPSON LQ-850, KPDLL.

Expansion memory

This option is used to increase printer memory. The printer has an expansion socket, into which you can install a 32 MB, 64 MB, 128 MB, or 256 MB DIMM (Dual Inline Memory Module). See your Kyocera Mita dealer to purchase the DIMM that is best suited for use with this printer.

First mode

This is an operation mode for the MP tray. When the MP tray setting is set to first mode (priority printing from the MP tray) with paper inserted in the MP tray, the first paper will always feed from there even if another paper source is selected. The printer is set to the cassette mode (another MP tray operation mode) as the factory default, but you can change this setting from the operator panel.

IEEE1284

This is a standard used when connecting a printer to a computer, and was established by the Institute of Electrical and Electronic Engineers in 1994.

KIR (Kyocera Image Refinement)

This is Kyocera's original smoothing function. It uses software to enhance the printer's resolution and produce high-quality printing. The default setting is On.

KM-NET VIEWER

This is a network management tool that can be used with the Kyocera Mita FS series. You can view information for printers connected to the network using SNMP commands. **KM-NET VIEWER** is contained on the CD-ROM supplied with the printer.

MB (mega byte)

This unit is used to express data quantities and memory capacities. 1 MB is equivalent to 1024 kB, or 1,048,576 bytes.

MP tray

This is an abbreviation for Multi-Purpose tray. The MP tray is used instead of the cassette when printing on envelopes, postcards, transparency sheets, and labels.

Offline

The printer can receive data, but cannot print. Turn the printer online if you want to print.

Online

The printer can output received data.

Operator panel

This is located on the top of the printer. The panel consists of the message display three indicators and eight keys. The message display shows the printer's status. Press the keys when you want to switch the printer between online and offline status, or to cancel printing.

Outline font

With outline fonts, characters outlines are represented by numerical expressions, and fonts can be enlarged, reduced, or painted in different ways by changing the numeric values of those expressions. Printing remains clear even if you enlarge fonts, since the letters are defined by an outline. You can specify font size in steps of 0.25 points up to 999.75 points.

Parallel interface

With this interface, data transfer between the printer and the computer takes place on 8-bit chunks. The printer can perform IEEE1284 compatible bi-directional communications.

Printer driver

The printer driver makes it possible for you to print data created using application software. The printer driver for either the printer is on the CD-ROM supplied with the printer. Install the printer driver on the computer connected to the printer.

RAM disk

This is a virtual disk drive that uses part of the printer's memory. With RAM disk you can set any memory size arbitrarily, and use electronic sorting (to reduce print time).

Rear tray

Tray installed at the rear of the printer. Select paper output to the rear tray when printing on postcards, envelopes, or labels.

Simple Network Management Protocol (SNMP)

This is a protocol for the management of networks that use TCP/IP (Transmission Control Protocol/Internet Protocol).

Sleep mode

This mode is activated after a specified amount of time elapses. The printer goes into economy mode and a minimum amount of power is consumed. You can change the amount of time before the printer goes into sleep mode from the printer's operator panel. The default setting is 15 minutes.

Status page

This lists printer conditions, such as the printer's memory, the total number of copies printed, and paper source settings.

USB (Universal Serial Bus)

An interface standard for low to middle speed serial interfaces. This printer supports Full-Speed USB 2.0. The maximum transfer rate is 12 Mbps and the maximum cable length is 5 meters (16 feet).

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KYOCERA MITA EUROPE B.V.

Hoeksteen 40, 2132 MS Hoofddorp,
The Netherlands
Phone: +31.(0)20.654.000
Home page: <http://www.kyoceramita-europe.com>
Email: info@kyoceramita-europe.com

KYOCERA MITA NEDERLAND B.V.

Hoeksteen 40 2132 MS Hoofddorp
The Netherlands
Phone: +31.(0)20.587.7200

KYOCERA MITA (UK) LTD.

8 Beacontree Plaza
Gillette Way,
Reading Berks RG2 0BS, UK
Phone: +44.(0)118.931.1500

KYOCERA MITA ITALIA S.P.A.

Via Verdi 89 / 91 20063 Cernusco sul Naviglio,
Italy
Phone: +39.02.92179.1

S.A. KYOCERA MITA BELGIUM N.V.

Hermesstraat 8A 1930 Zaventem Belgium
Phone: +32.(0)2.720.9270

KYOCERA MITA FRANCE S.A.

Parc Les Algorlthmes
Saint Aubin
91194 GIF-SUR-YVETTE
France
Phone: +33.(0)1.6985.2600

KYOCERA MITA ESPAÑA S.A.

Edificio Kyocera, Avda de Manacor N. 2,
Urb. Parque Rozas 28290 Las Rozas,
Madrid, Spain
Phone: +34.(0)91.631.8392

KYOCERA MITA FINLAND OY

Kirvesmiehenkatu 4 00810 Helsinki,
Finland
Phone: +358.(0)9.4780.5200

KYOCERA MITA (SCHWEIZ) AG

Holzliwisen Industriestrasse 28
8604 Volketswil, Switzerland
Phone: +41.(0)1.908.4949

KYOCERA MITA DEUTSCHLAND GMBH

Mollsfeld 12 D-40670 Meerbusch,
Germany
Phone: +49.(0)2159.918.0

KYOCERA MITA GMBH AUSTRIA

Eduard-Kittenberger Gasse 95
1230 Wien, Austria
Phone: +43.(0)1.86338.0

KYOCERA MITA SVENSKA AB

Box 1402 171 27 Solna, Sweden
Phone: +46.(0)8.546.550.00

KYOCERA MITA NORGE

Postboks 150 Oppsal, NO 0619 Oslo
Olaf Helsetsvei 6, NO 0694 Oslo
Phone: +47.(0)22.62.73.00

KYOCERA MITA DANMARK A/S

Hovedkontor: Slotsmarken 11,
DK-2970 Hørsholm, Denmark
Phone: +45.(70)22.3880

KYOCERA MITA PORTUGAL LDA.

Rua do Centro Cultural, no 41 1700-106
Lisbon, Portugal
Phone: +351.(0)21.842.9100

KYOCERA MITA SOUTH AFRICA (PTY) LTD.

527 Kyalami Boulevard,
Kyalami Business Park 1685 Midrand South
Phone: +27.(0)11.466.3290

KYOCERA MITA AMERICA, INC.

Headquarters:

225 Sand Road,
Fairfield, New Jersey 07004-0008,
U.S.A.
Phone: (973) 808-8444

KYOCERA MITA AUSTRALIA PTY. LTD.

Level 3, 6-10 Talavera Road, North Ryde,
N.S.W. 2113 Australia
Phone: (02) 9888-9999

KYOCERA MITA NEW ZEALAND LTD.

1-3 Parkhead Place, Albany
P.O. Box 302 125 NHPC, Auckland,
New Zealand
Phone: (09) 415-4517

KYOCERA MITA (THAILAND) CORP., LTD.

9/209 Ratchada-Prachachem Road,
Bang Sue, Bangkok 10800, Thailand
Phone: (02) 586-0320

KYOCERA MITA SINGAPORE PTE LTD.

121 Genting Lane, 3rd Level,
Singapore 349572
Phone: 67418733

KYOCERA MITA HONG KONG LIMITED

11/F., Mita Centre,
552-566, Castle Peak Road,
Tsuen Wan, New Territories,
Hong Kong
Phone: 24297422

KYOCERA MITA TAIWAN

Corporation.

7F-1~2, No.41, Lane 221, Gangchi Rd.
Neihu District, Taipei, Taiwan, 114. R.O.C.
Phone: (02) 87511560

KYOCERA MITA Corporation

2-28, 1-chome, Tamatsukuri, Chuo-ku
Osaka 540-8585, Japan
Phone: (06) 6764-3555
<http://www.kyoceramita.com>