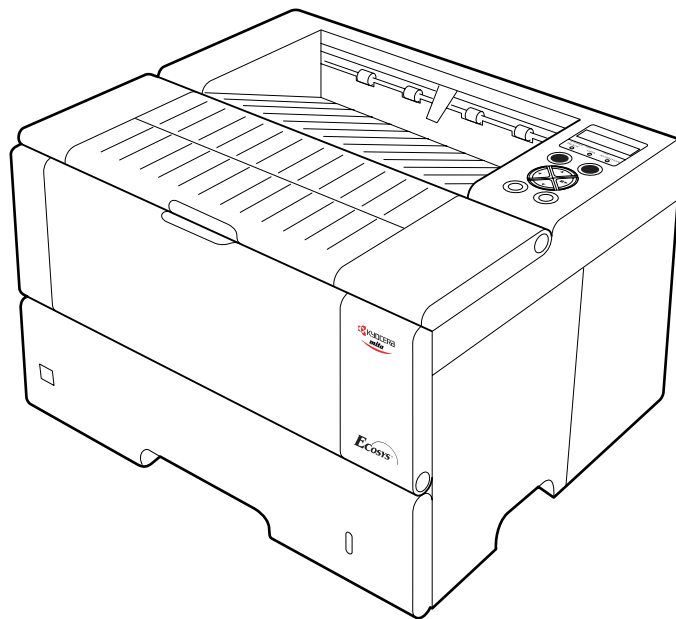


FS-6020

Page Printer



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

The sections of this guide and parts of the printer marked with symbols are safety warnings meant to protect the user, other individuals and surrounding objects, and ensure correct and safe usage of the printer. The symbols and their meanings are indicated below.

⚠ WARNING: Indicates that serious injury or even death may result from insufficient attention to or incorrect compliance with the related points.

⚠ CAUTION: Indicates that personal injury or mechanical damage may result from insufficient attention to or incorrect compliance with the related points.

Symbols

The **⚠** symbol indicates that the related section includes safety warnings. Specific points of attention are indicated inside the symbol.



..... [General warning]



..... [Warning of danger of electrical shock]



..... [Warning of high temperature]

The **⊘** symbol indicates that the related section includes information on prohibited actions. Specifics of the prohibited action are indicated inside the symbol.



..... [Warning of prohibited action]



..... [Disassembly prohibited]

The **●** symbol indicates that the related section includes information on actions which must be performed. Specifics of the required action are indicated inside the symbol.



..... [Alert of required action]



..... [Remove the power plug from the outlet]



..... [Always connect the printer to an outlet with a ground connection]

Please contact your service representative to order a replacement if the safety warnings in the guide are illegible or if the guide itself is missing. (fee required)

Caution

NO LIABILITY IS ASSUMED FOR ANY DAMAGE CAUSED BY IMPROPER INSTALLATION.

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](#).

Notice

The information in this guide is subject to change without notification. Additional pages may be inserted in future editions. The user is asked to excuse any technical inaccuracies or typographical errors in the present edition.

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Introduction

The Kyocera Mita page printer has many desirable features, such as EcoPrint function that reduces the power consumption and Auto Media Type Selection function that selects automatically media before print.

This section explains the following topics:

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

For More Information...

Item	Description
Installation Guide (paper manual)	Describes procedures from printer setup to printing a test page.
Operation Guide (this manual)	Guides you through topics concerning the operations and maintenance of the printer.
Printer Driver Operation Guide	Describes how to install and set the printer driver.
PRESCRIBE Commands Technical Reference	PRESCRIBE is the native language of the Kyocera Mita printers. 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 Commands Command Reference	Give a detailed explanation of PRESCRIBE command syntax and parameters with the aid of print examples.

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 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.

Appendix A Fonts

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

Appendix B Option Units

This appendix introduces the available options using with the printer.

Appendix C Host Computer Interface

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

Appendix D Specifications

This appendix lists the printer's specifications.

Glossary

This glossary explains the terminology used in this manual.

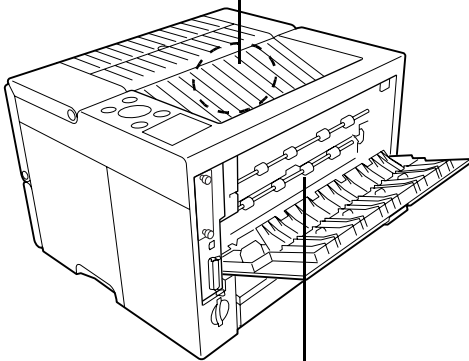
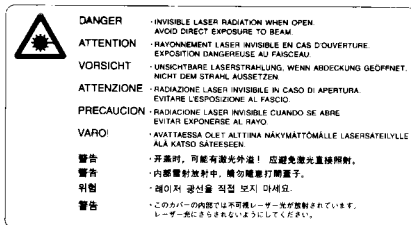
IMPORTANT! PLEASE READ FIRST

Caution Labels

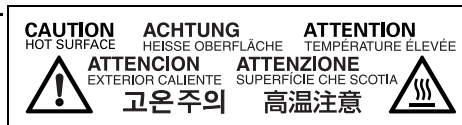
Caution labels have been attached to the printer at the following locations for safety purposes. BE SUFFICIENTLY CAREFUL to avoid fire or electric shock when removing a paper jam or when replacing toner.

Label inside the printer (Laser radiation warning)

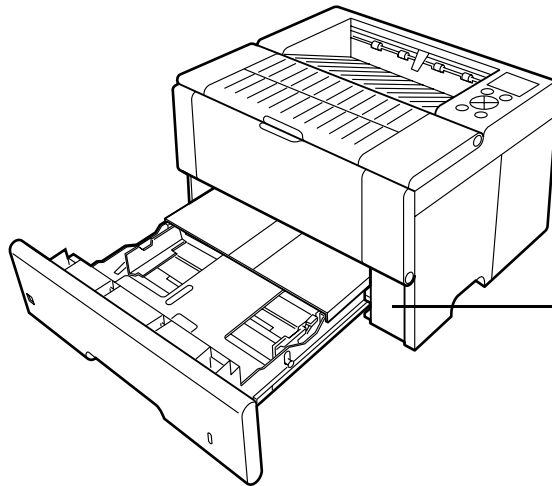
This label is attached to the scanner unit installed in the printer.



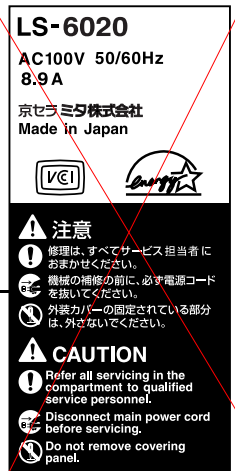
Label inside the rear cover



Label on the printer's front side







FSに差替え
データ入手済み

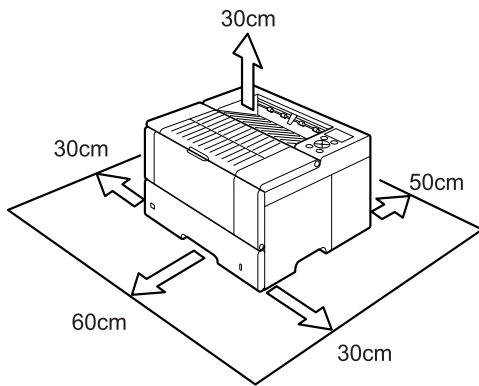



Installation Precautions

Environment

CAUTION

- Avoid placing the printer on or in locations which are unstable or not level. Such locations may cause the printer to fall down or fall over. This type of situation presents a danger of personal injury or damage to the printer. 
- Avoid locations with humidity or dust and dirt. If dust or dirt becomes attached to the power plug, clean the plug to avoid the danger of fire or electrical shock. 
- Avoid locations near radiators, heaters, or other heat sources, or locations near flammable items, to avoid the danger of fire. 
- To keep the printer cool and facilitate changing of parts and maintenance, allow access space as shown below. Leave adequate space, especially around the side cover, to allow air to be properly ventilated out of the printer. 






- Always use the caster stoppers to stabilize the printer once it is in place to keep it from moving and/or falling over and causing injury. 

Other Precautions

- Adverse environmental conditions may affect the safe operation and performance of the printer. Install in an air-conditioned room (recommended room temperature: around 20 °C, humidity: around 65 % RH) and avoid the following locations when selecting a site for the printer.
 - Avoid locations near a window or with exposure to direct sunlight.
 - Avoid locations with vibrations.
 - Avoid locations with drastic temperature fluctuations.
 - Avoid locations with direct exposure to hot or cold air.
 - Avoid poorly ventilated locations.

Power Supply/Grounding the Printer

WARNING


- DO NOT use a power supply with a voltage other than that specified. Avoid multiple connections in the same outlet. These types of situations present a danger of fire or electrical shock. 
- Plug the power cord securely into the outlet. If metallic objects come in contact with the prongs on the plug, it may cause a fire or electric shock. 
- Always connect the printer to an outlet with a ground connection to avoid the danger of fire or electrical shock in case of an electric short. If an earth connection is not possible, contact your service representative. 

Other Precautions

- Connect the power plug to the closest outlet possible to the printer.

Handling of Plastic Bags









WARNING

- Keep the plastic bags that are used with the printer away from children. The plastic may cling to their nose and mouth causing suffocation. 





Precautions for Use


Cautions when Using the Printer

WARNING


- DO NOT place metallic objects or containers with water (flower vases, flower pots, cups, etc.) on or near the printer. This type of situation presents a danger of fire or electrical shock should they fall inside. 
- DO NOT remove any of the covers from the printer as there is a danger of electrical shock from high voltage parts inside the printer. 
- DO NOT damage, break or attempt to repair the power cord. DO NOT place heavy objects on the cord, pull it, bend it unnecessarily or cause any other type of damage. These types of situations present a danger of fire or electrical shock. 
- NEVER attempt to repair or disassemble the printer or its parts as there is a danger of fire, electrical shock or damage to the laser. If the laser beam escapes, there is a danger of it causing blindness. 
- If the printer becomes excessively hot, smoke appears from the printer, there is an odd smell, or any other abnormal situation occurs, there is a danger of fire or electrical shock. Turn the power switch OFF (O) immediately, remove the power plug from the outlet and contact your service representative. 
- If anything harmful (paper clips, water, other fluids, etc.) falls into the printer, turn the power switch OFF (O) immediately. Next, remove the power plug from the outlet to avoid the danger of fire or electrical shock. Then contact your service representative. 
- DO NOT remove or connect the power plug with wet hands, as there is a danger of electrical shock. 
- ALWAYS contact your service representative for maintenance or repair of internal parts. 

CAUTION

- DO NOT pull the power cord when removing it from the outlet. If the power cord is pulled, the wires may become broken and there is a danger of fire or electrical shock. (ALWAYS grasp the power plug when removing the power cord from the outlet.) 
- ALWAYS remove the power plug from the outlet when moving the printer. If the power cord is damaged, there is a danger of fire or electrical shock. 
- If the printer will not be used for a short period of time (overnight, etc.), turn the power switch OFF (O). If it will not be used for an extended period of time (vacations, etc.), remove the power plug from the outlet for safety purposes during the time the printer is not in use. 
- For safety purposes. ALWAYS remove the power plug from the outlet when performing cleaning operations. 






- If dust accumulates within the printer, there is a danger of fire or other trouble. It is therefore recommended that you consult with your service representative in regard to cleaning of internal parts. This is particularly effective if accomplished prior to seasons of high humidity. Consult with your service representative in regard to the cost of cleaning the internal parts of the printer. 

Other Precautions

- DO NOT place heavy objects on the printer or cause other damage to the printer. 
- DO NOT open the ~~front cover~~ **top cover and front cover**, turn off the main switch, or pull out the power plug during printing.
- During printing, some ozone is released, but the amount does not cause any ill effect to one's health. If, however, the printer is used over a long period of time in a poorly ventilated room or when printing an extremely large number of copies, the smell may become unpleasant. To maintain the appropriate environment for print work, it is suggested that the room be properly ventilated.
- DO NOT touch electrical parts, such as connectors or printed circuit boards. They could be damaged by static electricity.
- DO NOT attempt to perform any operations not explained in this handbook.
- CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- If the printer will not be used for an extended period of time, remove the paper from the cassette, return it to its original package and reseal it.

Cautions for Toner Handling

CAUTION

- 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. 

Chapter 1

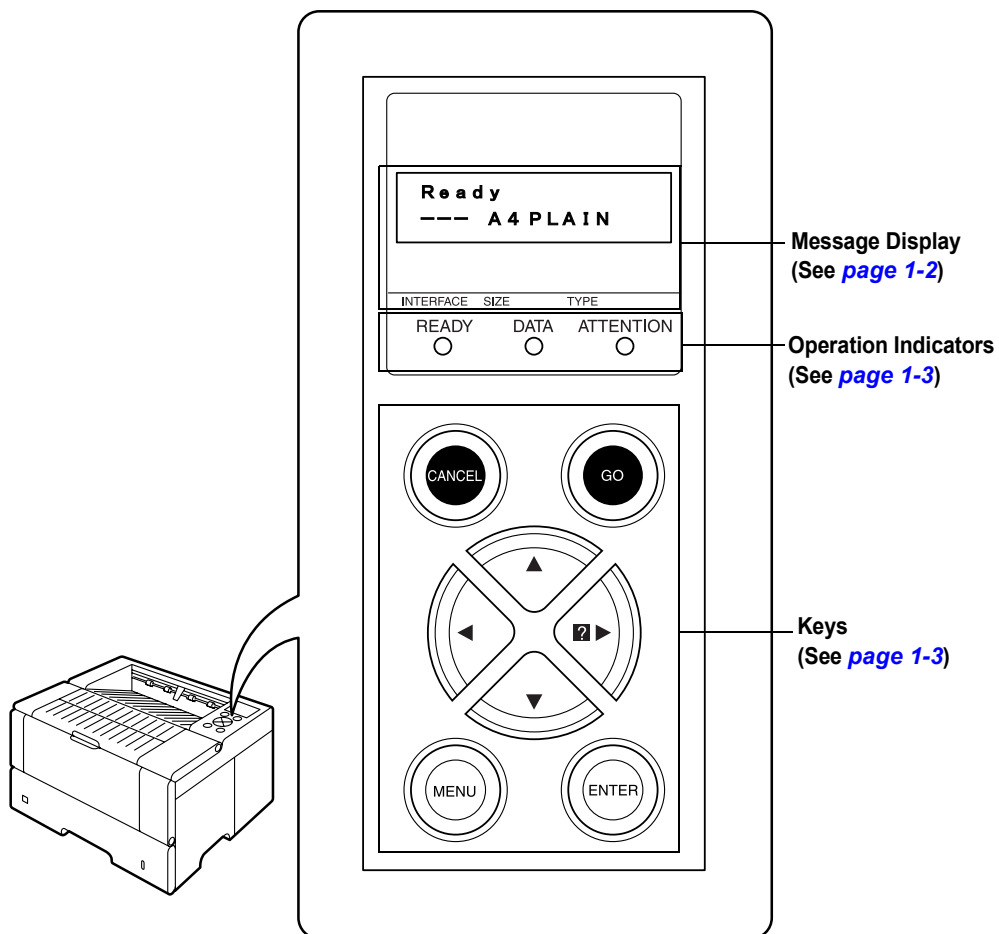
Using the Operator Panel

This chapter explains the following topics:

- Understanding the Operator Panel
- Printing Test Page
- Paper Handling
- Pagenation
- e-MPS
- Interface
- Operating the Storage Device
- Configuration

Understanding the Operator Panel

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



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 on [page 4-4](#).

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 memory card/hard disk, or printing.
Sleeping	The printer is in Sleep mode. The printer wakes from Sleep mode whenever a key on the operator panel is pressed, the cover is opened or closed, or 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 1-3 .
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 TimeOut	The printer is printing the last page after a waiting period.

Interface Indicator

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

- PAR** Standard bi-directional parallel interface
- USB** USB interface
- SER** Optional serial interface board (RS-232C)
- OPT** Option network interface
- 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 shows 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
A3	ISO A3	#9	Commercial 9*
B4	B4	#6	Commercial 6-3/4*
CU	Custom Size	DL	ISO DL*
C4	ISO C4	C5	ISO C5
O2	Oficio II	A6	ISO A6*
ST	Statement*	B6	JIS B6*
FO	Folio	A5	ISO A5
Y2	Youkei2*	B5	JIS B5
Y4	Youkei4*	b5	ISO B5*
8K	8kai	A4	ISO A4
16K	16kai	EX	Executive
HA	Japanese Postcard*	LT	Letter
OH	Return Postcard*	LG	Legal
MO	Monarch*	LD	Ledger
BU	Business*		

* With only the MP tray feeding

NOTE

While the printer is processing data, the **SIZE** display 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 [Customizing Paper Type on page 1-19](#).

The following abbreviations are used to indicate the paper type.

Message Display	Paper Type	Message Display	Paper Type
PLAIN	Plain	LETTERHEA	Letterhead
TRNSPRNCY	Transparency*	COLOR	Color
PREPRINTE	Preprinted	PREPUNCHED	Prepunched
LABELS	Labels*	ENVELOPE	Envelope*
BOND	Bond	CARDSTOCK	Cardstock*
RECYCLED	Recycled	THICK	Thick*
VELLUM	Vellum*	CUSTOM1 (to 8)	Custom 1 (to 8)
ROUGH	Rough		

* With only the MP tray feeding

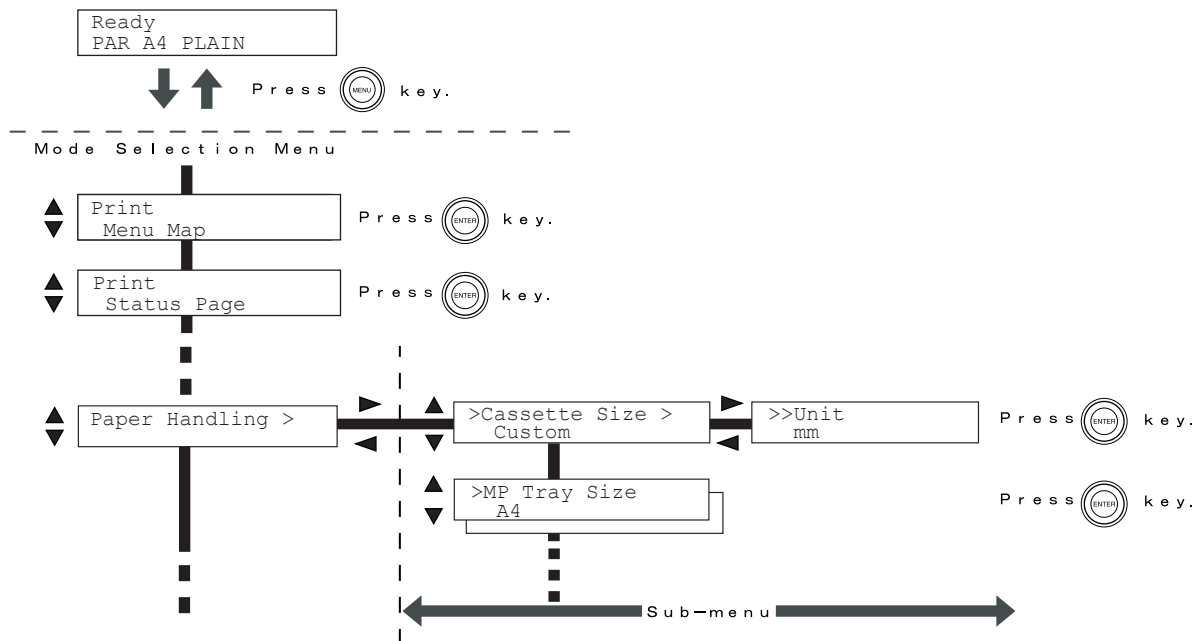
Menu Selection System

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 print, emulation, etc., to your specific needs. Settings can be made when Ready is indicated on the printer message display.

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.

Entering Mode Selection Menu

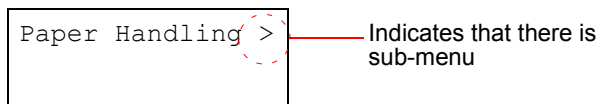
Press the **MENU** key when Ready is indicated on the printer message display. Mode selection menu is displayed.



Selecting Menu

The mode selection menu is hierarchical. Press the ▲ or ▼ key to display desired menu.

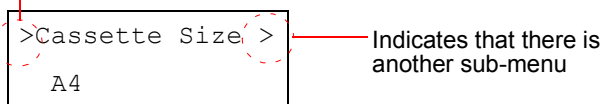
- If the selected menu has sub-menu, > is displayed after the menu.



Press the ► key to move to the sub-menu or ◀ key to go back.

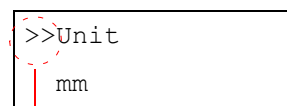
- > is displayed before the sub-menu.

Indicates that this is sub-menu



Press the ► key to move to the another sub-menu or ◀ key to go back.

- >> is displayd before the second sub-menu.



Indicates that this is second sub-menu

Setting Menu

Select the desired menu and press the **ENTER** key to set or change the configuration.

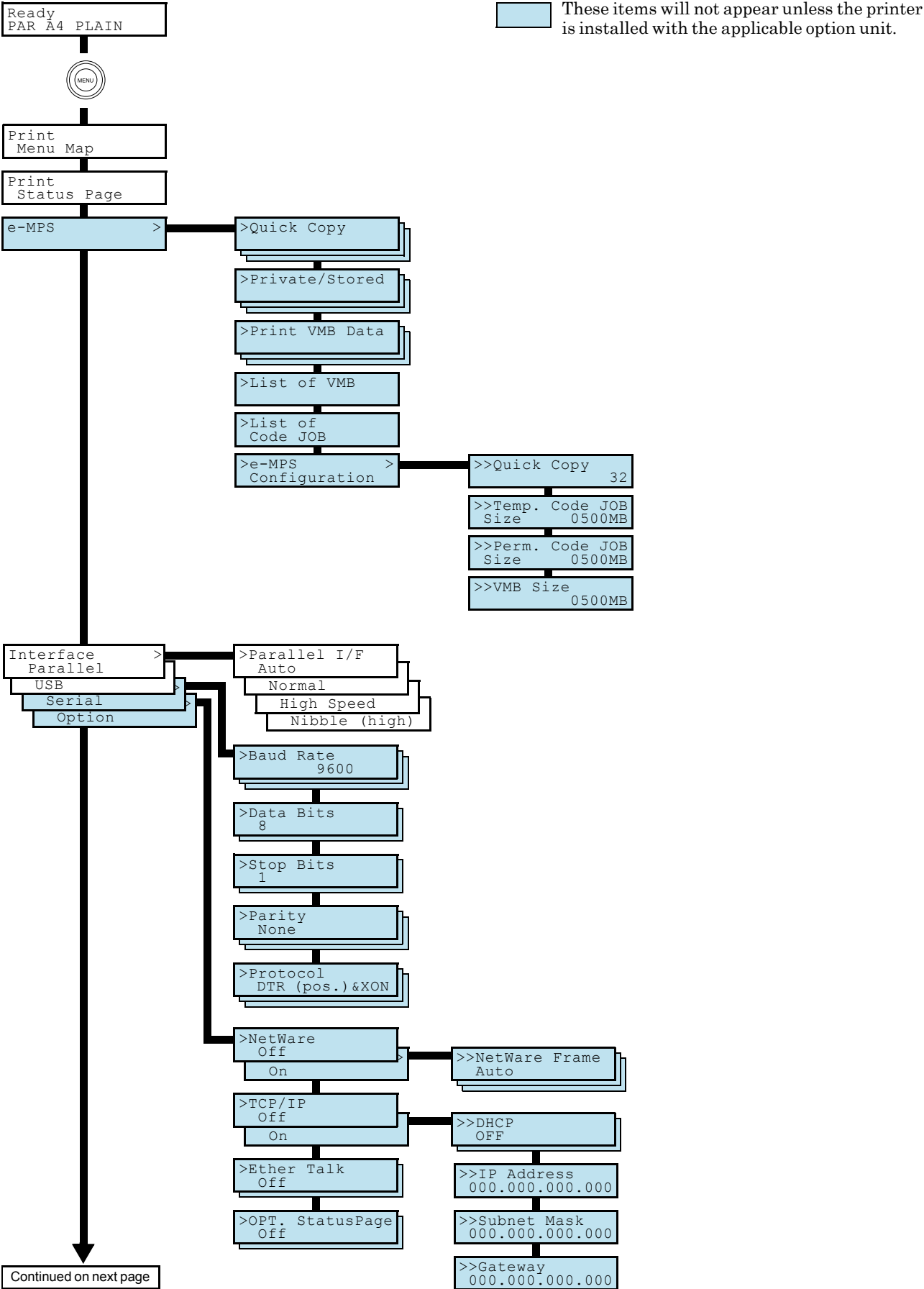
Press the ▲ or ▼ key to display desired item and the **ENTER** key to finalize the value or selections set.

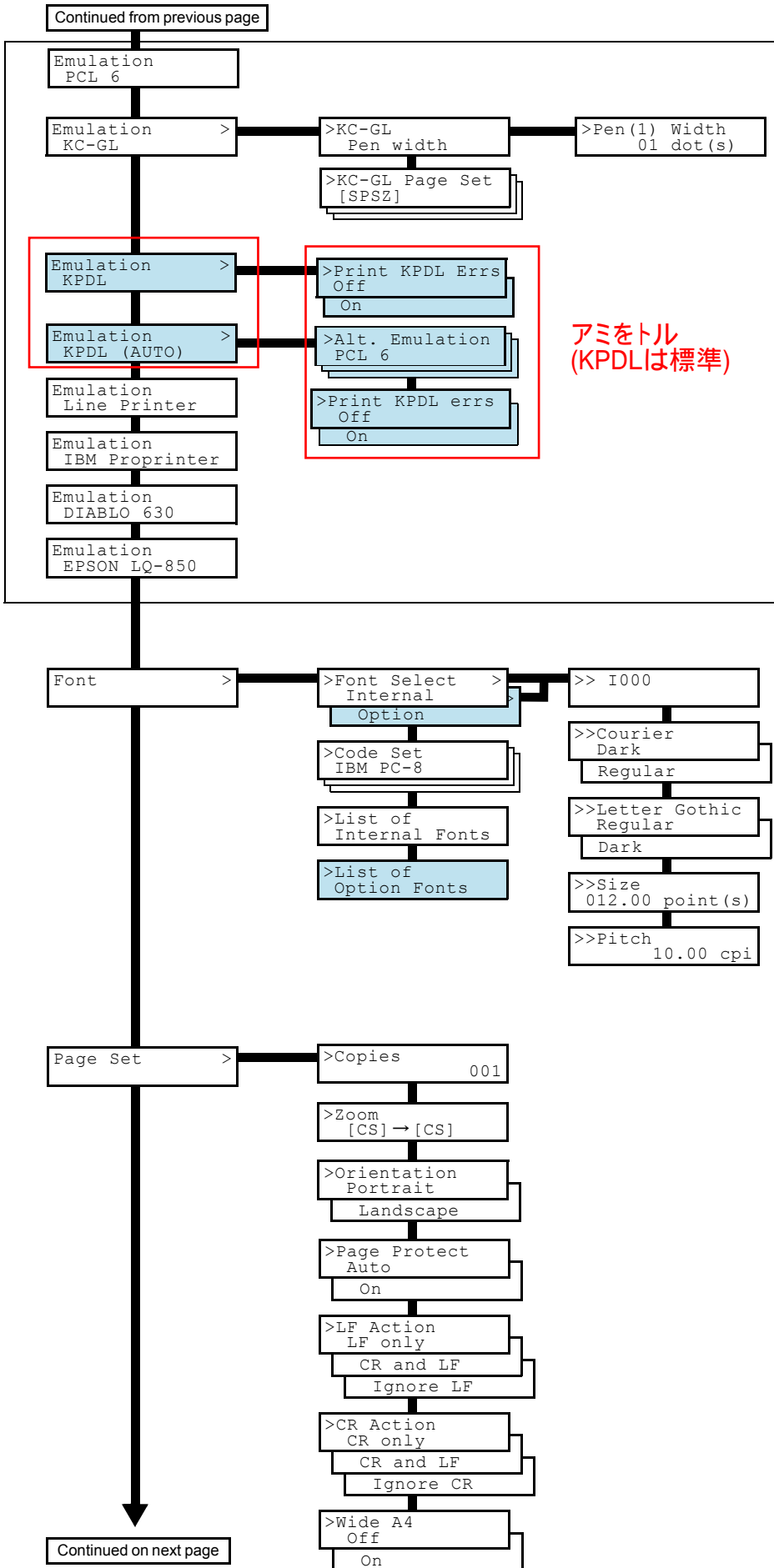
Cancelling Menu Selection

If you press the **MENU** key when selecting menu, the message display returns to Ready.

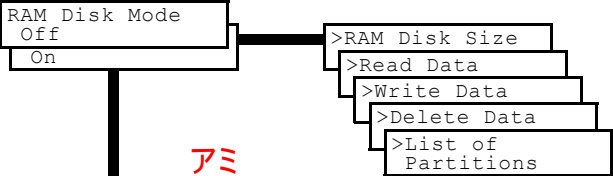
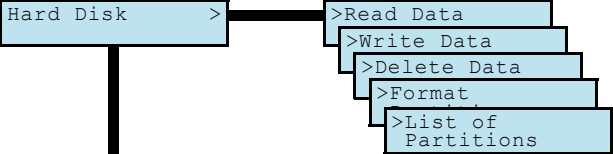
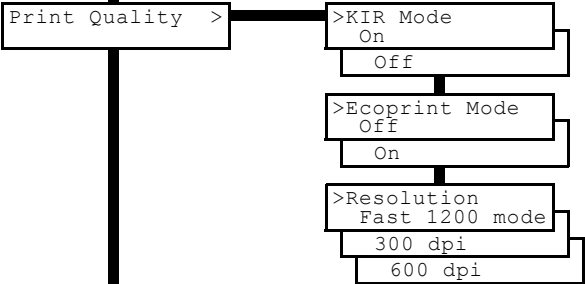
Mode Selection Menu

The following is the hierarchy diagram of the menu selection system of the printer. For details about menu selection operations, see page 1-4.

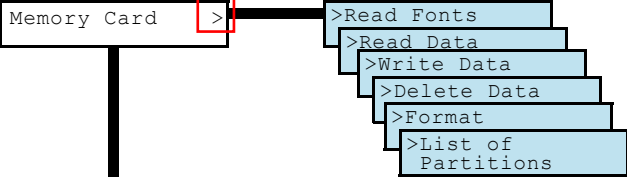




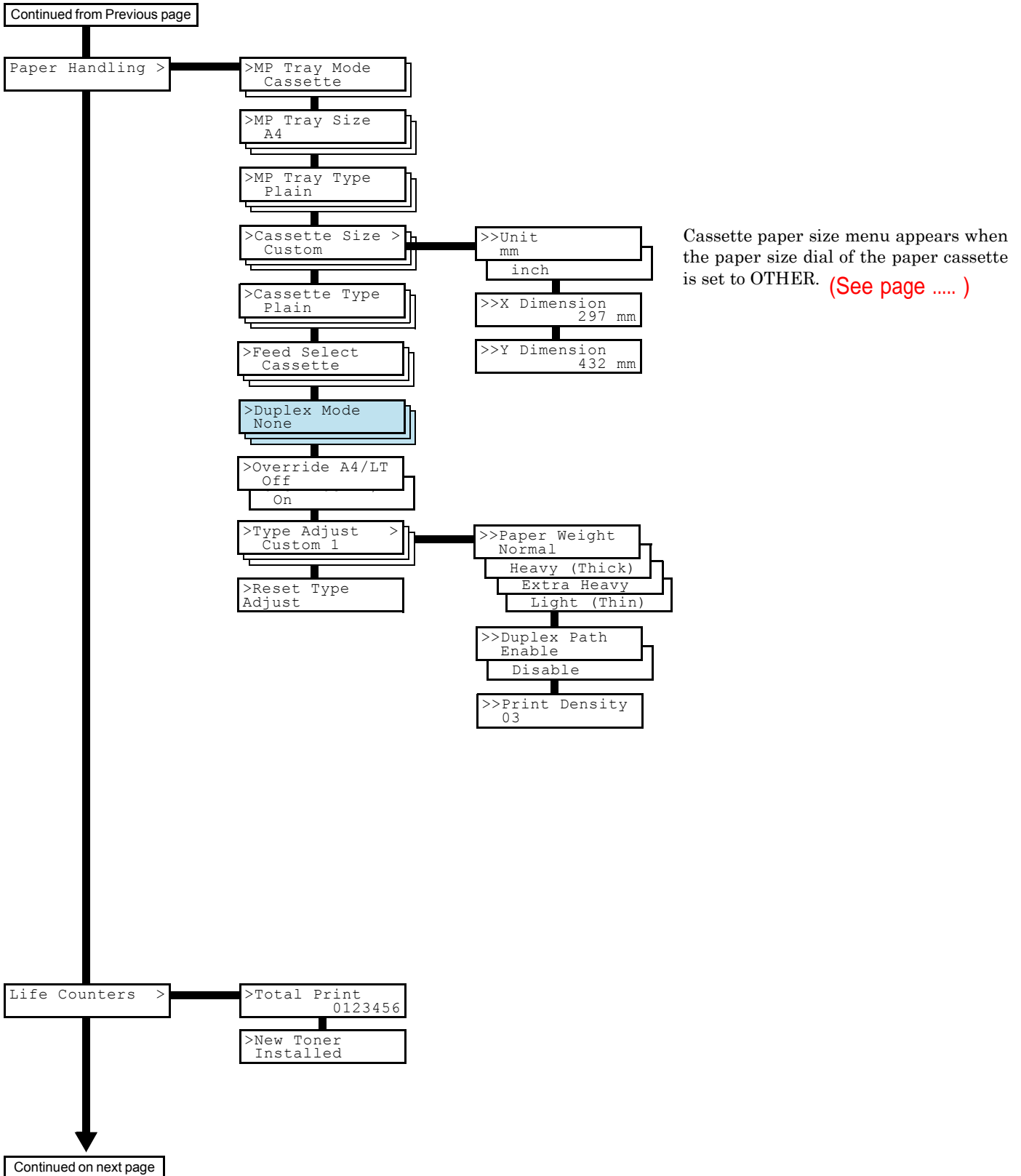
Continued from previous page



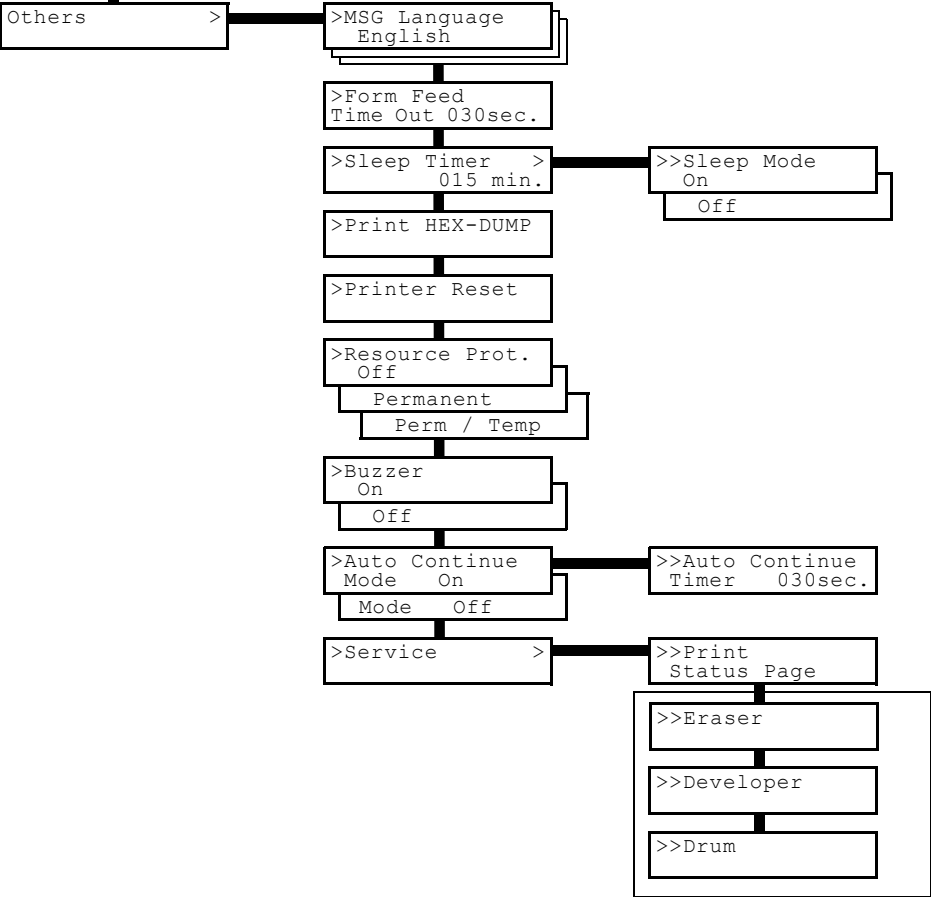
アミ



Continued on next page



Continued from previous page



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

Printing

This section explains the procedures to print out the printer's internal information.

You can print out such information as the set menu, printer's status, font list as well as dump list of received data in hexadecimal.

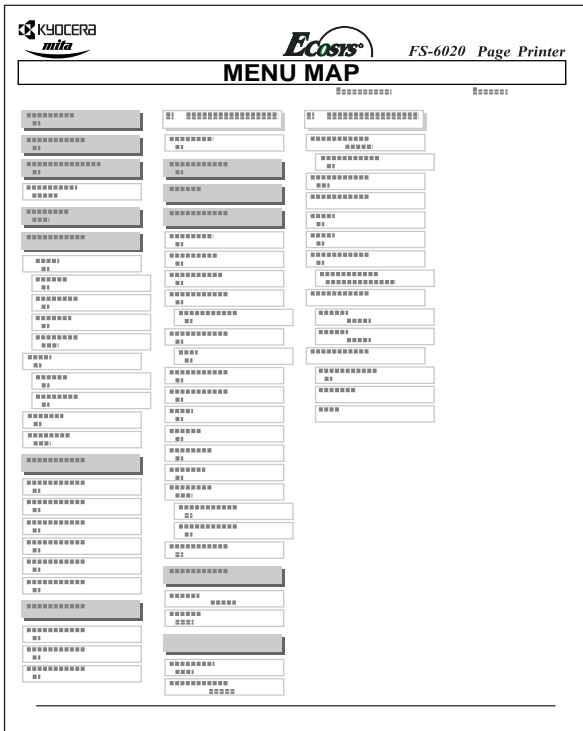
Printing Menu Map

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 **▼** key repeatedly until Print Menu Map appears.
- 3 Press the **ENTER** key. A question mark (?) appears.
- 4 Press the **ENTER** key again. The printer prints a menu map.

```
Print
Menu Map
```

```
Print
Menu Map ?
```



Printing 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.
- 3 Press the **ENTER** key. A question mark (?) appears.
- 4 Press the **ENTER** key again. The printer prints a status page.

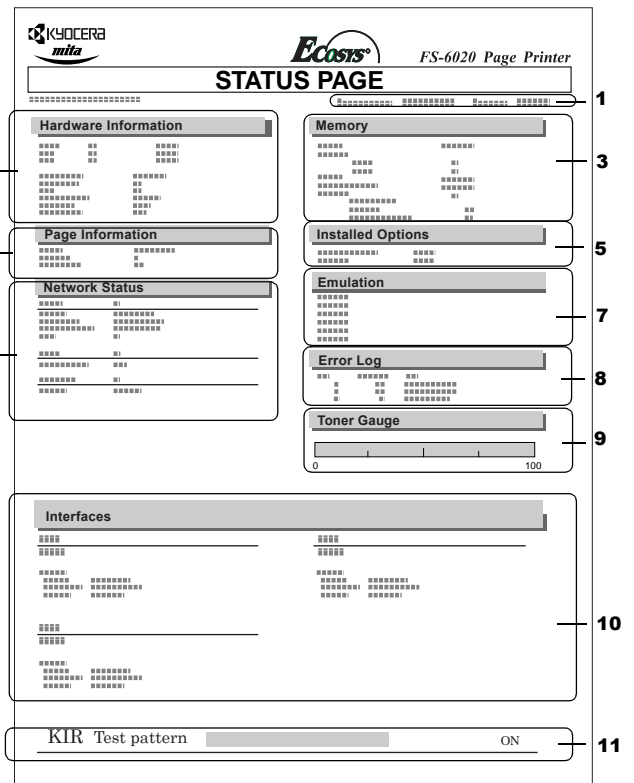
```
Print
Status Page
```

```
Print
Status Page ?
```

NOTE

For a full description of the status, see the following [Printing Service Status Page on page 1-11](#).

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



NOTE

- Items and values on the status page may vary depending on the printer's firmware version.
- The network status page will also be printed after the status page if the option network interface card is installed. For details, see [Printing Option Network Status Page on page 1-12](#).

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 RAM Disk on page 1-50](#).

4 Page Information

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

5 Installed 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.

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: KPDL error; memory related error; or memory card related error. The most recent error is displayed on the top line of the Error Log. For error remedies, see [Maintenance Messages on page 4-4](#). 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's original smoothing function. This test pattern shows the effect of the KIR (Kyocera Image Refinement) system.

Printing 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. To print a service status page, proceed as follows:

- 1 Press the **MENU** key.

- 2 Press the **▲** or **▼** key repeatedly until **Others >** appears.

```
Others >
```

- 3 Press the **▶** key.

- 4 Press the **▲** or **▼** key repeatedly until **>Service >** appears.

```
>Service >
```

- 5 Press the **▶** key.

- 6 Press the **▲** or **▼** key repeatedly until **>>Print Status Page** appears.

```
>>Print
Status Page
```

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

```
>>Print
Status Page ?
```

- 8 Press the **ENTER** key. The message display indicates **Processing** and printing starts. When printing is completed, the message display returns to **Ready**.

Printing Option Network Status Page

NOTE

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

You can print out a status page for the option network interface. The option network status page shows the firmware version, the network addresses, and other information under various network protocols about the network interface. The default setting is *Off* (print disabled). When *On* (print) is selected, the option network status page will be output after the printer status page.

NOTE

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

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until *Interface* > appears.

```
Interface >
Parallel
```

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

```
Interface
? Parallel
```

4 Press the **▲** or **▼** key repeatedly until *Option* appears.

```
Interface
? Option
```

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

```
Interface >
Option
```

6 Press the **▶** key and then press the **▲** or **▼** key repeatedly until the message display indicates >Opt. StatusPage.

```
>Opt. StatusPage
Off
```

7 The default setting is *Off*. Change it as follows. Press the **ENTER** key. A blinking question mark (?) appears.

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

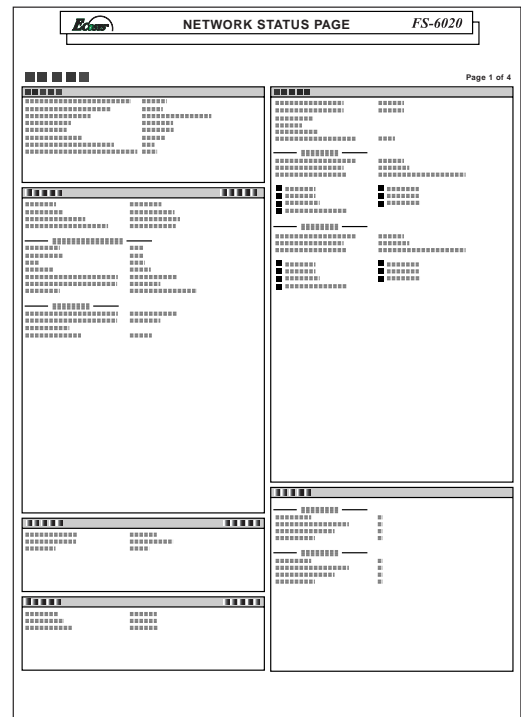
8 Select *On* using the **▲** or **▼** key.

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

9 Press the **ENTER** key again.

```
>Opt. StatusPage
On
```

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



Network Status Page

Printing List of Fonts

To help in selecting fonts, you can print a list of the fonts including option fonts. The list of the option fonts may not be printed when there is no option font stored in the memory card or hard disk.

1 Press the **MENU** key.

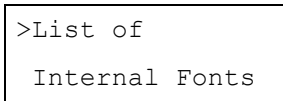
2 Press the **▲** or **▼** key repeatedly until **Font** > appears.



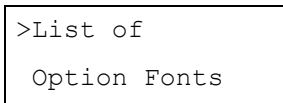
3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until **List of Internal Fonts** or **List of Option Fonts** appears.

(Internal Fonts)

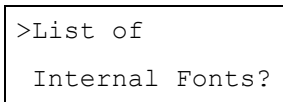


(Optional Fonts)

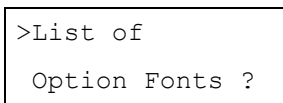


5 Press the **ENTER** key. A question mark (?) appears.

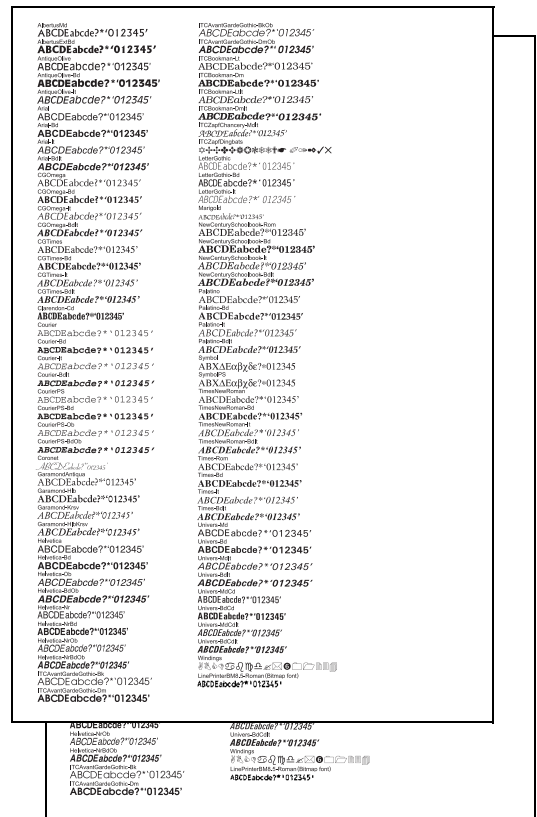
(Internal Fonts)



(Optional Fonts)



6 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.



List of Fonts

Dumping Received Data

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 **CANCEL** key and then pressing the **ENTER** 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 the following topics:

- Setting Paper Size
- Setting Paper Type
- Adjusting Print Density
- Setting MP Tray Mode
- Selecting Paper Source
- Setting Duplex Printing
- Overriding A4 and Letter Size Difference

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. This setting is made with the paper size dial for the paper cassette and the operator panel for the MP tray, respectively.

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 Cassette

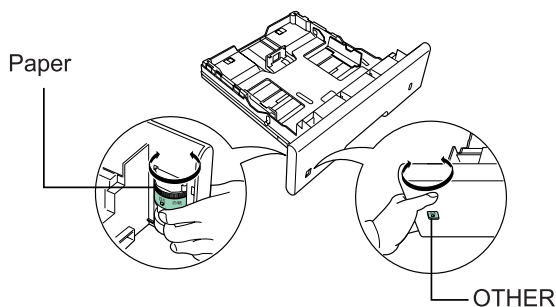
In addition to the standard A5 □, B5 □, A4 □ (long-edge feed), A4R □ (short-edge feed), B4 □, and A3 □ size paper, paper of non-standard sizes (OTHER) can be fed into the paper cassette of this printer

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

NOTE

If the paper size dial is not properly adjusted to the actual paper size, printer trouble such as paper jam may occur.

- 1 Pull out the paper cassette from the printer and turn the paper size dial to the paper size you set.



- 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. Replace the cassette into the printer.

Standard paper sizes are automatically detected by the printer. For non-standard paper sizes, see the following section Setting Non-Standard Paper Size .

Setting Non-Standard Paper Size

Use the following procedures to set a paper size for non-standard size paper from the operator panel.

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

```
Paper Handling >
```

- 3 Press the **▶** key.
- 4 Press the **▲** or **▼** key repeatedly until >Cassette Size > appears. If option paper feeders are added, Cassette1 Size will appear for the standard paper cassette and Cassette2 Size to Cassette5 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 **▲** or **▼** key to select desired paper size. The following paper size are displayed.

```
A4
Executive
Letter-R
Letter
Legal
Ledger
A3
B4
Custom
C4
Oficio II
Folio
8K
16K
C5
A5
B5
ISO B5
A4-R
```

- 7 Press the **ENTER** key. Set the unit of measurement as described in the next section if you have selected Custom.

```
>Cassette Size >
  Custom
```

Selecting Paper Size Unit for the Paper Cassette

Set the paper size unit as described below when Custom is selected.

1 When the paper size is set to Custom, press the **▶** key.

2 >>Unit appears and the unit currently set is displayed. You can select from mm and inch. The default setting is mm.

```
>>Unit
  mm
```

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

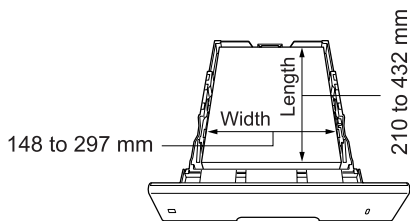
```
>>Unit
  ? mm
```

4 Press the **▲** or **▼** key to select mm or inch.

5 Press the **ENTER** key.

Entering the Width and Length

Then, use the following procedure to set the paper size when the paper size is set to Custom.



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

```
>>X Dimension
      297 mm
```

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

```
>>X Dimension
      297 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 297 mm (5.83 to 11.69 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).

```
>>Y Dimension
      432 mm
```

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

```
>>Y Dimension
      432 mm
```

7 Set the desired length in the same way as you set the paper width. The length can be set between 210 and 432 mm (8.27 to 17.01 inches).

```
>>Y Dimension
      432 mm
```

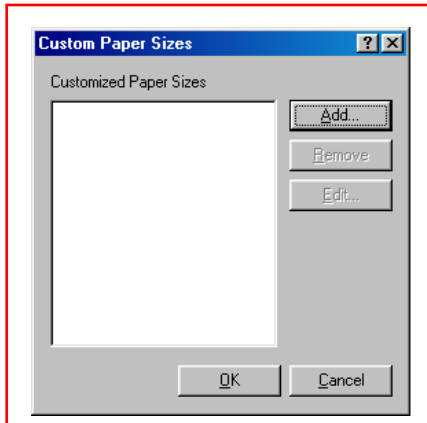
8 Display the paper length and press the **ENTER** key.

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

Setting the Printer Driver

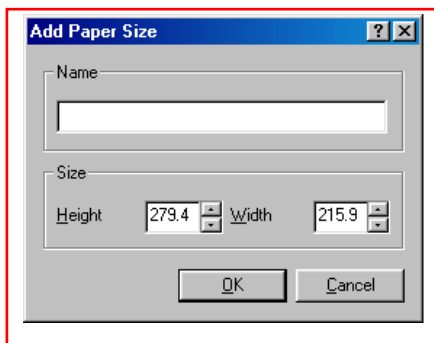
To print using the paper size set above, define the same size on the printer driver. For details, see the *Printer Driver Operation Guide* in the CD-ROM shipped with the printer.

- 1 Display **Media** window of the printer driver and press the **Custom Paper Sizes** button under the General. Set **Custom Paper Sizes** window appears.



XPの画面に変更

- 2 Press the **Add...** button, input the name and size of the paper, and press the **OK** button.



Setting the Paper Size in MP Tray

When using the MP tray in the cassette mode, you should set the MP tray size to the paper size that is used to format the job to print. 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 (printer driver). The default setting is A4 size.

For more details about the paper sizes that can be fed from the MP tray, see *Chapter 2 Paper Selection*.

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

Paper Handling >

- 3 Press the **▶** key.

- 4 Press the **▲** or **▼** key repeatedly until >MP Tray Size appears.

>MP Tray Size
A4

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

>MP Tray Size
? A4

- 6 Press the **▲** or **▼** key to display the desired MP tray paper size. The display changes as shown below.

A4
Executive
Letter-R
Letter
Legal
Ledger
A3
B4
Custom
C4
Oficio II
Statement
Folio
Youkei 2
Youkei 4
8K
16K
Hagaki
OufukuHagaki
Monarch
Business
Comm. #9
Comm. #6 3/4
DL
C5
A6
B6
A5
B5
ISO B5
A4-R

- 7 Press the **ENTER** key.

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

Setting the Paper Type

You can set paper type for each paper source including the MP tray. Setting paper type for each paper source allows the printer to automatically select appropriate paper source for each printing job. This section explains how to set paper type from the operator panel.

The following table shows paper type you can set for each paper source. For details of paper type, see [Chapter 2 Paper Selection](#).

Media Type	Paper Source	MP Tray	Paper Cassette
Plain		Yes	Yes
Transparency*		Yes	No
Preprinted		Yes	Yes
Labels		Yes	No
Bond		Yes	Yes
Recycled		Yes	Yes
Vellum*		Yes	No
Rough		Yes	Yes
Letterhead		Yes	Yes
Color		Yes	Yes
Prepunched		Yes	Yes
Envelope*		Yes	No
Cardstock*		Yes	No
Thick*		Yes	No
Custom 1 (to 8)		Yes	No

* Can not print double-side

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 (printer driver). The factory default setting is Plain.

For more details about the paper types that can be fed from the paper cassette, see [Paper Type on page 2-6](#).

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until Paper Handling > appears.

Paper Handling >

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until >Cassette Type appears. The paper type is also displayed.

>Cassette Type
Plain

NOTE

>Cassette 2 Type to >Cassette 5 Type are displayed for the installed option paper feeders in descending order from the bottom of the printer.

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

>Cassette Type
? Plain

6 Press the **▲** or **▼** key to display the desired cassette paper type. The display changes as shown below.

Plain
Preprinted
Bond
Recycled
Rough
Letterhead
Color
Prepunched
Custom1 (to 8)*

* You can define and register a desired paper type to the printer in advance. See [Customizing Paper Type on page 1-19](#) for details.

7 When the desired cassette paper 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 (printer driver). The default setting is Plain.

For more details about the paper types that can be fed from the MP tray, see [Paper Selection on page 2-1](#).

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until Paper Handling > appears.

```
Paper Handling >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until >MP Tray Type appears.

```
>MP Tray Type
  Plain
```

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

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

6 Press the **▲** or **▼** key to display the desired MP tray paper type. The display changes as shown below.

```
Plain
Transparency
Preprinted
Labels
Bond
Recycled
Vellum
Rough
Letterhead
Color
Prepunched
Envelope
Cardstock
Thick
Custom1 (to 8)*
```

* You can define and register a desired paper type to the printer in advance. See [Customizing Paper Type](#) below for details.

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

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

Customizing 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. Once registered, 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](#) below and [Setting the Duplex Path on page 1-20](#)). To reset the customized settings, see [Resetting the Type Adjust on page 1-21](#).

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until Paper Handling > appears.

```
Paper Handling >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until >Type Adjust > appears.

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

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

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

6 Press the **▲** or **▼** key to display the desired paper type. The display changes as shown below.

```
Custom1 (to 8)
Plain
Transparency
Preprinted
Labels
Bond
Recycled
Vellum
Rough
Letterhead
Color
Prepunched
Envelope
Cardstock
Thick
```

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](#) below and [Setting the Duplex Path on page 1-20](#).

Setting the Paper Weight

You can set the paper thickness for your customized paper type.

NOTE

The default setting is `Normal` for each customized paper type (`Custom 1` to `8`). The printer is factory-set so as to provide the optimal printing functions/quality in this setting, which you need not change for ordinary custom paper.

1 Display the custom paper type (see [Customizing Paper Type](#) above) and press the **▶** key.

2 Press the **▲** or **▼** key repeatedly until `>>Paper Weight` appears.

```
>>Paper Weight
  Normal
```

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

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

4 Press the **▲** or **▼** key to display the desired paper thickness. The display changes as shown below.

```
Normal (default)
Heavy (Thick)
Extra Heavy
Light (Thin)
```

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 duplex is installed on the printer, duplex printing can be enabled and disabled. See [Setting the Duplex Path](#) below.

Setting the Duplex Path

NOTE

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

If the paper type is set to `Custom`, you can set whether or not to enable duplex printing as follows. The default setting is `Enable`.

1 Display the custom paper type (see [Customizing Paper Type on page 1-19](#)) and press the **▶** key.

2 Press the **▲** or **▼** 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 **▼** key.

5 Press the **ENTER** key.

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

Resetting the Type Adjust

Resets the custom settings (Custom1 to 8) that are set in *Customizing Paper Type on page 1-19*.

1 Press the **MENU** key.

2 Press the ▲ or ▼ key repeatedly until Paper Handling > appears.

```
Paper Handling >
```

3 Press the ► key.

4 Press the ▲ or ▼ key repeatedly until >Reset Type Adjust appears.

```
>Reset Type
Adjust
```

5 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.

Adjusting Print Density

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

1 Press the **MENU** key.

2 Press the ▲ or ▼ key repeatedly until Paper Handling > appears.

```
Paper Handling >
```

3 Press the ► key.

4 Press the ▲ or ▼ key repeatedly until >Type Adjust > appears.

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

5 Press the ► key.

6 Press the ▲ or ▼ key repeatedly until >>Print Density appears.

```
>>Print Density
03
```

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

```
>>Print Density
? 03
```

8 Select the print density from five steps from 01 (light) to 05 (dark) using the ▲ or ▼ key.

9 Press the **ENTER** key.

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

This finishes the custom paper type settings.

Setting MP Tray Mode

The MP tray can be used in one of two modes: cassette mode or first mode. The MP tray can hold approximately 100 sheets of paper (A4 size, 0.11 mm thickness).

■ Cassette Mode

Approximately 100 sheets of paper can be continuously fed in this mode. This is the default setting.

■ First Mode (Automatic Manual Feeding)

The printer automatically feeds any paper placed on the MP tray even if another paper source is selected. After all paper in the MP tray has been fed out, paper will be fed from the paper source originally selected.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until Paper Handling > appears.

```
Paper Handling >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until >MP Tray Mode appears.

```
>MP Tray Mode
Cassette
```

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

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

6 Select First or Cassette using the **▲** or **▼** key.

7 Press the **ENTER** key.

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

Selecting Paper 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.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until Paper Handling > appears.

```
Paper Handling >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until >Feed Select appears.

```
>Feed Select
Cassette
```

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

```
>Feed Select
? Cassette
```

6 Press the **▲** or **▼** key to display the desired paper source. The display changes as shown below according to the installed option units.

Cassette (1)	Printer's standard paper cassette
Cassette 2	Option paper feeder, second paper cassette
Cassette 3	Option paper feeder, third paper cassette
Cassette 4	Option paper feeder, fourth paper cassette
Cassette 5	Option paper feeder, fifth paper cassette
MP tray	Printer's MP tray

7 Press the **ENTER** key.

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

Setting Duplex Printing

NOTE

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

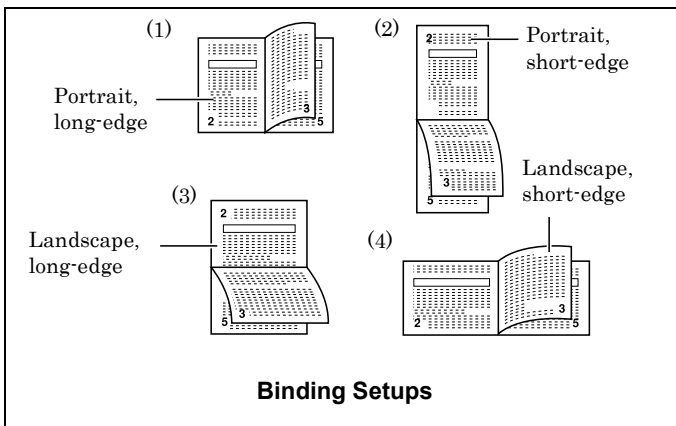
Using the optional duplex unit, you can automatically print on both sides of the paper. The duplex unit is ~~installed underneath~~ the printer. The default setting of the duplex printing is None (duplex printing disabled).

attached to the rear of the printer.

Binding Setups

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

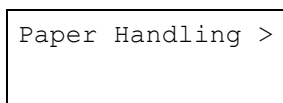
Depending on the binding type and print orientation, the duplex unit provides four types of binding setups. These are: (1) portrait, long-edge, (2) portrait, short edge, (3) landscape, long-edge, and (4) landscape, short-edge. The figure below shows these binding setups.



To select duplex printing and binding setup from the operator panel, proceed as follows.

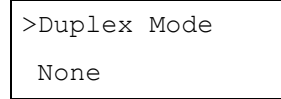
1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until Paper Handling > appears.

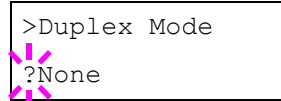


3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until >Duplex Mode appears.



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



6 Press the **▲** or **▼** key to display the desired duplex mode. The display changes as shown below.

None (default)
Short edge bind
Long edge bind

7 When the desired duplex mode 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 or not to make 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 whenever either A4 or Letter size paper is loaded in the paper source, 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:

- Changing Emulation
- Setting Default Font
- Setting Code Set
- Setting Number of Copies
- Selecting Reduced Print
- Selecting Printing Orientation
- Setting KIR Mode
- Setting EcoPrint
- Setting Resolution

Changing Emulation

The emulation mode for the current interface can be changed.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until **Emulation** appears. One of the emulation names shown below appears, indicating the current emulation.

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

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

```
Emulation
?PCL 6
```

4 Press the **▲** or **▼** key repeatedly until the desired emulation mode appears.

5 Press the **ENTER** key. The **▶** key allows access to sub-menu **>Code Set**.

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

After changing the emulation, you have the option to change the character code set. Available character code sets vary depending on the current emulation.

KC-GL Pen Width

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

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until **Emulation** appears on the message display.

```
Emulation
PCL 6
```

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

```
Emulation
?PCL 6
```

4 Press the **▲** or **▼** key repeatedly until **KC-GL** appears.

```
Emulation
?KC-GL
```

5 Press the **ENTER** key.

```
Emulation >
KC-GL
```

6 Press the **▶** key to move to the **>KC-GL > Pen Width** submenu.

```
>KC-GL >
Pen Width
```

7 Press the **▶** key.

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

8 Press the **▲** or **▼** key repeatedly until the desired pen number of 1 to 8 appears.

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

10 To change the pen width, press the **▶** key, then press the **ENTER** key. A blinking cursor (**_**) appears at the width value.

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

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

Chapter 1 Using the Operator Panel

11 To set the KC-GL page size, press the ◀ key, then press the ▲ or ▼ key until >KC-GL Page Set is displayed.

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

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

Press the ▲ or ▼ key repeatedly until the desired page size (A2, A1, A0, B3, B2, B1, B0, and SPSZ) appears. When selecting SPSZ, printing will be done with the paper size specified by the PRESCRIBE SPSZ command. For details, see *Programming Manual* in the CD-ROM.

13 Press the **ENTER** key to set the page set you just selected.

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

Alternative Emulation for KPDL Emulation

NOTE この機能に限ったことではないので、KPDLエミュレーションでの印刷は…の文章に変更

To use this function, it is recommended that you install expansion memory of 16 MB or more (total printer memory 32 MB or more).

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 ▼ 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 ▼ key repeatedly until the message display KPDL (AUTO) appears.

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

5 Press the **ENTER** key.

6 Press the ▶ key. When > Print KPDL Errs is displayed, press the ▲ or ▼ key. The display cycles through the emulation in the following order:

```
PCL 6 (default)
KC-GL
KPDL
KPDL (AUTO)
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 ▲ or ▼ 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 KPDL Errors

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

1 Press the **MENU** key.

2 Press the ▲ or ▼ key repeatedly until Emulation appears.

```
Emulation
PCL 6
```

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

```
Emulation
? PCL 6
```

- 4** Select KPDL or KPDL (AUTO) using the ▲ or ▼ key.

```
Emulation
? KPDL
```

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

- 6** Press the ► key. The message display changes to that shown below. If >Alt. Emulation is displayed when the KPDL (AUTO) emulation is selected, press the ▲ or ▼ key to change it.

```
>Print KPDL Errs
OFF
```

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

```
>Print KPDL Errs
? OFF
```

- 8** Select On using the ▲ or ▼ key.

```
>Print KPDL Errs
? ON
```

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

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

Setting Default 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 memory card or option hard disk can be selected as the default font.

You can also set the type and pitch for Courier and Letter Gothic.

Selecting the Default Font

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

- 2** Press the ▲ or ▼ key repeatedly until Font > appears.

```
Font >
```

- 3** Press the ► key to select an internal font, press the ▲ or ▼ key repeatedly until Internal appears.

```
>Font Select >
Internal
```

To select an option font, press the **ENTER** key while >Font Select > is displayed. Press the ▲ or ▼ key repeatedly until the message display indicates Option. This operation is possible only when option fonts are installed in the printer.

- 4** Press the ► key.

```
>> I000
```

The letter before the number indicates the type of font as follows:

Letter	Description
I	Internal fonts
S	Soft (download) fonts
M	Fonts in an option memory card
H	Fonts in a RAM disk or hard disk
O	Fonts in an option ROM

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

```
>>?I000
```

- 6** Press the ▲ or ▼ key repeatedly until the desired font number appears. For font numbers of the internal fonts, see [List of Fonts on page A-1](#).

```
>Font Select >  
Internal
```

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

8 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 **▲** or **▼** key repeatedly until `Font >` appears.

```
Font >
```

3 Press the **▶** key.

4 Check that `Internal` is displayed and press the **▶** key.

```
>Font Select >  
Internal
```

5 Press the **▲** or **▼** key repeatedly until `>>Courier` appears.

```
>>Courier  
Regular
```

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

```
>>Courier  
? Regular
```

7 Select Regular or Dark using the **▲** or **▼** key.

8 Press the **ENTER** key.

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

Changing the Font Size

You can change the size of the default font. If the default font is a fixed-pitch 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 **▲** or **▼** key repeatedly until `Font >` appears.

```
Font >
```

3 Press the **▶** key.

4 Check that `Internal` is displayed and press the **▶** key.

```
>Font Select >  
Internal
```

5 Press the **▲** or **▼** key repeatedly until `>>Size` appears.

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

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

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

7 Press the **▲** or **▼** key to increase or decrease the value 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 **▶** and **◀** key to move the cursor right and left.

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

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

Setting the Character Pitch for Courier/Letter Gothic

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

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until `Font >` appears.

```
Font >
```

3 Press the **▶** key.

4 Check that `Internal` is displayed and press the **▶** key.

```
>Font Select >
Internal
```

5 Press the **▲** or **▼** key repeatedly until `>Pitch` appears.

```
>Pitch
10.00 cpi
```

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

```
>Pitch
10.00 cpi
```

7 Press the **▲** or **▼** key to increase or decrease the value 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 **▶** and **◀** keys to move the cursor right and left.

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

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

Setting 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.

4 Press the **▲** or **▼** key repeatedly until `>Code Set` appears.

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

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

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

6 Press the **▲** or **▼** key until the desired character code set appears.

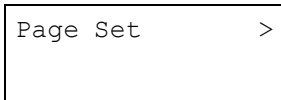
7 Press the **ENTER** key.

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

Setting 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. The number of copies can be set whenever the message display indicates *Ready*.

- 1 Press the **MENU** key.
- 2 Press the ▲ or ▼ key repeatedly until *Page Set >* appears.



```
Page Set >
```

- 3 Press the ► key.
- 4 Press the ▲ or ▼ key repeatedly until *>Copies* appears.



```
>Copies  
001
```

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



```
>Copies  
001
```

- 6 Press the ▲ or ▼ key to increase or decrease 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 cursor 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*.

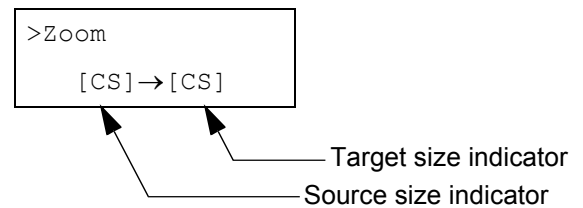
Selecting Reduced Print

You can print with the reduced size. This menu is used to set the source paper size and the paper size to use after reduction.

NOTE

- Printed results when making reductions differ from equivalent size printing. Sometimes the line width of characters may not be consistent or lines may appear in figures or image patterns. Also, thin lines may not be reproduced on the reduced print.
- In the reduction mode, printed barcodes may not be read.

Bring up the *Zoom* menu. The following display will appear.



```
>Zoom  
[CS] → [CS]
```

Target size indicator
Source size indicator

Source size indicator...This is the paper size before reduction. This must be the same as the paper size set for print data from the computer.

Target size indicator...This is the paper size after reduction. This must be the same as the paper size set for the paper cassette.

The message display will show the messages given in the following table.

Source size indicator	Target size indicator
[CS] Current cassette size	[CS] [CS] 98%
[LG] Legal size (8-1/2 × 14 inches)	[LG] [LG] 98%
[LT] Letter size (8-1/2 × 11 inches)	[LT] [A4] 94% [LT] 98%
[LD] Ledger size (12 × 15-1/2 inches)	[LD] [LD] 98%
[ST]	[ST]
[O2]	[O2]
[FO]	[FO]
[8K]	[8K]
[16K]	[16K]
[A5] (14.8 × 21 cm)	[A5] [A5] 98%
[B5] (18.2 × 25.7 cm)	[B5] [A5] 81% [B5] 98%
[A4] (21 × 29.7 cm)	[A4] [LT] 94% [B5] 86% [A5] 70% [A4] 98%
[B4] (25.7 × 36.4 cm)	[B4] [B5] 70% [A4] 81% [B4] 98%
[A3] (29.7 × 42 cm)	[A3] [A4] 70% [B4] 86% [A3] 98%
[SF]	[B4] 88.4×92.9% [A4] 71.6×75.3%

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 >Zoom appears.

```
>Zoom
[CS]→[CS]
```

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

```
>Zoom
[CS]→[CS]
```

6 Press the **▲** or **▼** key to select source size. The both sizes change simultaneously.

7 Press the **▶** key to move the cursor to the target size.

8 To make a reduced print, press the **▲** or **▼** key to select the target size.

```
>Zoom
[CS]→[CS] 98%
```

9 Press the **ENTER** key.

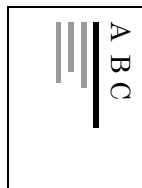
10 Press the **MENU** key. The message display returns to Ready.

Selecting Printing Orientation

You can select the portrait or landscape page orientation. The page orientation can be set whenever the message display indicates Ready.

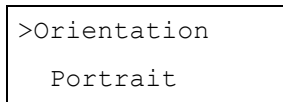
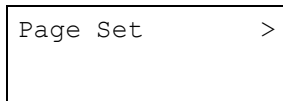


Portrait

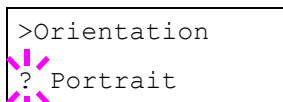


Landscape

- 1 Press the **MENU** key.
- 2 Press the **▲** or **▼** key repeatedly until `Page Set >` appears.
- 3 Press the **▶** key.
- 4 Press the **▲** or **▼** key repeatedly until `>Orientation` appears.



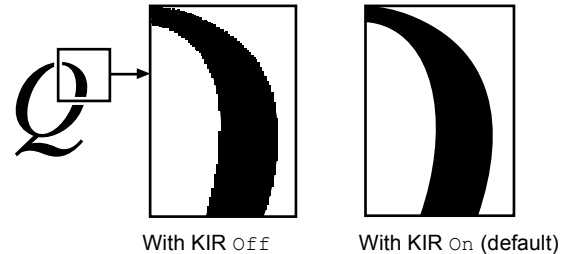
- 5 Press the **ENTER** key. A blinking question mark (?) appears.



- 6 Select Portrait or Landscape using the **▲** or **▼** key.
- 7 Press the **ENTER** key.
- 8 Press the **MENU** key. The message display returns to Ready.

Setting KIR Mode

This printer incorporates the KIR (Kyocera Image Refinement) smoothing function. KIR uses software to enhance resolution, resulting in high quality printing at resolution of 600 dpi and 300 dpi. The default is On. KIR has no effect on the printing speed.



With KIR Off

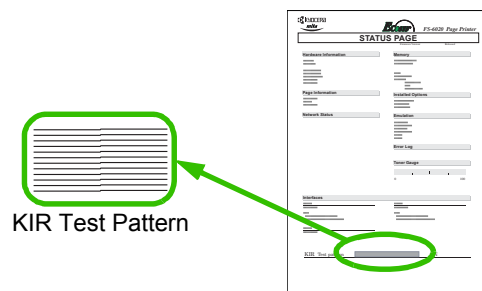
With KIR On (default)

NOTE

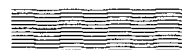
Set the print density to 03 when setting the KIR mode. For details on print density, see [Verifying Total Printed Pages on page 1-52](#). You can monitor the KIR test pattern, the last line on a status page, to make the optimum KIR mode setting.

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

Status Page

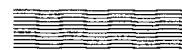


KIR Test Pattern



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 **▲** or **▼** key repeatedly until **Print Quality >** appears.

```
Print Quality >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until **>KIR Mode** appears.

```
>KIR Mode
  On
```

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

```
>KIR Mode
? On
```


6 Select **On** or **Off** using the **▲** or **▼** key.

7 Press the **ENTER** key.

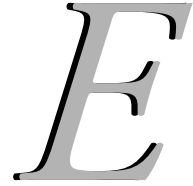
8 Press the **MENU** key. The message display returns to **Ready**.

Setting 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 EcoPrint mode **On**, as follows. (The factory default setting is **Off**.) When the EcoPrint mode set to **On**, the toner consumption is reduced and the print density becomes lighter. The EcoPrint setting has no effect on the print speed.



EcoPrint setting is **Off**
(default)



EcoPrint setting is **On**

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until **Print Quality >** appears.

```
Print Quality >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until **>EcoPrint Mode** appears.

```
>EcoPrint Mode
  Off
```

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

```
>EcoPrint Mode
? 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**.

Setting Resolution

You can set the default print resolution in three ways: 300 dpi, 600 dpi and Fast 1200 mode. The clarity of printed characters and graphics becomes sharper in this order.

NOTE

Fast 1200 mode can only be set with PCL 6, KPDL or KPDL (auto) emulation.

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** or **300 dpi**, **600 dpi** using the **▲** or **▼** key.

7 Press the **ENTER** key.

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

e-MPS

NOTE
To use the e-MPS system, an optional hard disk must be installed in the printer. For details, see [Appendix B Option Units](#).

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 Microdrive. Since copies of the document are printed using the stored data, printing is performed faster with less computer spooling time and less network traffic.

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:

	Quick Copy	Proof-and-Hold
Primary function	To later print additional copies	To proof the first copy before printing multiple copies
Start storing by	Printer driver	Printer driver
On terminating print setting from application software	Prints simultaneously	Prints one copy simultaneously
Retrieved by	Operator panel	Operator panel
Default number of copies printed at retrieval	Same as storing (can be changed)	One less (can be changed)
Maximum number of jobs stored*	32, expandable to 50	32, expandable to 50
PIN security	No	No
Data after printing	Stored	Stored
Data at power off	Deleted	Deleted

	Private Print	Stored Job
Primary function	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
On terminating print setting from application software	Does not print	Does not print

Retrieved by	Operator panel	Operator panel
Default number of copies printed at retrieval	Same as storing (can be changed)	One
Maximum number of jobs stored*	Depends on the hard disk capacity (Private jobs are deleted automatically once it is retrieved.)	Depends on the hard disk capacity
PIN security	Yes	Yes (if necessary)
Data after printing	Deleted	Stored
Data at power off	Deleted	Stored

*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 Microdrive without printing. It enables you to retrieve jobs later from the operator panel, or the KM-NET Job 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 mailbox on the printer driver when printing.

Up to 255 virtual mailboxes can be used and the number of jobs stored in each box is not limited. You can store as many jobs as the hard disk can hold.

NOTE
To retrieve the stored job for printing, see [Printing Data Stored in Virtual Mailbox \(VMB\) on page 1-39](#).

Using Quick Copy

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

The default number of print jobs that can be stored on the hard disk is 32. This value can be increased to up to 50 from the e-MPS Configuration menu. For details, see *Changing the Maximum Number of Quick Copy/Proof-and-Hold Jobs on page 1-40*. When the number of jobs reaches the limit, the oldest job will be overwritten by the new one.

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

Printing Additional Copies Using Quick Copy

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

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until e-MPS > appears.

```
e-MPS >
```

3 Press the **▶** key.

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

```
>Quick Copy  
Harold
```

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

```
>Quick Copy  
?Harold
```

6 Press the **▲** or **▼** key to display the desired user name, Arlen, in this example.

```
>Quick Copy  
?Arlen
```

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

```
>Arlen  
?Report
```

8 Press the **▲** or **▼** key to scroll to the desired job title.

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

```
>Report  
Copies 001
```

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

Deleting a Quick Copy Job

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

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

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

```
>Report  
Copies 001
```

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

```
>Report  
Delete
```

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

Using Proof-and-Hold

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

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

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

Printing Remaining Copies of a Proof-and-Hold Job

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

- 1 Press the **MENU** key.

- 2 Press the **▲** or **▼** key repeatedly until `e-MPS >` appears.

```
e-MPS >
```

- 3 Press the **▶** key.

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

```
>Quick Copy
Harold
```

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

```
>Quick Copy
?Harold
```

- 6 Press the **▲** or **▼** key to display the desired user name, `Arlen`, in this example.

```
>Quick Copy
?Arlen
```

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

```
>Arlen
?Report
```

- 8 Press the **▲** or **▼** key to scroll to the desired job title.
- 9 Press the **ENTER** key. The number of copies to be printed can be set. To increase the copy count, press the **▲** key; to decrease the copy count, press the **▼** key.

```
>Report
Copies 001
```

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

Using Private Print/Job Retention

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 can 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.

In the job retention mode, access codes are not mandatory, but can be set on the printer driver if printing with the PIN security is required. Then the access code must be entered on the operator panel to print a stored job. Print data will be stored in the hard disk after printing. See *Printer Driver Operation Guide* for the driver settings.

Releasing a Private/Stored Job

- 1 Press the **MENU** key.
- 2 Press the **▲** or **▼** key repeatedly until `e-MPS >` appears.

```
e-MPS >
```

- 3 Press the **▶** key.

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

```
>Private/Stored
Harold
```

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

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

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

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

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

```
>Arlen
?Agenda
```

- 8** Press the ▲ or ▼ key to display the desired job title.

- 9** Press the **ENTER** key. The ID input line appears. Enter the four-digit access code entered in the printer driver and press the **ENTER** key. To enter the ID, press the ◀ or ▶ key to move the cursor to the number to be changed and then enter the correct number by pressing the ▲ or ▼ key. In printing a stored job, the access code must be entered in this step only when it has been set on the printer driver.

```
>Agenda
ID      0000
```

- 10** You can set the number of copies to be printed. To increase the copy count, press the ▲ key; to decrease the copy count, press the ▼ key.

```
>Agenda
Copies  001
```

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

Deleting a Private/Stored Job

- 1** Follow steps 1 through 8 in the above section.

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

```
>Agenda
Copies  001
```

- 3** Press the ▼ key repeatedly until **Delete** appears for the number of copies.

```
>Agenda
Delete
```

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

Printing a Code Job

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

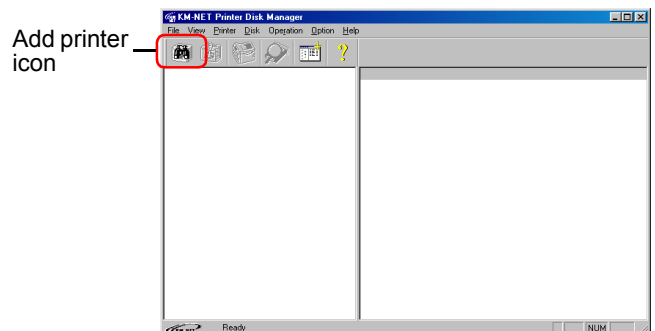
- 1** Browse through Windows **Start > Programs > KYOCERA MITA > KM-Net > Job Manager**.

- 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

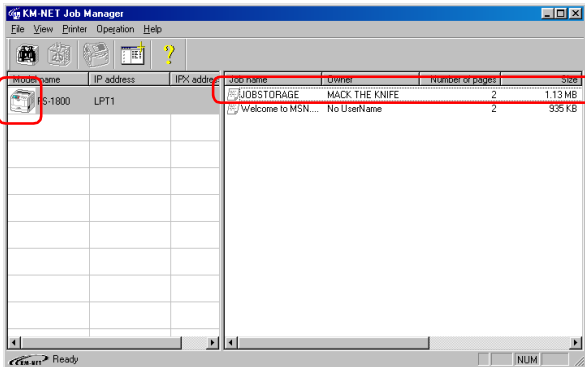
If you use the local parallel port to connect to the printer, make sure that the printer driver is set to print to a local port. To check this out, click the Details tab of the printer Properties, and note the Print to the following port setting.



- 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**.

- 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 lost that appears.

Printing a List of Code Jobs

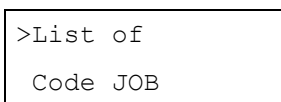
If you select permanent job storage on the printer driver, you can have a list of code job printed using the operator panel.

A sample Code Job List is shown below.

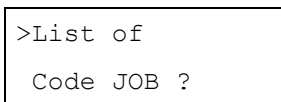
- Press the **MENU** key.
- Press the **▲** or **▼** key repeatedly until e-MPS > appears.



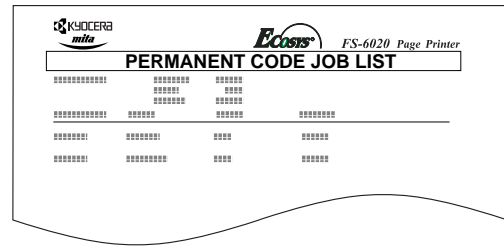
- Press the **▶** key.
- Press the **▲** or **▼** key repeatedly until >List of Code JOB appears.



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



- Press the **ENTER** key again. The printer prints a Code Job list as shown below.



Using Virtual Mailbox (VMB)

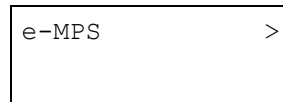
You can store a job in the virtual mailbox. Specify the virtual mailbox as destination through the printer driver. You can print the stored jobs from the operator panel.

Jobs stored in the virtual mailbox are deleted when printing is completed.

Printing Data Stored in Virtual Mailbox (VMB)

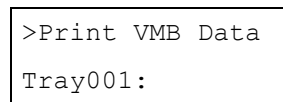
To retrieve and print the jobs posted in the virtual mailbox, proceed as follows.

- Press the **MENU** key.
- Press the **▲** or **▼** key repeatedly until e-MPS > appears.

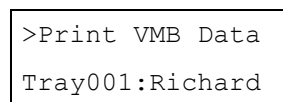


- Press the **▶** key.

- Press the **▲** or **▼** key repeatedly until >Print VMB Data appears. The virtual mailbox number will also appear.



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



- 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 after printing is completed.

Printing a List of VMB

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

- 1 Press the **MENU** key.

- 2 Press the **▲** or **▼** key repeatedly until e-MPS > appears.

```
e-MPS >
```


- 3 Press the **▶** key.

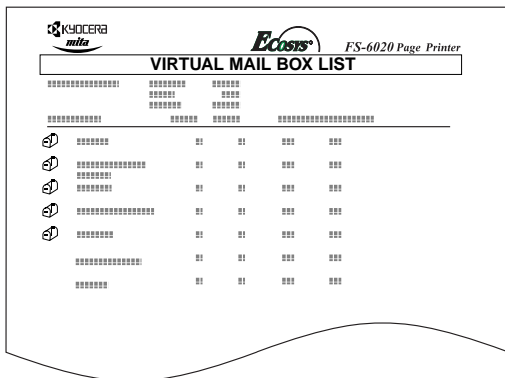
- 4 Press the **▲** or **▼** key repeatedly until >List of VMB appears.

```
>List of VMB
```

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

```
>List of VMB ?
```

- 6 Press the **ENTER** key again. The printer prints a list of jobs currently posted in the virtual mailboxes as shown below. The mailbox (tray) with document(s) stored is marked with  in the list.



Changing e-MPS Configuration

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

- Maximum number of quick copy/proof-and-hold jobs
- Maximum space assigned to temporary code jobs
- Maximum space assigned to permanent code jobs
- Maximum space assigned to virtual mailboxes

NOTE

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

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

This changes maximum number of quick copy/proof-and-hold jobs from 0 to 50. The default is 32.

- 1 Press the **MENU** key.

- 2 Press the **▲** or **▼** key repeatedly until e-MPS > appears.

```
e-MPS >
```

- 3 Press the **▶** key.

- 4 Press the **▲** or **▼** key repeatedly until >e-MPS Configuration > appears.

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

- 5 Press the **▶** key.

- 6 Press the **▲** or **▼** key repeatedly until >>Quick Copy appears.

```
>>Quick Copy
32
```

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

```
>>Quick Copy
32
```

8 Press the ▲ or ▼ key to increase or decrease the value at the blinking cursor. The value can be set between 0 and 50. Use the ► and ◀ keys to move the cursor right and left.

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

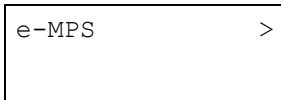
10 Press the MENU key. The display returns to Ready.

Maximum Space Assigned to Temporary Code Jobs

This changes the hard disk space that holds temporary code jobs. The default size is about 1/6 of the total hard disk space. For example, the default size is 50 MB for 340 MB hard disk and 150 MB for 1 GB hard disk. The actual maximum size depends on the size of free hard disk space, however.

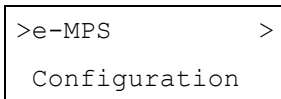
1 Press the MENU key.

2 Press the ▲ or ▼ key repeatedly until e-MPS > appears.



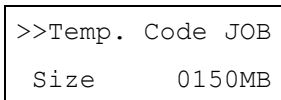
3 Press the ► key.

4 Press the ▲ or ▼ key repeatedly until >e-MPS Configuration > appears.

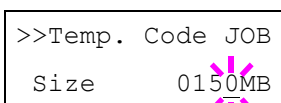


5 Press the ► key.

6 Press the ▲ or ▼ key repeatedly until >>Temp. Code JOB Size appears.



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



8 Press the ▲ or ▼ key to increase or decrease, respectively, the value at the blinking cursor. Use the ► and ◀ keys to move the cursor right and left. You can change the maximum space from 0 to 9999 (megabytes).

9 Press the ENTER key.

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

Maximum Space Assigned to Permanent Code Jobs

This changes the hard disk space that holds permanent code jobs. The default size is about 1/6 of the total hard disk space. For example, the default size is 50 MB for 340 MB hard disk and 150 MB for 1 GB hard disk. The actual maximum size depends on the size of free hard disk space, however.

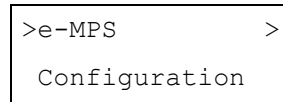
1 Press the MENU key.

2 Press the ▲ or ▼ key and select e-MPS >.



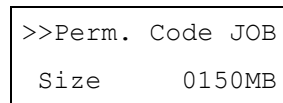
3 Press the ► key.

4 Press the ▲ or ▼ key repeatedly until >e-MPS Configuration > appears.

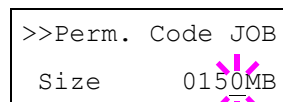


5 Press the ► key.

6 Press the ▲ or ▼ key and select >>Perm. Code JOB Size.



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



8 Press the ▲ or ▼ key to increase or decrease, respectively, the value at the blinking cursor. Use the ► and ◀ keys to move the cursor right and left. You can change the maximum space from 0 to 9999 (megabytes).

9 Press the ENTER key.

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

Maximum Space Assigned to Virtual Mailboxes (VMB)

This changes the hard disk space for virtual mailboxes. The default size is about 1/6 of the total hard disk space. For example, the default size is 50 MB for 340 MB hard disk and 150 MB for 1 GB hard disk. The actual maximum size depends on the size of free hard disk space, however.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key until e-MPS > appears.

```
e-MPS >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key and select >e-MPS Configuration >.

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

5 Press the **▶** key.

6 Press the **▲** or **▼** key and select >>VMB Size.

```
>>VMB Size  
0150MB
```

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

```
>>VMB Size  
0150  MB
```

8 Press the **▲** or **▼** key to increase or decrease, respectively, the value at the blinking cursor. Use the **▶** and **◀** keys to move the cursor right and left. You can change the maximum space from 0 to 9999 (megabytes).

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

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

Interface

The printer is equipped with both a parallel and USB interfaces. 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. Select the interface to apply the changes in the procedure described below.

NOTE

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

Changing Parallel Interface Modes

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 C Host Computer Interface](#). After setting the interface, be sure to re-set 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 **▲** or **▼** 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 (only when an optional network interface
card is installed)
```

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

```
Interface >
? Parallel
```

If **Parallel** is not displayed, press the **▲** or **▼** key repeatedly until **Parallel** appears.

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 **▲** or **▼** 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**.

Changing Serial Interface Parameters

NOTE

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 **▲** or **▼** 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
```

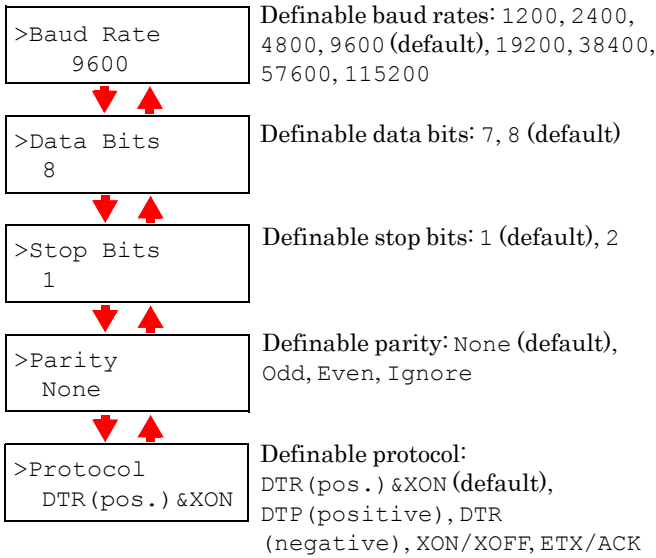
If you want to abandon the interface selection procedure, press the **CANCEL** key. The interface remains unchanged.

4 Press the **▲** or **▼** key repeatedly until **Serial** appears.

```
Interface
? Serial
```

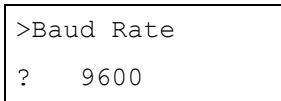
5 Press the **ENTER** key again.

6 Press the **▶** key. Each time the **▲** or **▼** 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.



8 Press the **▲** or **▼** 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.

Changing Option Network Interface Parameters

To make your printer support TCP/IP, Netware, and EtherTalk networks, you will need to install the option network interface card in the option interface slot 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

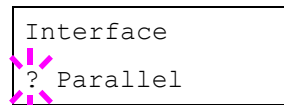
To confirm or change network card parameters, proceed as follows:

1 Press the **MENU** key.

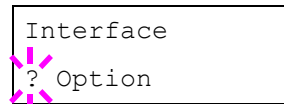
2 Press the **▲** or **▼** key repeatedly until *Interface* > appears. One of the interface names shown below appears, indicating the current interface.

- 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.



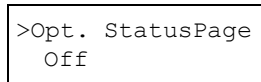
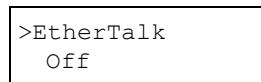
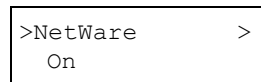
4 Press the **▲** or **▼** key repeatedly until *Option* appears.



5 Press the **ENTER** key again.

6 Press the **▶** key. Each time the **▲** or **▼** key is pressed, the display changes as shown below.

Range



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

Set this item to *On* when you connect to a Windows network using TCP/IP. Submenu (>) has items including DHCP, IP address, subnet mask address, and gateway address, or details on IP address, see the following step 8 subsegment steps.

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


When the item is set to *On*, the printer also prints out a network status page when it prints the printer status page. See [Printing Option Network Status Page on page 1-12](#).

- 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 ▼ 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.



```
>>DHCP
  Off
```

```
>>IP Address
  000.000.000.000
```

```
>>Subnet Mask
  000.000.000.000
```

```
>>Gateway
  000.000.000.000
```

- 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 device; memory card, option hard disk, and RAM disk. The memory card and option hard disk are installed into the dedicated slots of the printer. The RAM disk is an allocated part of the printer's memory.

The basic operations of each storage device are the same. This section mainly explains the operation of the memory card.

Operating Memory Card

The printer is equipped with a slot for a memory card. By inserting a memory card into the printer, the following operations become available.

- Reading Font Data
- Reading Data
- Writing Data
- Deleting Data
- Formatting Memory Card
- Printing a List of Data Names

For details about the handling of the memory card, see [Memory Card on page B-6](#).

Reading Font Data

In case of a memory card if a memory with the font data card is already inserted into the slot when the printer is turned on, the fonts are automatically read into the printer. To read fonts into the printer from a memory card, proceed as follows.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until Memory Card > appears.

```
Memory Card >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until >Read Fonts appears.

```
>Read Fonts
```

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

```
>Read Fonts ?
```

6 Press the **ENTER** key. Processing appears and the reading of data from the memory card starts. When completed, Processing disappears.

```
>Read Fonts
Processing
```

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

Reading Data

Data stored on a memory card can be read. To read data on a memory card, proceed as follows.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until Memory Card > appears.

```
Memory Card >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until >Read Data appears. The data name also appears. These are the partition names the printer automatically assigns.

```
>Read Data
DataS001
```

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

```
>Read Data
?DataS001
```

6 Press the **▲** or **▼** key to display the desired data name.

7 Press the **ENTER** key. Processing appears and the reading of data from the memory card starts.

Writing Data

Data can be written to a memory card until no space is left for storing. When writing to a memory card, a name is assigned to the file automatically. You can use the procedure explained in the section [Printing a List of Data Names \(Partitions\) on page 1-48](#) to print a list of data names for confirmation.

To write data to a memory card, proceed as follows.

NOTE

First check that the memory card is properly formatted. Otherwise, the `>Write Data` message to be explained below will not be shown on the message message display.

If the memory card inserted in the memory card slot is not formatted, the `>Format` will automatically appear on the message display. Format the memory card. See [Formatting Memory Card on page 1-48](#).

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until `Memory Card >` appears.

```
Memory Card >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until `>Write Data` appears.

```
>Write Data
```

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

```
>Write Data ?
```

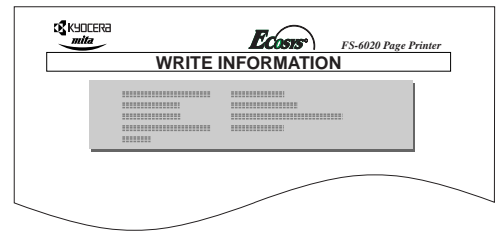
6 Press the **ENTER** key. Processing appears, then `Waiting`.

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

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 memory card write information page as shown below.

The file is written onto the memory card 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)...



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

Partition Name: The destination name of data written to the card.

Write Partition Length: The size of the written data on the memory card.

Others: Error information.

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

If the writing is not completed successfully, an error code appears on the message display. For details, see [Error Messages on page 4-6](#). 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 memory card. Each time you finish writing data, a memory card write information page is printed from the printer showing the information explained in step 8 above, but pertaining only to the data just written. To see all data contained in the memory card at once, print a list of data names as explained. See [Printing a List of Data Names \(Partitions\) on page 1-48](#).

Deleting Data

It is possible to use the printer to delete data from a memory card one by one.

To delete data from a memory card, proceed as follows. Check that the memory card contains data. Otherwise, the `>Delete Data` menu will not appear on the message display.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until `Memory Card >` appears.

```
Memory Card >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until **>Delete Data** appears. The data name also appears.

```
>Delete Data
DataS001
```

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

```
>Delete Data
?DataS001
```

6 Press the **▲** or **▼** key to display the desired data name.

7 Press the **ENTER** key. Processing appears and the data is deleted from the memory card. The message display returns to Ready.

Formatting Memory Card

A new memory card must be formatted before it can be used in the printer. Formatting allows data to be written to the memory card.

NOTE

- Formatting will destroy any existing data on a storage device including a used memory card.
- Formatting of the memory card must be executed from the printer.

To format a memory card, proceed as follows. When a new memory card is inserted in the printer's slot, **Format error Memory card** will appear on the message display.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until **Memory Card >** appears.

```
Memory Card >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until **>Format** appears.

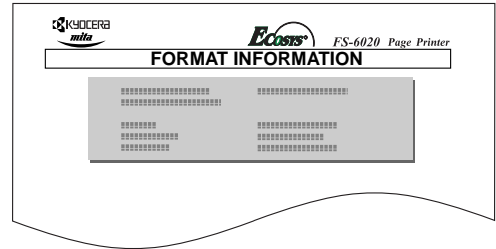
```
>Format
```

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

```
>Format ?
```

6 Press the **ENTER** key. Processing appears and formatting of the memory card starts.

When the formatting is successfully completed, the printer automatically prints out a format information page, which allows you to check the memory card for proper formatting.



Format information page includes the following items:

- Capacity:** The total size of the memory card.
- Used Space:** The size the printer uses for its system.
- Free Space:** The size remaining in the memory card for storing data.

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

Printing a List of Data Names (Partitions)

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

To print a list of data names for the memory card, proceed as follows.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until **Memory Card >** appears.

```
Memory Card >
```

3 Press the **▶** key.

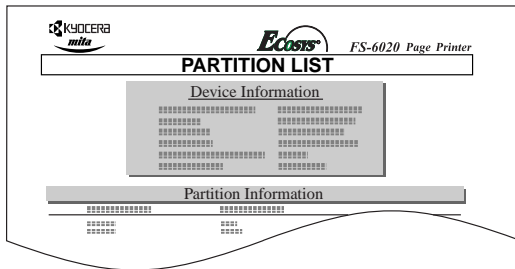
4 Press the **▲** or **▼** key repeatedly until **>List of Partitions** appears.

```
>List of
Partitions
```

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

```
>List of
Partitions ?
```

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



The printout (example above) includes the following information:

- Device Name/Number:** MEMORY CARD/A is indicated for the memory card.
- Capacity:** The total capacity of the memory card in bytes.
- Used Space:** The total size of the data stored in the memory card in bytes.
- Free Space:** The size of the capacity remaining in the memory card for storing further data, including the amount of memory that the printer uses for its system.
- Partition Name:** The name of the written data assigned automatically by the printer.
- Partition Size:** The size of the written data in bytes.
- Partition Type:** The type of the written data i.e., whether it is host data (Data) or font data (Font).

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

Operating Option Hard Disk

Installing the option hard disk into the printer allows you to perform the following operations on the hard disk.

- Reading data
- Writing data
- Deleting data
- Formatting hard disk
- Printing a list of data names (partitions)

When an option hard disk is inserted into the printer for the first time, it must be formatted before use. If the option hard disk is not formatted, the >Format menu will automatically appear on the message display.

The operations of the option hard disk are the same as those of the memory card. See the relevant sections in *Operating Memory Card on page 1-46*.

The formatted hard disk is automatically assigned a data name including the letter "H" such as DataH001 (instead of DataS001).

Operating RAM Disk

The RAM disk is a memory space shared within the printer memory that can temporarily store print jobs. The RAM disk can be used only for electronic sorting. The stored print job can then be used to print multiple copies of the job reducing the total amount of time required to print the whole job. It acts similar to the hard disk except that the data is effective only during the printer is powered up. By default, the RAM disk is not activated (OFF).

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 minus 9 MB

For example, if the total memory installed in your printer is 16 MB (factory setting), you can set 7 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.

To activate RAM disk in the printer's memory, first you must set the RAM disk mode to On and set the desired data size for the RAM disk as described in the following section. This allows you to perform the following operations on the RAM disk.

- Reading data
- Writing data
- Deleting data
- Printing a list of data names (partitions)

The operations of the RAM disk are the same as those of the memory card. See the relevant sections in [Operating Memory Card on page 1-46](#).

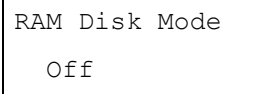
NOTE

- RAM disk can not be used when an option hard disk is installed.
- RAM disk stores data only temporarily. When the printer is reset or turned off, the stored data will be erased.
- The RAM disk is allocated within the printer's memory available to users. If the size of the RAM disk is set too large, the printing speed may decrease or the memory may become insufficient.

To confirm the RAM disk size or activate the RAM disk, proceed as follows:

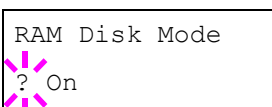
Setting RAM Disk Size

- 1 Press the **MENU** key.
- 2 Press the **▲** or **▼** key repeatedly until RAM Disk Mode appears.
- 3 Press the **ENTER** key. A blinking question mark (?) appears. Press the **▲** or **▼** key to select On. Press the **ENTER** key.

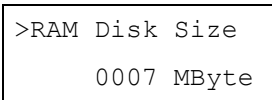


```
RAM Disk Mode
Off
```

- 4 Press the **▶** key. Press the **▲** or **▼** key repeatedly until >RAM Disk Size appears. The data size also appears.

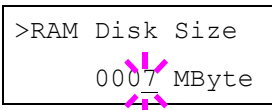


```
RAM Disk Mode
? On
```



```
>RAM Disk Size
0007 MByte
```

- 5 Press the **ENTER** key. A blinking cursor () appears. Press the **▲** or **▼** key to display the desired size. Definable RAM disk size is 0001 to 1024 .



```
>RAM Disk Size
0007 MByte
```

This range varies depending on the total memory size of the printer. The setting exceeding this range is automatically adjusted to the maximum RAM disk size.

- 6 When the desired RAM disk size is displayed, press the **ENTER** key.
- 7 Press the **MENU** key. The message display returns to Ready. Then, turn off the printer and on again. The selected RAM disk size is activated after the printer is restarted.

Configuration

This section explains the following topics:

- Setting Page Protect Mode
- Setting Linefeed (LF) Action
- Setting Carriage-Return (CR) Action
- Setting Wide A4
- Verifying Total Printed Pages
- Resetting Remaining Toner Counter
- Selecting Message Language
- Setting Automatic Form Feed Timeout
- Turning Off the Sleep Timer
- Setting Sleep Timer
- Resetting Printer
- Resource Protection
- Setting Alarm (Buzzer)
- Setting Auto Continue
- Setting Auto Continue Recovery Time

Setting Page Protect Mode

Although **Auto** is the default setting and this menu does not usually appear, **Page Protect** will be forcibly set to **On** if a **Print overrun Press GO** error occurs due to insufficient printer memory. Be sure to return this setting to **Auto** in order to maintain high printer memory efficiency. This can be done as follows.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until **Page Set >** appears.

```
Page Set >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until **>Page Protect** appears.

```
>Page Protect
On
```

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

```
>Page Protect
? On
```

6 Press the **▲** or **▼** key repeatedly until **Auto** appears.

```
>Page Protect
? Auto
```

7 Press the **ENTER** key.

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

Setting 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 **▼** key repeatedly until **Page Set >** appears.

```
Page Set >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until **>LF Action** appears.

```
>LF Action
LF only
```

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

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

6 Press the **▲** or **▼** key repeatedly until 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**.

Setting 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.

- Press the ▲ or ▼ key repeatedly until `Page Set >` appears.

```
Page Set >
```

- Press the ► key.

- Press the ▲ or ▼ key repeatedly until `>CR Action` appears.

```
>CR Action  
CR only
```

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

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

- Press the ▲ or ▼ 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.

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

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

Setting Wide A4

Turning this On increases 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 only in PCL 6 emulation.

- Press the **MENU** key.

- Press the ▲ or ▼ key repeatedly until `Page Set >` appears.

```
Page Set >
```

- Press the ► key.

- Press the ▲ or ▼ key repeatedly until `>Wide A4` appears.

```
>Wide A4  
Off
```

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

```
>Wide A4  
? Off
```

- Select On or Off using the ▲ or ▼ key.

- Press the **ENTER** key.

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

Verifying Total Printed Pages

You can display the total number of pages printed by your printer for confirmation whenever necessary. The total number of printed pages can also be checked on the status page. Moreover, for proper maintenance scheduling, it will be necessary to reset the toner counter using this menu each time a new toner container is installed.

This procedure only displays the total number of printed pages. The number cannot be changed.

- Press the **MENU** key.

- Press the ▲ or ▼ key repeatedly until `Life Counters >` appears.

```
Life Counters >
```

- Press the ► key.

- Press the ▲ or ▼ key until `>Total Print` appears, followed by the current total printed pages (0123456 in this example).

```
>Total Print  
0123456
```

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

Resetting Remaining Toner Counter

If the toner container was replaced when `Replace toner Clean Printer` was not displayed, 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 see the [Installation Guide](#) supplied with the toner kit when replacing the toner container.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until `Life Counters >` appears.

```
Life Counters >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until `>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.

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

Selecting Message Language

You can select the language of the messages on the message display by following the procedure 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 `>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):

```
English
Francais
Deutsch
Italiano
Nederlands
Espagnol
Portugues
```

7 Press the **ENTER** key.

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

Setting Automatic Form Feed Timeout

When the printer receives no data for a certain time, it times 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 **▲** or **▼** key repeatedly until `Others >` appears.

```
Others >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until `>Form Feed Time Out` appears. The default setting is 0 seconds.

```
>Form Feed
Time Out 000sec.
```

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

```
>Form Feed
Time Out 000sec.
```

- 6** Press the **▲** or **▼** 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. (The printer does not timeout with the value set to 0.) 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.

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 **▲** or **▼** key repeatedly until Others > appears.

```
Others >
```

- 3** Press the **▶** key.

- 4** Press the **▲** or **▼** 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 **▲** or **▼** key.

```
>>Sleep Mode
? Off
```

- 8** Press the **ENTER** key.

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

Setting Sleep Timer

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 sleep mode in the absence of data.

NOTE

The default setting of the sleep mode is On (enabled).

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

- 2** Press the **▲** or **▼** key repeatedly until Others > appears.

```
Others >
```

- 3** Press the **▶** key.

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

```
>Sleep timer >
015 min.
```

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

```
>Sleep timer >
015 min.
```

- 6** Press the **▲** or **▼** 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.

Resetting Printer

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 deleted. In either of the following two resource protection modes, resource protection preserves these PCL resources in memory so that they are available as intact when you change the emulation back to PCL 6.

You can select either of the following two resource protection modes to enable this function.

- Permanent:** You can store such permanent PCL resources as fonts, macros, and symbol sets in the printer's memory when switching to another emulation.
- Perm / Temp:** You can store both permanent and temporal PCL resources in the printer's memory when switching to another emulation.

NOTE

The extension memory should be installed in the printer in advance to set the resource protection. See [Appendix B Option Units](#).

- 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 `>Resource Prot.` appears.

```
>Resource Prot.
Off
```

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

```
>Resource Prot.
? Off
```

- 6 Press the **▲** or **▼** 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.

Setting (Buzzer) Alarm

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.

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.

Setting Auto Continue

If an error that still allows you to continue printing occurs (Memory overflow Press GO, Print overrun Press GO, KPDL error Press GO, File not found Press GO, RAM disk error Press GO, MemoryCard err Press GO, and Hard disk err Press GO), the next received data is automatically printed after a set period of time elapses. For example, if the printer is shared over a network as a network printer and one person causes one of the above errors, after the set period of time elapses, the data sent from the next person is printed. The default setting is On (Auto Continue).

NOTE

For setting the auto continue recovery time, see the next section.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until Others > appears.

```
Others >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until > Auto Continue Mode > appears.

```
>Auto Continue >  
Mode Off
```

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

```
>Auto Continue  
Mode ? 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.

Setting Auto Continue Recovery Time

Follow the procedure given below to change the recovery time for Auto Continue.

1 Press the **MENU** key.

2 Press the **▲** or **▼** key repeatedly until Others > appears.

```
Others >
```

3 Press the **▶** key.

4 Press the **▲** or **▼** key repeatedly until >Auto Continue Mode > appears.

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

5 Press the **▶** key and display >>Auto Continue Timer.

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

```
>>Auto Continue
Timer 030Sec.
```

7 Press the **▲** or **▼** 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.

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

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.

Chapter 2 Paper Selection

MP tray	Size	Cassette or MP tray	Size
Monarch	3-7/8 × 7-1/2 inches	Ledger	11 × 17 inches
Business	4-1/8 × 9-1/2 inches	Legal	8-1/2 × 14 inches
Commercial #9	3-7/8 × 8-7/8 inches	Letter	8-1/2 × 11 inches
Commercial #6-3/4	3-5/8 × 6-1/2 inches	Executive	7-1/4 × 10-1/2 inches
ISO DL	110 × 220 mm	Folio	210 × 330 mm
ISO C5	162 × 229 mm	ISO A3	297 × 420 mm
ISO A6	105 × 148 mm	ISO A4	210 × 297 mm
JIS B6	128 × 182 mm	ISO A5	148 × 210 mm
ISO B5	176 × 250 mm	JIS B5	182 × 257 mm
Statement	5-1/2 × 8-1/2 inches	JIS B4	257 × 364 mm
Hagaki	100 × 148 mm	ISO C4	229 × 324 mm
Oufuku Hagaki	148 × 200 mm	Oficio II	8-1/2 × 13 inches
Youkei 2	114 × 162 mm	8K	273 × 394 mm
Youkei 4	105 × 235 mm	16K	197 × 273 mm
		Custom for paper cassette	148 × 297 mm (5-13/16 × 11-11/16 inches) to 210 × 432 mm (8-1/4 × 17 inches)
		for MP tray	70 × 148 mm (2-3/4 × 5-13/16 inches) to 297 × 450 mm (11-11/16 × 17-3/4 inches.)

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. Such paper may cause damage to the drum.

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 above. The dimensional tolerances are ±0.7 mm (±0.0276 inches) for the length and width. The angle at the corners must be 90° ±0.2°.

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

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.

NOTE

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.

Chapter 2 Paper Selection

Processing: It is recommended that you do not use processed paper such as follows even if they satisfy basic paper specifications.

- Shiny paper
- Paper with watermarks
- Surface printed paper
- Perforated paper
- Paper with holes

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 to be used	Media type to be selected
Thin paper (60 to 64 g/m ²)	Thin
Thick paper (90 to 200 g/m ²)	Thick
Colored paper	Color
Recycled paper	Recycle
Overhead projector transparencies	Transparency
Postcards	Cardstock
Envelopes	Envelope
Label	Labels

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 inches)
Squareness of corners	90° ± 0.2°

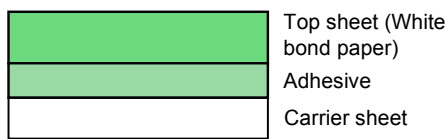
To avoid trouble, transparency must be delivered face-up. If transparency jams frequently, pull the top of the sheet very gently as it leaves the printer.

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.

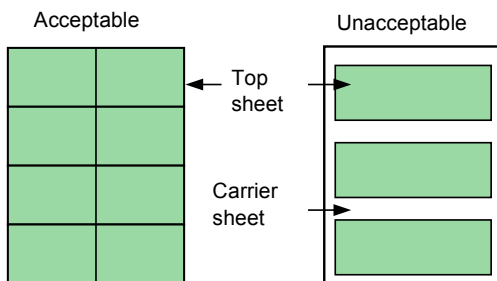
Label paper must be manually fed.

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)

Envelopes

The printer can print on envelopes using paper with a basis weight of 70 to 100 g/m² (19 to 27 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 2-3*). 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.

NOTE

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.

Colored Paper

Colored paper should satisfy the same conditions as white bond paper, listed in *Paper Specifications on page 2-1*. 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 and meet the specifications listed in the table on *page 2-2*. 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 2-1*) 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 [Customizing Paper Type on page 1-19](#).

The following types of paper can be set.

Media Type \ Paper source	MP tray	Paper Cas- sette	Paper Weight	Duplex path (MP tray available only in Cassette mode)
Plain	Yes	Yes	Normal	Yes
Transparency	Yes	No	Extra Heavy	No
Preprinted	Yes	Yes	Normal	Yes
Labels	Yes	No	Normal	No
Bond	Yes	Yes	Normal	Yes
Recycled	Yes	Yes	Normal	Yes
Vellum	Yes	No	Light (Thin)	No
Rough	Yes	Yes	Normal	Yes
Letterhead	Yes	Yes	Normal	Yes
Color	Yes	Yes	Normal	Yes
Prepunched	Yes	Yes	Normal	Yes
Envelope	Yes	No	Heavy (Thick)	No
Cardstock	Yes	No	Heavy (Thick)	No
Custom 1 (to 8)*	Yes	Yes	Normal	Yes

Yes: Can be stored No: Cannot be stored

* This is a paper type defined and registered by the user. Up to eight types of user settings may be defined. For details on [Customizing Paper Type on page 1-19](#).

Chapter 3 Maintenance

This chapter explains how to replace the toner container and how to clean the internal parts of the printer. When you replace the toner container, make sure to clean the internal parts of the printer.

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** message will be shown instructing you to install a new toner kit.

Toner Container Replacement Interval

Assuming paper of A4 size, an average toner coverage of approximately 5% and Ecoprint mode turned off, the toner container will need replacing approximately once every 10,000 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 5,000.

Toner Kit Contents:

- Toner container
- Wiper cloth
- Cap (for disposal of the used toner container)
- Plastic bag (for disposal of the used toner container)
- Installation Guide

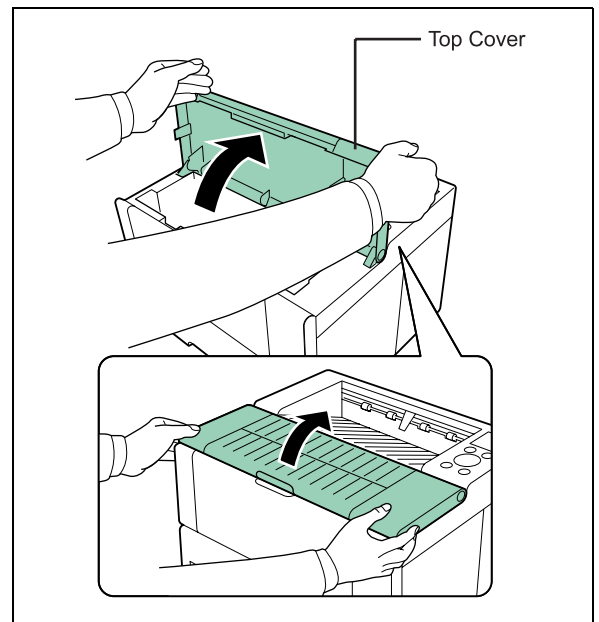
NOTE

- Be sure to distance items such as floppy disks during toner container replacement.
- Be sure to clean the inside of the printer as described later when replacing the toner container.
- Use of original Kyocera Mita toner kits is highly recommended to prevent printer trouble and ensure the long life of the printer. Using toner kits other than the original ones may spoil the print quality and may void the printer's warranty.

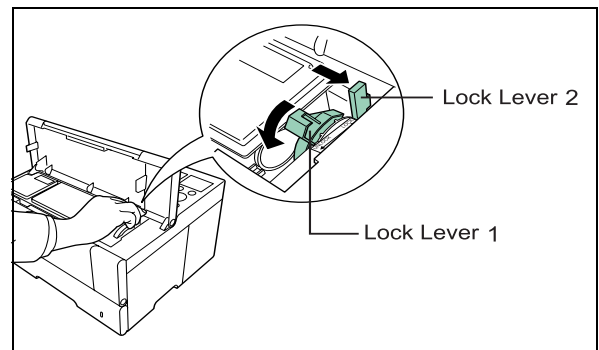
Replacing the Toner Container

Replace the toner container using the following procedures.

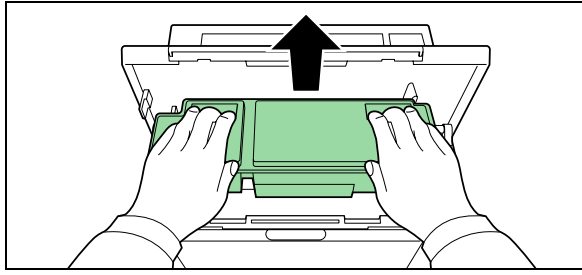
- 1 Open the printer's top cover.



- 2 Pull the lock lever 1 (blue-colored) to the **UNLOCK** (near) position until you hear a click, then pull the toner container's lock lever 2 (blue-colored) to the direction of the arrow.



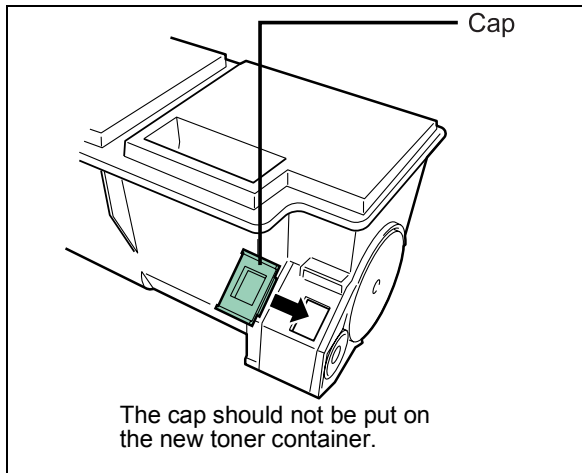
- 3** Gently lift the toner container and remove it.



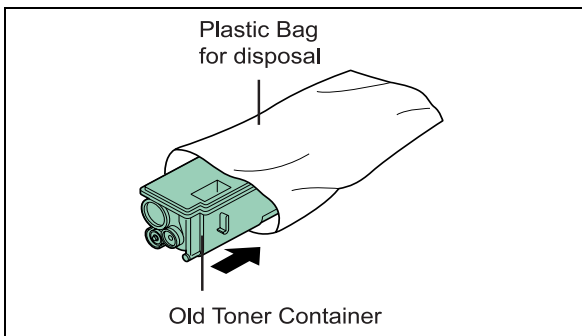
NOTE

Keep the removed toner container flat.

- 4** Put the supplied cap on the used toner container to prevent toner spill.



- 5** Place the used toner container into the supplied plastic bag, and seal it up before disposing.

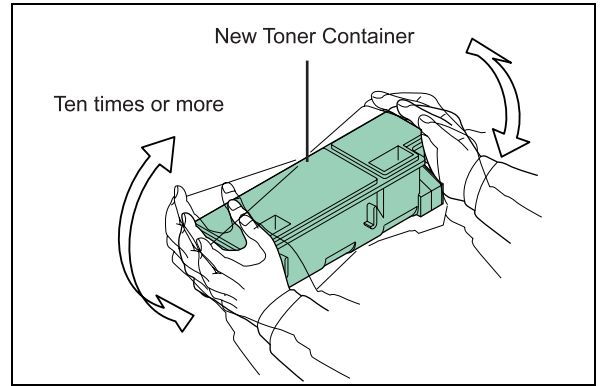


NOTE

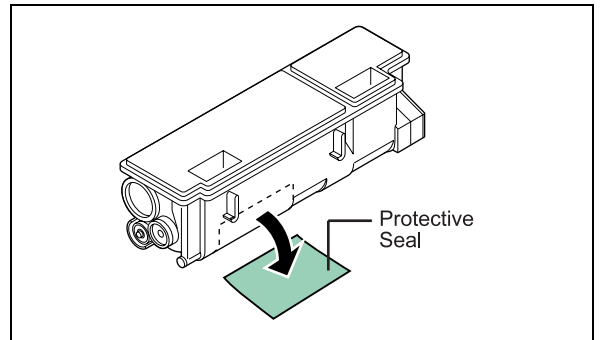
With consideration of an environmental problem, Kyocera Group is now providing free collection services of used toner container. For details, see the "Toner Container Collection Request Form" enclosed in the toner kit or the Kyocera Mita homepage; <http://www.kyocera-mita.co.jp/support/>.

- 6** Take a new toner container out of the toner kit.

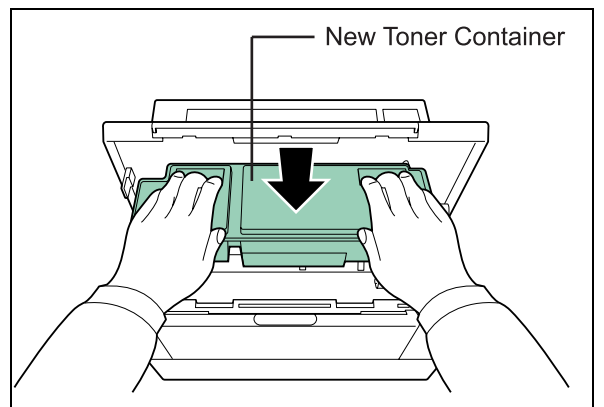
- 7** Shake the new toner container as shown in the figure below ten times or more to ensure that the toner is evenly distributed inside.



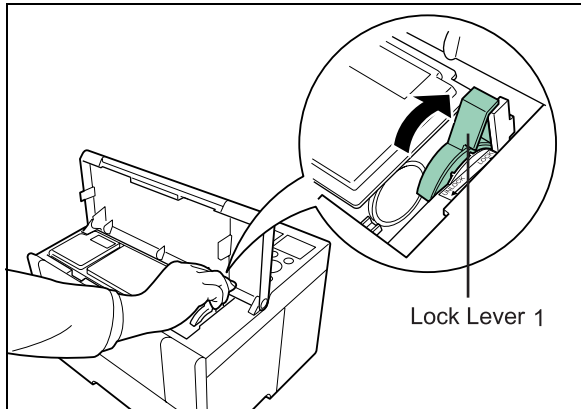
- 8** Carefully remove the protective seal (orange-colored) from the new toner container as shown below.



- 9** Install the new toner container into the printer. Push firmly on the top of the toner container at the positions marked **PUSH HERE** until you hear it click into place.



- 10** Pull back the lock lever 1 to the LOCK position as shown by the arrow to fix the toner container.



- 11** Close the top cover.

- 12** Reset the toner counter to keep the toner gauge display accurate. See [Resetting Remaining Toner Counter on page 1-53](#) for details.

Continue to cleaning the internal parts of the printer on the next page.

Cleaning

Clean the internal parts of the printer whenever you replace a toner container. To ensure the best printing quality, clean the internal parts periodically (once a month).

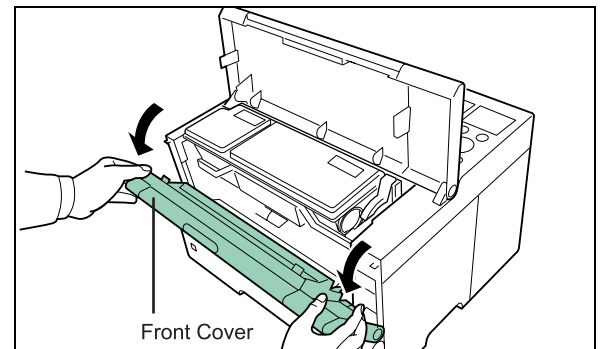
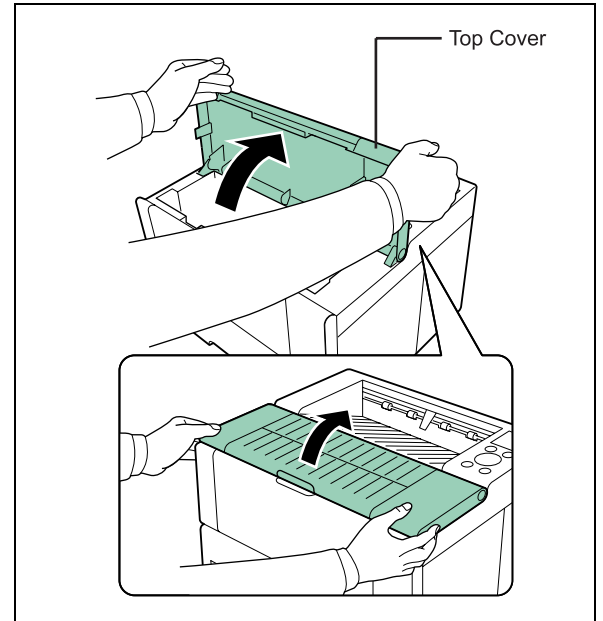
NOTE

The `Replace toner` message will change to `Clean printer` after you replace the toner container. This message will be cleared when you press the **GO** key after cleaning.

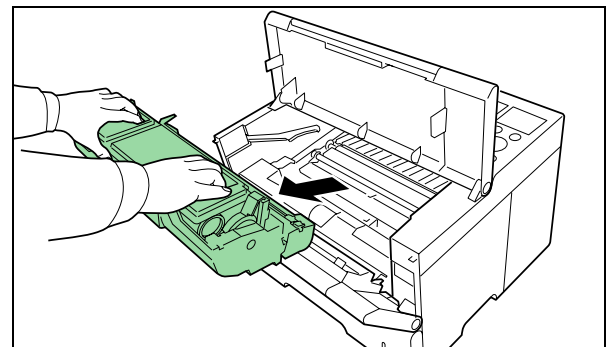
Cleaning the Internal Parts of the Printer

Take the following steps to clean the internal parts of the printer.

- 1** Open the top cover and front cover.



- 2** Lift the process unit together with the toner container out of the printer.



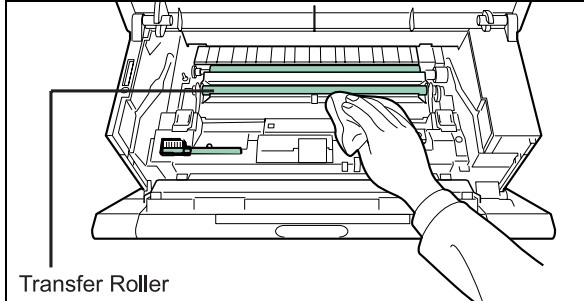
NOTE

- Place the process unit in a level location. Do not stand it.
- Do not touch the drum (green-colored) in the process unit or expose it to light. Return the process unit promptly when you have finished cleaning.

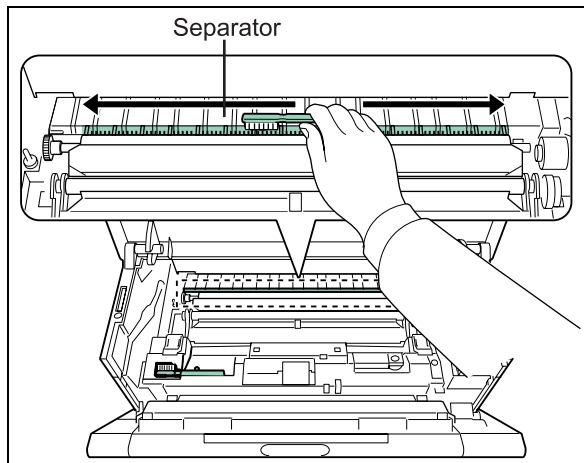
- Use the supplied wiper cloth to clean dust and dirt away from the registration roller (metal).

NOTE

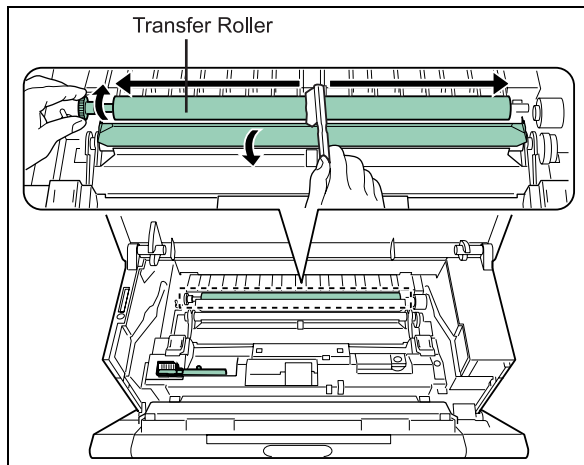
While cleaning, be careful to avoid touching the transfer roller (the black roller).



- Clean the separator at the back of the transfer roller (black-colored) with the cleaning brush installed on the top of the transport unit as shown below.



- Clean the surface of the transfer roller (black-colored) with the cleaning brush while manually rotating the transfer roller gear as shown below. After cleaning, put the cleaning brush back on to the top of the transport unit.

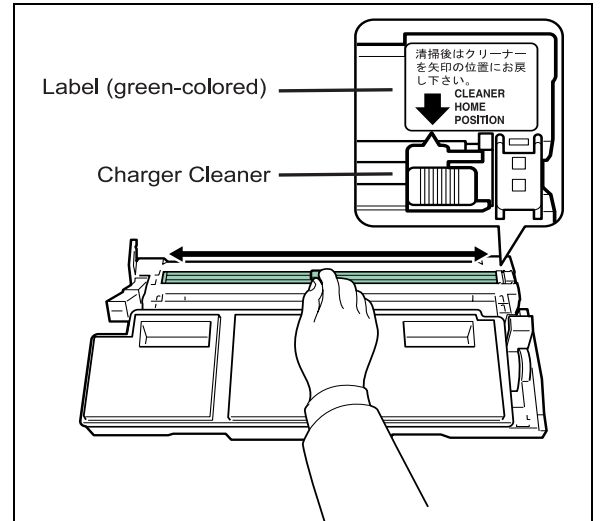


Continue to cleaning the charger wire below.

Cleaning the Charge Wire

Take the following steps to clean the charger wire.

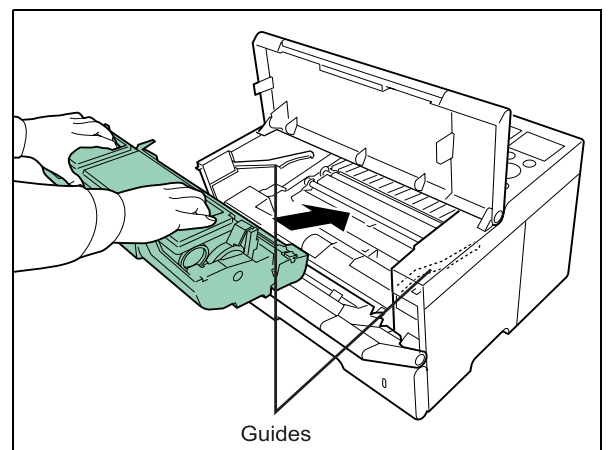
- Clean the internal charger wire by sliding the charger cleaner (green-colored) located on the top of the process unit to the right and left two or three times as shown in the figure. When you finish cleaning, make sure to place the charger cleaner back to the position marked with ↓ on the green label.



NOTE

When you finish cleaning, make sure to place the charger cleaner back to its home position (position marked with ↓ on the label). If the charger cleaner is not returned to its home position, a black band will appear along the length of printed pages.

- After cleaning is done, put back the process unit along the guides of the printer.



- Close the front cover and then the top cover. Now cleaning is completed.
- Reset the toner counter to keep the toner gauge display accurate. See [Resetting Remaining Toner Counter](#) on page 1-53 for details.

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

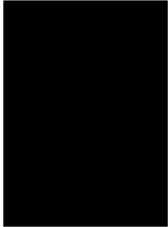
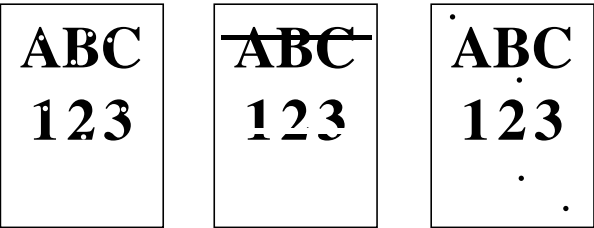
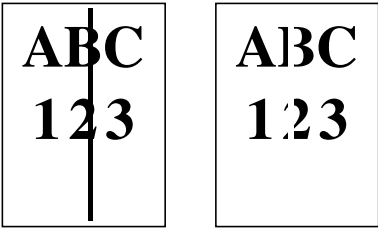
If some kind of problem should occur, check the following before concluding the printer is broken:

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. Check the message display, and then take measures seeing Indicators and Messages on page 4-4 .
		Lit	See the appropriate item below.
	Check the ATTENTION indicator.	Flashing	See Indicators on page 4-4 .
		Lit	
	A maintenance message appears in the message display.	See Maintenance Messages on page 4-4 .	
Print quality is not good.		See Print Quality Problems on page 4-2 .	
Paper is jammed.		See Correcting a Paper Jam on page 4-8 .	
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 main 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 interface for this printer, see Appendix C Host Computer Interface .	
	Try turning on the printer's power again.	Turn off the printer's power and try turning on the printer's power again.	
	Check program files and application software.	Try printing another file or using another print command. If the problem occurs only with a specific file or application, check the printer settings for that application.	

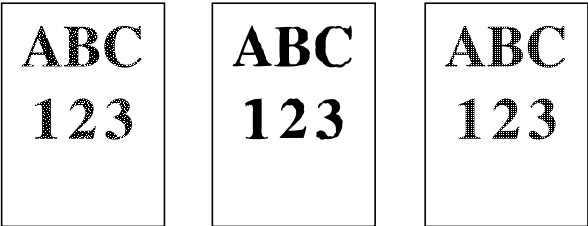

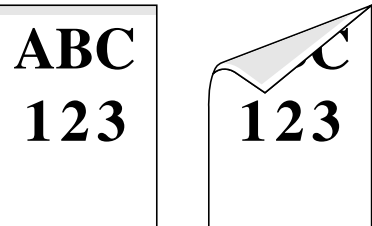
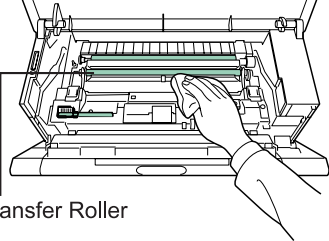

If you still cannot correct a printer problem even after checking the above, please contact your Kyocera Mita dealer.

Print Quality Problems

As the following table shows, there are many possible causes of print quality problems, such as blank output. 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
<p>All-black printout</p> 	<p>Contact your Kyocera Mita dealer.</p>
<p>Dropouts, horizontal streaks, stray dots</p> 	<p>Clean the charger wire. Open the printer top and front covers. Remove the process unit and clean the charger wire by moving the charger cleaner (green-colored) to the right and left two or three times. See Cleaning on page 3-3.</p>
<p>Black or white vertical streaks</p> 	<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 3-1.</p> <p>Clean the charger wire. Open the printer top and front covers. Remove the process unit and clean the charger wire by moving the charger cleaner (green-colored) to the right and left two or three times. See Cleaning on page 3-3.</p> <p>Check the charger cleaner position. Open the printer top and front covers. Remove the process unit and check the charger cleaner (green-colored) is in the correct position. See Cleaning on page 3-3.</p>




(Continued on next page)

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.</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 Setting EcoPrint on page 1-33. • Make sure the paper type setting is correct. See Paper Type on page 2-6. <p>Clean the charger wire. Open the printer top and front covers. Remove the process unit and clean the charger wire by moving the charger cleaner (green-colored) to the right and left two or three times. See Cleaning on page 3-3.</p>
<p>Grey background</p> 	<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 3-1.</p> <p>Check the process unit installation. Open the printer top and front covers. Check that the process unit is correctly installed.</p>
<p>Dirt on the top edge or back of the paper</p> 	<p>Check the transfer roller (black-colored). Open the printer top and front covers. Remove the process unit and check the transfer roller. If the transfer roller is dirty with toner, try printing several pages.</p>  <p>Check the registration roller (metal). Open the printer top and front covers. Remove the process unit and check the registration roller. If the registration roller is dirt with toner, wipe it away with the wiper cloth supplied with the toner kit.</p>
<p>Characters out of position</p> 	<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>

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	Condition	Description
READY 	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 	Flashing	Data transfer is taking place.
	Lit	Either data is being processed, or data is being written onto the option memory card or hard disk.
ATTENTION 	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.

Maintenance Messages

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

Message	Corrective Action
Add paper (paper source)	<p>The paper has run out. Supply paper according to the paper source displayed (paper cassette, MP tray, or optional paper feeder).</p> <p>Messages indicating the printer status (Ready, Please wait, Processing*, Waiting, and FormFeed Time Out*) are displayed alternately. * These messages will not appear when the number of copies is set to 2 or more.</p>
Call service ####:0123456	<p>Indicates a mechanical error. #### represents a mechanical error code (#=0, 1, 2, ...). The total number of pages printed is also indicated, e.g. 0123456. Take down the error code, turn off the printer, disconnect the power cord, and call a service. The printer does not operate when this message is displayed.</p>
Call service F###:	<p>Indicates a controller error. F### represents a controller error code (#=0, 1, 2, ...). Take down the error code, turn off the printer, disconnect the power cord, and call a service. The printer does not operate when this message is displayed.</p>
Call service person F0	<p>Indicates a problem with the controller and the operator panel an error in data communications between the printer controller and the operator panel. Turn off the printer, disconnect the power cord, and call a service. The printer does not operate when this message is displayed.</p>
Close duplexer unit cover	<p>The rear cover of the option duplexer unit is open. Close the rear cover.</p>
Close front cover	<p>The top or front cover of the printer is open. Close the printer top or front cover.</p>
Close rear cover	<p>The rear cover of the printer is open. Close the printer rear cover.</p>

Message	Corrective Action
Face-down tray paper full 	The face-down tray has become full (approx. 500 pages). You must remove all printed pages from the face-down tray. When the printer senses that the face-down tray is empty again, it will continue printing into the face-down tray.
Load Cassette 1 (to 4) (paper size)/(paper type)* *(paper size) and (paper type) are displayed flashing alternately. 	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 cassette numbers (3 to 4) are only displayed when there is an option paper feeder installed. Or, if you want to print from a different paper source press the ▲ or ▼ key to display <i>Use alternative?</i> and you can change the source for paper feeding. 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.
Load MP tray (paper size)/(paper type)* *(paper size) and (paper type) are displayed flashing alternately. 	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. Or, if you want to print from a different paper source, press the ▲ or ▼ key to display <i>Use alternative?</i> and you can change the source for paper feeding. 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.
Load path error 	The load path is open. Close the path.
Missing paper cassette #	The paper cassette # (#=1 to 5) is not installed correctly. <ul style="list-style-type: none"> Install the paper cassette properly that is displayed in "#". Check the paper size dial of the paper cassette displayed in "#" is set in the correct position. Paper cassette numbers ("#") are displayed only when option paper feeders are installed.
Missing toner container	Install the process unit or toner container. See Toner Container Replacement on page 3-1 . The printer does not operate when this message is displayed.
Missing duplexer	The option duplexers is not installed. The option duplexers installed has been removed or installed incorrectly. Re-install the duplexers correctly.
Option interface Error ##	A failure has occurred with the option network interface card. Check the option network interface card installed in the printer.
Paper jam ##### 	A paper jam has occurred. Open the printer's cover(s) or the paper cassette(s) 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 4-8 .)
Replace toner 	The printer has stopped due to lack of toner. 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 3-1 .
Toner low	Toner is running low. Replace the toner container using a new toner kit and upon completion of replacement, clean the internal parts of the printer. See Toner Container Replacement on page 3-1 .

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

(Continued on next page)


Chapter 4 Troubleshooting

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 . See for details about Expansion Memory or changing resolution.
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 or adding more memory. See Appendix B for details about expansion memory.

Error Messages


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

Message	Corrective Action
File not found Press GO	Specified file does not exist in the hard disk, memory card, or RAM disk. Check the file. If Auto Continue is set to On, printing will be automatically resumed after a preset period of time. See Setting Auto Continue on page 1-56 .
Format error Memory card	This message appears when the printer is in the ready state and the memory card is not formatted, and therefore cannot be read or written. Format the memory card inserted in the printer. See Formatting Memory Card on page 1-48
Format error Hard disk	Initialization (formatting) of the hard disk is required. Format the hard disk. See Operating Option Hard Disk on page 1-49 .
Hard disk err ## Press GO	Look at the error code given in place of ## and see the corresponding description given below. 01: Hard disk format error. Turn the printer off and then on again. If this error occurs even if the power has been turned off and then on, reformat the hard disk. 02: The disk system is not installed. Recheck the requirements for using the system and the devices. 04: There is no available hard disk space. Delete unnecessary files, etc., to free up space. 05: The specified file does not exist in the hard disk. 06: There is no memory available to the hard disk system. Increase the available memory. 10: Formatting is not possible because host data is being spooled on the hard disk. Wait until Ready appears on the message display, 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 jobs 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 hard disk.
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. Upon completion of data reception, resume the menu selection on the operator panel.
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 memory card when the Insert again message was displayed. Remove the wrong memory card from the printer's memory card slot and insert the correct memory card. The printer again reads it from the beginning of the data.
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 Setting Auto Continue on page 1-56 .

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

(Continued on next page)

Message	Corrective Action
Memory card err Insert again	<p>The memory card is accidentally removed from the printer's memory card slot during reading. If you continue reading the memory card, insert the same memory card into the slot again. The printer again reads it from the beginning of the data.</p> <p>Note: We recommend that you follow the reading procedure from the beginning to ensure correct reading of the memory card.</p>
Memory overflow Press GO	<p>The total amount of data received by the printer exceeds the printer's internal memory. Check the memory on the status page and delete unnecessary macros and external fonts or expand printer memory. see Appendix B Option Units for details about expansion memory. Press the GO key to resume printing. You can abandon printing by the CANCEL key.</p> <p>If Auto Continue is set to On, printing will be automatically resumed after a preset period of time. See Setting Auto Continue on page 1-56.</p>
MemoryCard err## Press GO	<p>This message appears when an error occurs during access to the memory card using the PRESCRIBE RWER command or from the printer's operator panel. Look at the error code given in place of ## and see the corresponding description given below.</p> <p>01: The memory card does not meet specifications. This memory card cannot be used by this printer. Insert a memory card which can be used by this printer.</p> <p>02: The memory card is not installed. Recheck the requirements for using the memory card.</p> <p>04: The capacity of the memory card is insufficient. Clean up files.</p> <p>05: Specified file not on memory card.</p> <p>06: No memory for use by memory card. Expand printer memory.</p>
Print overrun Press GO	<p>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.</p> <p>Check the memory on the status page and delete unnecessary macros and external fonts or expand printer memory. see Setting RAM Disk Size on page 1-50 for details.</p> <p>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 Setting Page Protect Mode on page 1-51.</p> <p>If Auto Continue is set to On, printing will be automatically resumed after a preset period of time. See Setting Auto Continue on page 1-56.</p>
RAM disk error ## Press GO	<p>Look at the error code given in place of ## and see the corresponding description given below.</p> <p>01: Format error. Try turning the power off and on again.</p> <p>02: RAM disk mode is Off. Turn RAM disk mode On. See Setting RAM Disk Size on page 1-50 for details.</p> <p>04: No disk space. Clean up files.</p> <p>05: Specified file is not on disk.</p> <p>06: No memory for use by disk system. Expand printer memory.</p>
Virtual mailbox full	<p>The storage area for the VMB is full. Print out accumulated VMB data.</p>

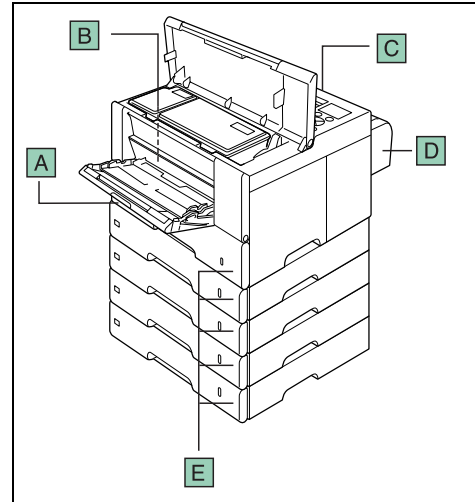
 :Alarm buzzer sounds when an error occurs. Press the **CANCEL** key to stop the alarm buzzer.

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	Pager jam location	Description	Reference Page
Paper jam MP Tray	A	Paper is jammed at the MP tray.	4-9
Paper jam Printer	B	Paper is jammed inside the printer.	4-9
Paper jam Rear cover	C	Paper is jammed in the rear cover section.	4-11
Paper jam Duplexer	D	Paper is jammed in the option duplexer.	Duplexer DU-400 Opration Guide
Paper jam Cassette 1 (2, 3, 4, 5)	E	Paper is jammed at the paper cassette or option paper feeder cassette.	4-9

When the jammed paper has been removed, open and close the printer's top cover. 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. 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. Contact your service representative.

CAUTION

- Take care not to leave any small pieces of paper in the printer when removing paper jams as this may result in fire.
- The printer's fuser unit is extremely hot. Take sufficient care when working in this area, as there is a danger of getting burned.

NOTE

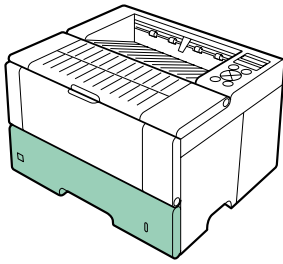
When pulling the paper, pull it gently so as not to tear it. Torn pieces of paper are difficult to remove and may be easily overlooked, deterring the jam recovery.

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 **?** key.

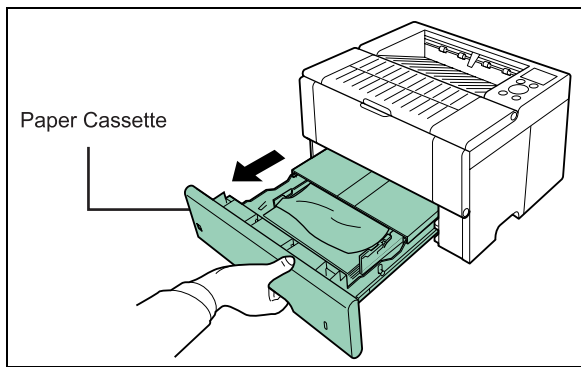
Pressing the **▼** key at the online help message display shows the next step; pressing the **▲** key shows the previous step. To exit the online help message display, press the **?** key. The previously shown paper jam message appears.

Jam in Paper Cassette

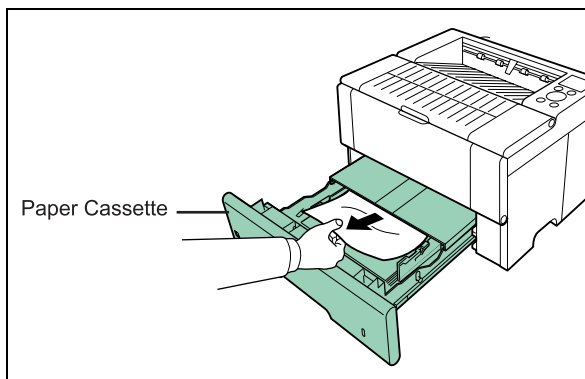


The following procedures also applies to the optional paper feeder.

- 1 Pull out the paper cassette.

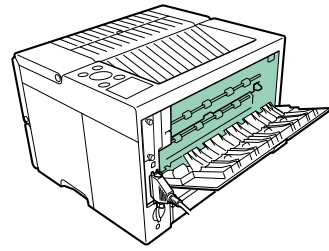


- 2 Remove the jammed paper while taking care not to tear it. If the paper has been torn, remove all the scraps from the inside the printer.



- 3 Close the paper cassette.

Jam inside the Printer

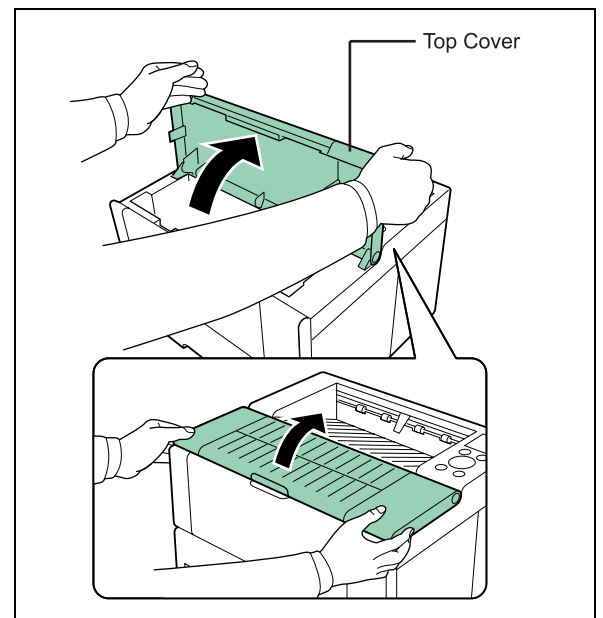


Paper is jammed inside the printer. Remove the jammed paper using the procedure given below.

NOTE

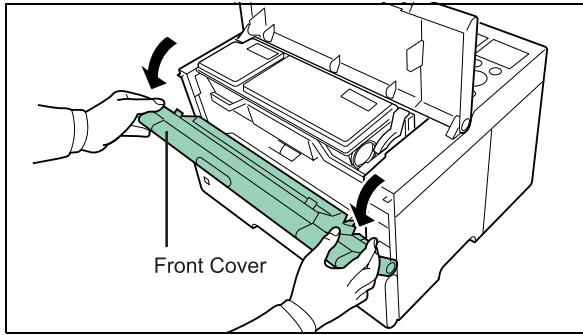
- The process unit contains such precise parts as a sensitive drum. Do not give it a shock or do not touch the green drum. Exposing the process unit to direct sunlight or strong light may result in print quality deterioration. When you finish removing jammed paper, promptly return the process unit into the printer.
- Keep the removed process unit level and do not stand it. Otherwise such process unit will deteriorate print quality.

- 1 Fully open the top cover.

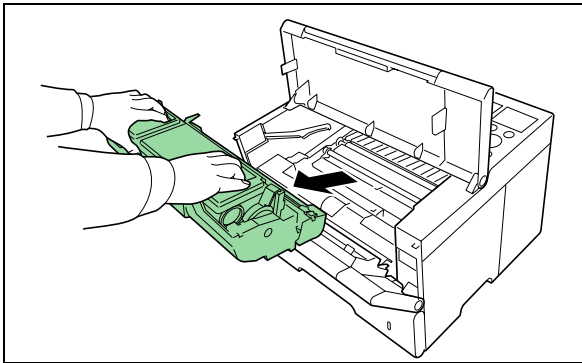


Chapter 4 Troubleshooting

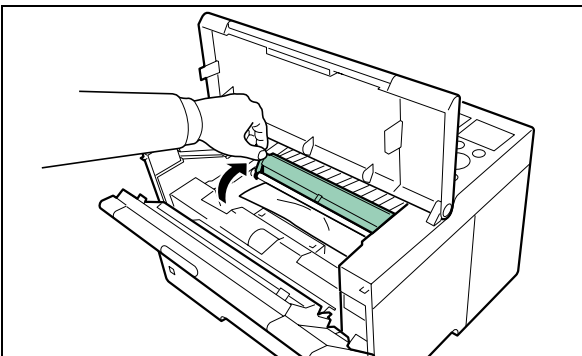
- 2** Pull open the front cover.



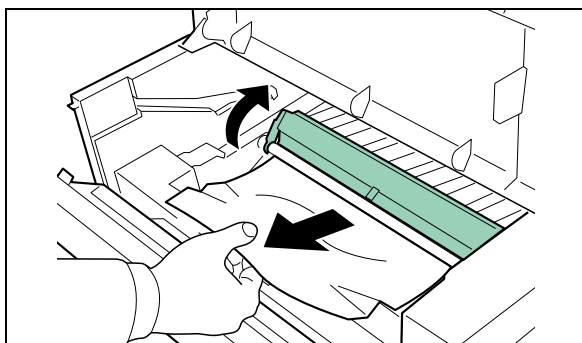
- 3** Lift the process unit together with the toner container out of the printer.



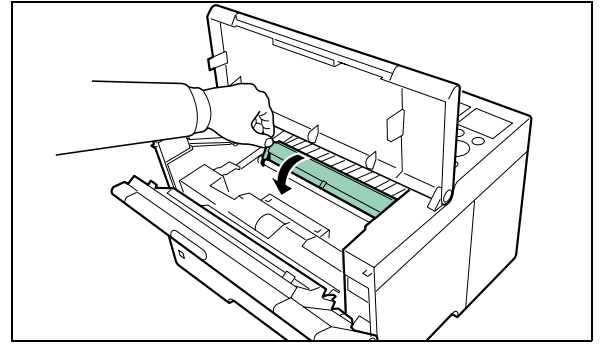
- 4** Open the feed cover by grasping the green lever.



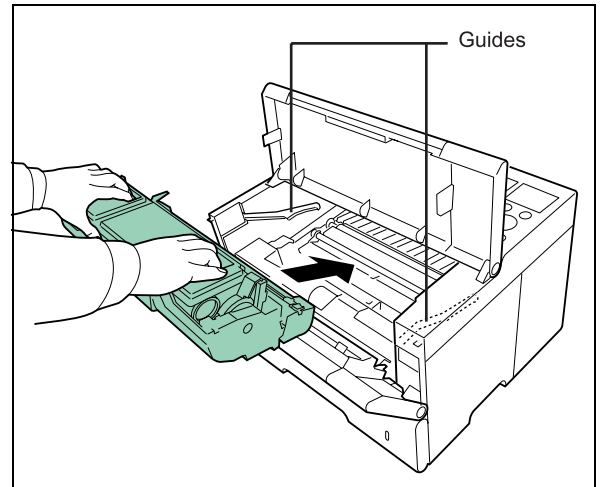
- 5** Remove the jammed paper at the roller. Take care not to leave any small pieces of paper in the printer when removing paper jams as this may result in fire.



- 6** Return the feed cover to its original position.

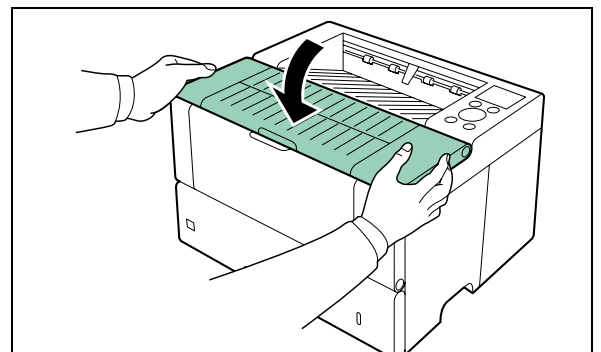


- 7** Put back the process unit along the guides of the printer.

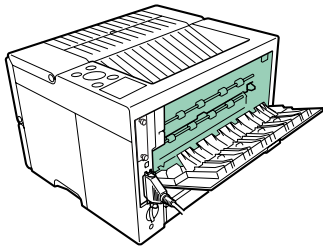


- 8** Close the front cover.

- 9** Close the top cover.

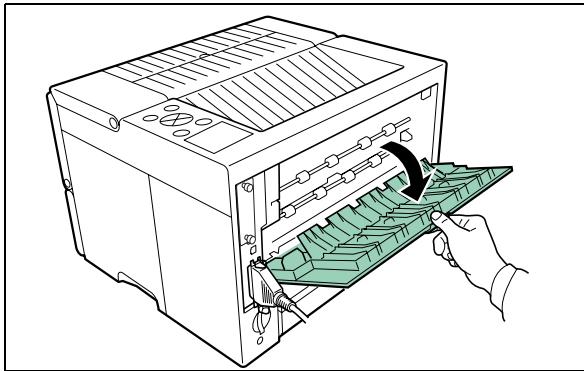


Jam in the Rear Cover

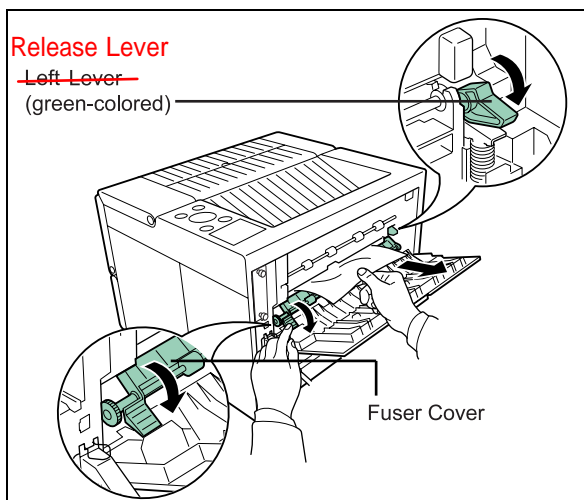


Paper is jammed in the rear cover. Remove the jammed paper using the procedure given below.

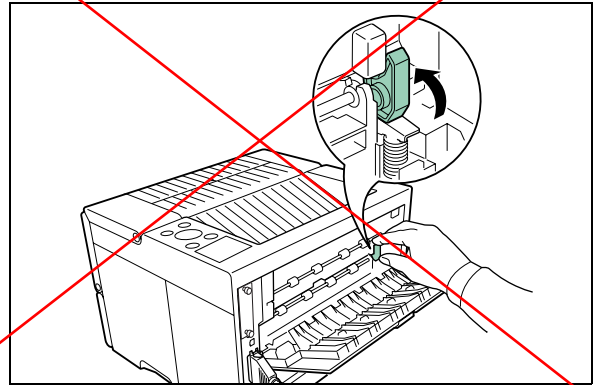
- 1 Open the rear cover.



- 2 Open the fuser cover as illustrated below. While holding down the ~~Release~~ left lever (green-colored) remove the jammed paper as shown in the figure.

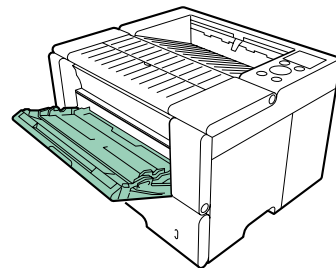


- 3 Return the left lever to (green-colored) its original position.



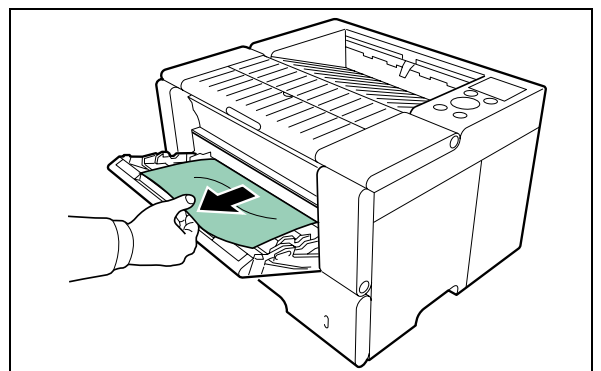
- 4 Close the rear cover.

Jam at the MP Tray



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

- 1 Remove the jammed paper.



- 2 Put all the paper out of the MP tray, align the edges of the paper and re-set the paper into the MP tray.

Appendix A 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 Kyocera Mita Digital Library CD-ROM and Kyocera Mita Network Library 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 and 1 bitmap font. You can print the same font list from the printer by using the printer's operator panel key. To print a list of fonts, see *Printing List of Fonts on page 1-13*. Font may be downloaded to the printer's memory from a option memory card or hard disk.

KPDL Fonts

AlbertusMT
ABCDEabcde?*012345'
 AlbertusMT-Italic
*ABCDEabcde?*012345'*
 AlbertusMT-Light
 ABCDEabcde?*012345'
 AntiqueOlive-Bold
ABCDEabcde?*012345'
 AntiqueOlive-Compact
ABCDEabcde?*012345'
 AntiqueOlive-Italic
*ABCDEabcde?*012345'*
 AntiqueOlive-Roman
 ABCDEabcde?*012345'
 Apple-Chancery
*ABCDEabcde?*012345'*
 Arial-BoldItalicMT
ABCDEabcde?*012345'
 Arial-BoldMT
ABCDEabcde?*012345'
 Arial-ItalicMT
*ABCDEabcde?*012345'*
 ArialMT
 ABCDEabcde?*012345'
 AvantGarde-Book
 ABCDEabcde?*012345'
 AvantGarde-BookOblique
*ABCDEabcde?*012345'*
 AvantGarde-Demi
ABCDEabcde?*012345'
 AvantGarde-DemiOblique
*ABCDEabcde?*012345'*
 Bodoni
 ABCDEabcde?*012345'
 Bodoni-Bold
ABCDEabcde?*012345'
 Bodoni-BoldItalic
*ABCDEabcde?*012345'*
 Bodoni-Italic
*ABCDEabcde?*012345'*
 Bodoni-Poster
ABCDEabcde?*012345'
 Bodoni-PosterCompressed
*ABCDEabcde?*012345'*
 Bookman-Demi
ABCDEabcde?*012345'
 Bookman-DemItalic
*ABCDEabcde?*012345'*
 Bookman-Light
 ABCDEabcde?*012345'
 Bookman-LightItalic
*ABCDEabcde?*012345'*
 Candid
 !@#%&'()+,-./:;<=>?`~{|}~ 012345
 Chicago
ABCDE abcde?*012345'
 Clarendon
ABCDEabcde?*012345'
 Clarendon-Bold
ABCDEabcde?*012345'
 Clarendon-Light
 ABCDEabcde?*012345'
 CooperBlack
ABCDEabcde?*012345'
 CooperBlack-Italic
ABCDEabcde?*012345'
 Copperplate-ThirtyThreeBC
ABCDE ABCDE?*012345'
 Copperplate-ThirtyTwoBC
 ABCDE ABCDE?*012345'
 Coronet-Regular
*ABCDEabcde?*012345'*
 Courier
 ABCDEabcde?*012345'
 Courier-Bold
ABCDEabcde?*012345'
 Courier-BoldOblique
ABCDEabcde?*012345'
 Courier-Oblique
*ABCDEabcde?*012345'*
 Eurostile
 ABCDEabcde?*012345'
 Eurostile-Bold
ABCDEabcde?*012345'
 Eurostile-BoldExtendedTwo
ABCabcde?*0123'
 Eurostile-ExtendedTwo
 ABCDabcde?*0123'
 Geneva
 ABCDEabcde?*012345'
 GillSans
 ABCDEabcde?*012345'

GillSans-Bold
ABCDEabcde?*012345'
 GillSans-BoldCondensed
ABCDEabcde?*012345'
 GillSans-BoldItalic
ABCDEabcde?*012345'
 GillSans-Condensed
 ABCDEabcde?*012345'
 GillSans-ExtraBold
ABCDEabcde?*012345'
 GillSans-Italic
*ABCDEabcde?*012345'*
 GillSans-Light
 ABCDEabcde?*012345'
 GillSans-LightItalic
*ABCDEabcde?*012345'*
 Goudy
 ABCDEabcde?*012345'
 Goudy-Bold
ABCDEabcde?*012345'
 Goudy-BoldItalic
ABCDEabcde?*012345'
 Goudy-ExtraBold
ABCDEabcde?*012345'
 Goudy-Italic
*ABCDEabcde?*012345'*
 Helvetica
 ABCDEabcde?*012345'
 Helvetica-Bold
ABCDEabcde?*012345'
 Helvetica-BoldOblique
ABCDEabcde?*012345'
 Helvetica-Condensed
 ABCDEabcde?*012345'
 Helvetica-Condensed-Bold
ABCDEabcde?*012345'
 Helvetica-Condensed-BoldObl
ABCDEabcde?*012345'
 Helvetica-CondensedOblique
*ABCDEabcde?*012345'*
 Helvetica-Narrow
 ABCDEabcde?*012345'
 Helvetica-Narrow-Bold
ABCDEabcde?*012345'
 Helvetica-Narrow-BoldOblique
ABCDEabcde?*012345'
 Helvetica-Narrow-Oblique
*ABCDEabcde?*012345'*
 Helvetica-Oblique
*ABCDEabcde?*012345'*
 HoeflerText-Black
ABCDEabcde?*012345'
 HoeflerText-BlackItalic
ABCDEabcde?*012345'
 HoeflerText-Italic
*ABCDEabcde?*012345'*
 HoeflerText-Ornaments

 HoeflerText-Regular
 ABCDEabcde?*012345'
 JoannaMT
 ABCDEabcde?*012345'
 JoannaMT-Bold
ABCDEabcde?*012345'
 JoannaMT-BoldItalic
ABCDEabcde?*012345'
 JoannaMT-Italic
*ABCDEabcde?*012345'*
 LetterGothic
 ABCDEabcde?*012345'
 LetterGothic-Bold
ABCDEabcde?*012345'
 LetterGothic-BoldSlanted
ABCDEabcde?*012345'
 LetterGothic-Slanted
*ABCDEabcde?*012345'*
 LubalinGraph-Book
 ABCDEabcde?*012345'
 LubalinGraph-BookOblique
*ABCDEabcde?*012345'*
 LubalinGraph-Demi
ABCDEabcde?*012345'
 LubalinGraph-DemiOblique
ABCDEabcde?*012345'
 Marigold
 ABCDEabcde?*012345'
 MonaLisa-Recut
 ABCDEabcde?*012345'
 Monaco
 ABCDEabcde?*012345'
 NewCenturySchlbk-Bold

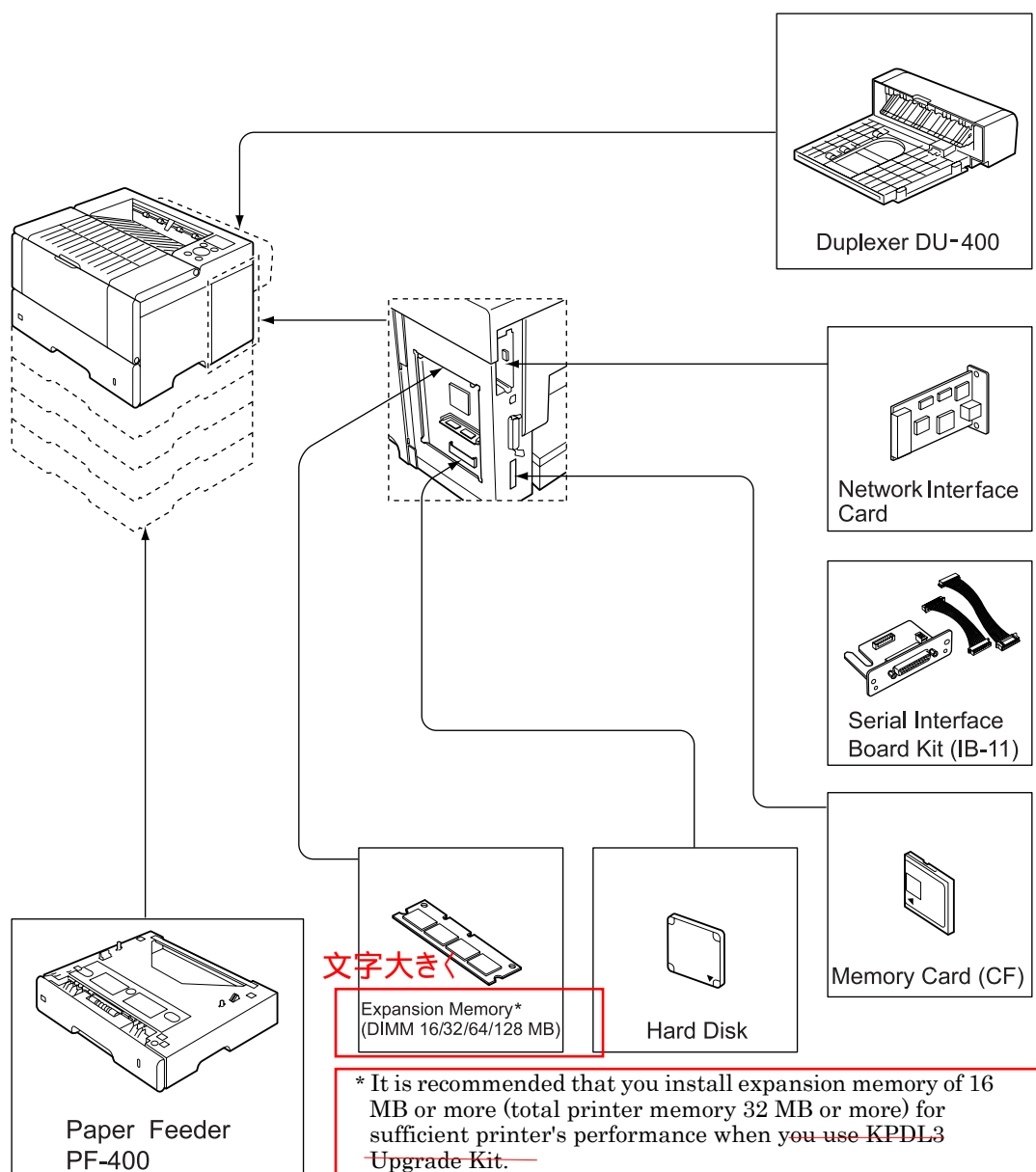
NewCenturySchlbk-BoldItalic
ABCDEabcde?*012345'
 NewCenturySchlbk-Italic
*ABCDEabcde?*012345'*
 NewCenturySchlbk-Roman
 ABCDEabcde?*012345'
 New York
 ABCDEabcde?*012345'
 Optima
 ABCDEabcde?*012345'
 Optima-Bold
ABCDEabcde?*012345'
 Optima-BoldItalic
ABCDEabcde?*012345'
 Optima-Italic
*ABCDEabcde?*012345'*
 Oxford
 ABCDEabcde?*012345'
 Palatino-Bold
ABCDEabcde?*012345'
 Palatino-BoldItalic
ABCDEabcde?*012345'
 Palatino-Italic
*ABCDEabcde?*012345'*
 Palatino-Roman
 ABCDEabcde?*012345'
 StempelGaramond-Bold
ABCDEabcde?*012345'
 StempelGaramond-BoldItalic
ABCDEabcde?*012345'
 StempelGaramond-Italic
*ABCDEabcde?*012345'*
 StempelGaramond-Roman
 ABCDEabcde?*012345'
 Symbol
 ABXΔEαβχδε?*012345
 Taffy
 ABCDEabcde?*012345'
 Times-Bold
ABCDEabcde?*012345'
 Times-BoldItalic
ABCDEabcde?*012345'
 Times-Italic
*ABCDEabcde?*012345'*
 Times-Roman
 ABCDEabcde?*012345'
 TimesNewRomanPS-BoldItalicMT
ABCDEabcde?*012345'
 TimesNewRomanPS-BoldMT
ABCDEabcde?*012345'
 TimesNewRomanPS-ItalicMT
*ABCDEabcde?*012345'*
 TimesNewRomanPSMT
 ABCDEabcde?*012345'
 Univers
 ABCDEabcde?*012345'
 Univers-Bold
ABCDEabcde?*012345'
 Univers-BoldExt
ABCDEabcde?*012345'
 Univers-BoldExtObl
ABCDEabcde?*012345'
 Univers-Condensed
 ABCDEabcde?*012345'
 Univers-Condensed-Bold
ABCDEabcde?*012345'
 Univers-CondensedBoldOblique
ABCDEabcde?*012345'
 Univers-CondensedOblique
*ABCDEabcde?*012345'*
 Univers-Extended
 ABCDE abcde?*012345'
 Univers-ExtendedObl
ABCDEabcde?*012345'
 Univers-Light
 ABCDE abcde?*012345'
 Univers-LightOblique
*ABCDEabcde?*012345'*
 Univers-Oblique
*ABCDEabcde?*012345'*
 Wingdings-Regular

 ZapfChancery-MediumItalic
*ABCDEabcde?*012345'*
 ZapfDingbats


Appendix B Option Units

This appendix explains how to install each option unit. Also see the manuals of the respective option units.

Available Options

The printer has the following options available. For instructions on installing individual options, see the following section on page [B-3](#) and documentation included with the option.



KPDLは標準なので、KPDLエミュレーションで印刷を行う場合は…の文章変更して、次ページの説明に盛り込む。

Appendix B Option Units

PF-400 Paper Feeder

Holds up to 250 sheets of A3, B4, A4 (long-edge feed), A4R (Short-edge feed), B5, A5, and OTHER (148 to 297 mm × 216 to 432 mm) size paper. Up to four paper feeders can be attached to the bottom of the printer.

DU-400 Duplexer

Enables duplex printing. This is installed at the rear of the printer.

Network Interface Card

Is used to communicate using the network protocols such as NetWare, TCP/IP or EtherTalk. This allows various types of computers (Windows, UNIX, Macintosh, etc.) to print via network. This is installed at the rear of the printer.

Hard Disk Unit

Enables such e-MPS functions as the electronic sorting and job retention functions. This is installed into the slot designed for it on the main circuit board of the printer. See your dealer for purchasing information regarding the hard disk units that are best suited for use with this printer.

Memory Card (CF)

This is a microchip card that may contain option fonts, macros, and forms. Insert the memory card into the memory card slot located on the rear of the printer. See your dealer for purchasing information regarding the memory cards that are best suited for use with this printer.

Expansion Memory DIMM

This is installed into the expansion memory slot located on the main circuit board of the printer. See your dealer for purchasing information of the DIMMs that are best suited for use with this printer.

IB-11 Serial Interface Board

Connect to the computer's serial printer port with a serial cable.

Installing Option Units

Expansion Memory

The printer is equipped with 16 MB memory as standard. By installing the expansion memory, you can increase RAM disk capacity and speed up the printing process of multiple copies using the electronic sorting function. Expanded printer memory also enables you to print more complex pages, download more fonts, and define more macros.

The main circuit board of the printer is equipped with a socket for memory expansion. Expansion memory is available in the form of DIMMs. By installing option expansion memory in the slot, you can expand the total of printer memory up to 144 MB (when 128 MB of expansion memory is installed).

CAUTION

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.

Printer memory can be expanded up to 144 MB. See your Kyocera Mita dealer for purchasing information of the DIMMs that are best suited for use with this printer.

NOTE

The following instructions are intended for the technician only.

Notes on Handling the Main Circuit Board and DIMM

Static electricity could easily damage such semiconductor products as memory. Take these precautions when you handle the main circuit board and DIMM.

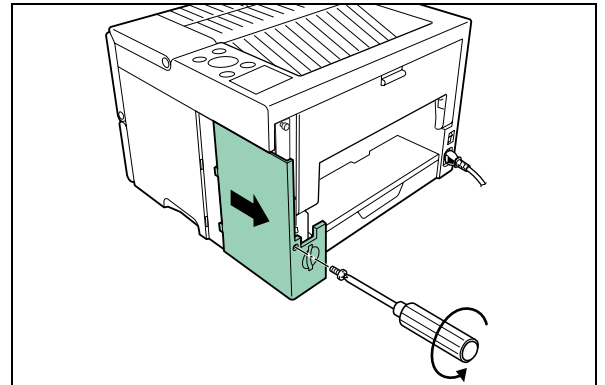
- Keep DIMM in an antistatic bag. Take it out only when you install it.
- Before touching the main circuit board and DIMM, touch a water pipe or other large metal object to discharge yourself of static electricity. While doing the work, it is recommended that you wear an antistatic wrist strap.
- Touch the main circuit board and DIMM only at the edges.



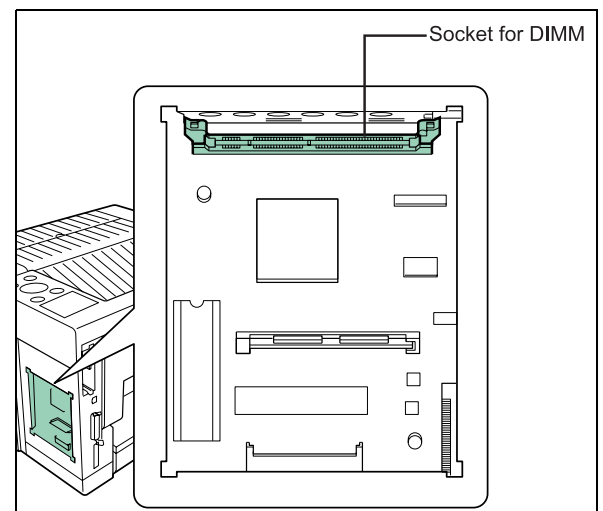
Installing DIMMs

The DIMM is installed in the socket of the main circuit board. Install the DIMM into the board as follows.

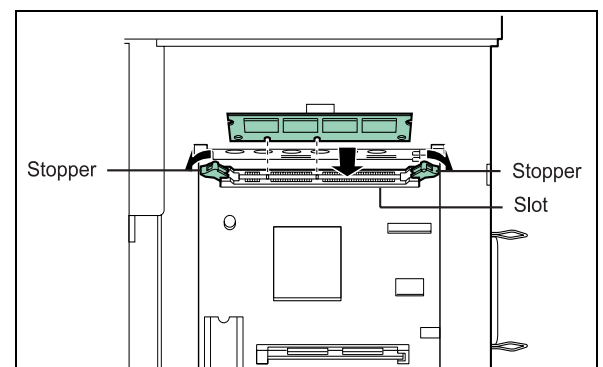
- 1 Turn off the printer and disconnect the power cord and printer cable.
- 2 Remove the screw from the printer's right side cover and pull the side cover.



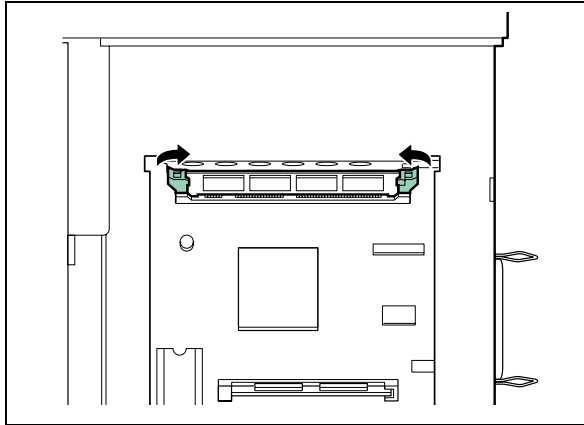
Make sure that there is a dedicated socket on the main circuit board.



- 3 Remove the DIMM from its package.
- 4 Open the stoppers on both ends of the DIMM socket, then insert the DIMM into the socket, so that the notches on the DIMM align with the corresponding protrusions in the socket.



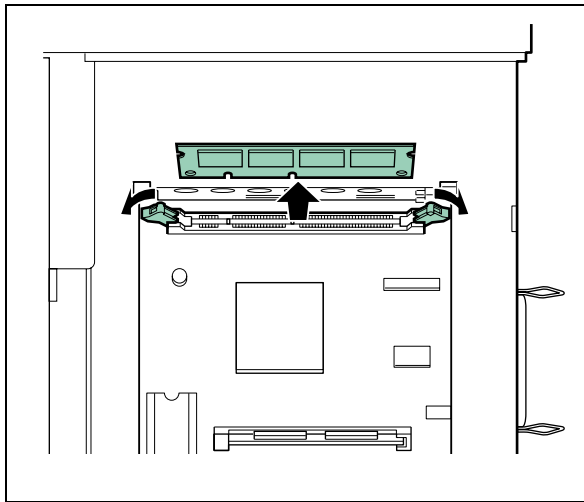
- 5 Close the stoppers of the DIMM socket to secure the DIMM.



- 6 When you finish installing the DIMM, reinsert the side cover into the printer by reversing the removal procedure.

Removing DIMMs

To remove a DIMM, carefully pull the end stoppers outwards, then pull the DIMM out of the socket.



Testing the Expansion Memory

After you finish installing DIMMs in the printer, test the printer to see if the installation was successful. To test the expansion memory, proceed as follows:

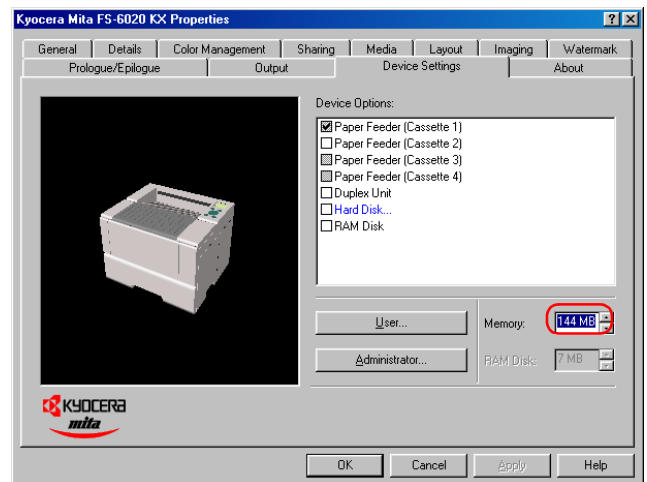
- 1 Make sure printer is turned off. Plug the power cord into the printer and turn the printer on.
- 2 Press the **MENU** key on the operator panel.
- 3 Press the **▲** or **▼** key repeatedly until **Print Status Page** appears.
- 4 Press the **ENTER** key twice.
- 5 If the installation was successful, the amount of memory shown on the status page will correspond with the amount of expanded memory. (The factory installed memory size is 16 MB.)

Setting 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.

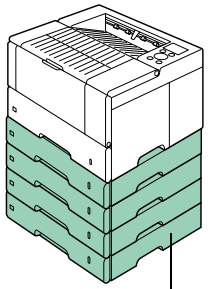
- 1 Click the Windows **Start** button, point to **Settings** then click **Printers**.
- 2 Right click the **Kyocera Mita FS-6020 KX** icon, and click **Properties**.

The **Properties** dialog box will open. Click the **Device Settings** tab.
- 3 Enter the total memory size installed to the printer (up to 144 MB) in the **Memory** box.



PF-400 Paper Feeder

PF-400 Paper Feeder can be installed below the printer.

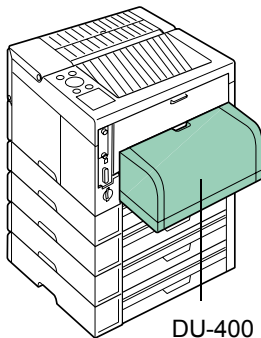


PF-400

For details of installing the optional paper feeder in the printer, see the [PF-400 Operation Guide](#).

DU-400 Duplexer

DU-400 Duplexer can be installed to rear of the printer.



DU-400

For details of installing the optional duplexer unit in the printer, see the [DU-400 Operation Guide](#).

Network Interface Card

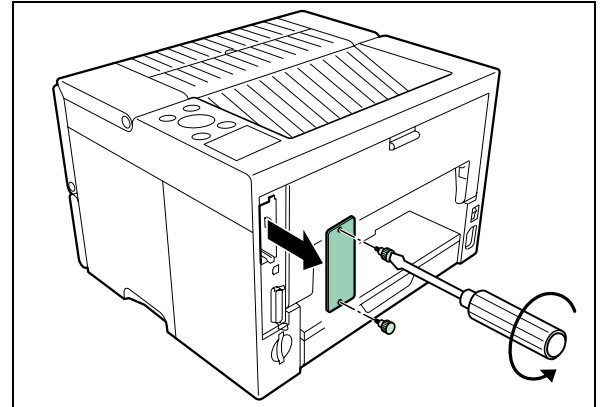
Option network interface card is installed in the option interface slot located at the rear of the printer. Take the following steps to install option network interface cards. And also refer to the documentation included with the option.

NOTE

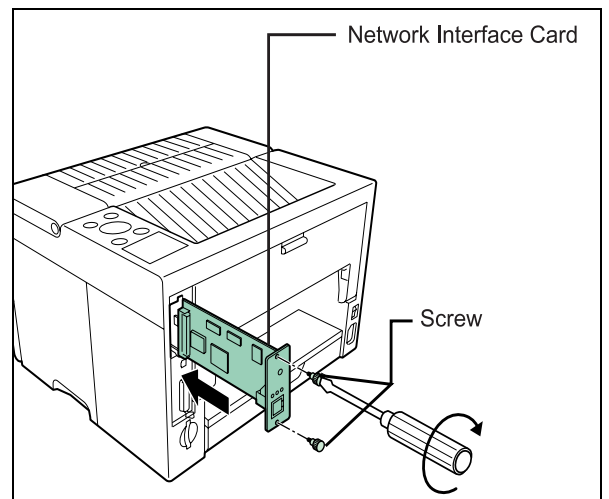
- The network interface card should be installed only by a Kyocera Mita authorized dealer or Kyocera Mita certified technician. Kyocera Mita shall not be liable for damage due to improper installation of the network interface card.
- The following instructions are intended for the technician only.

- 1 Turn off the printer and disconnect the power cord and printer cable.

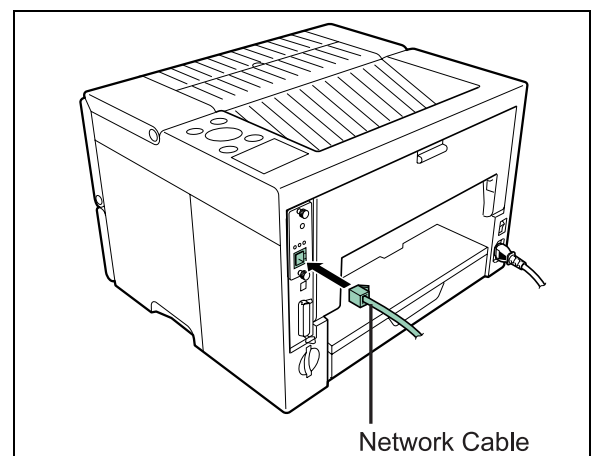
- 2 Remove the screws from the printer's option interface slot cover to remove the cover.



- 3 Insert the network interface card and secure it with the screws removed in step 2.



- 4 Connect the network cable. Then, re-connect the power cord to the outlet and the printer cable.



- 5 Turn on the printer and then set the network address from the printer operator panel (for details about the modes, see [Changing Option Network Interface Parameters on page 1-44](#)).

Hard Disk

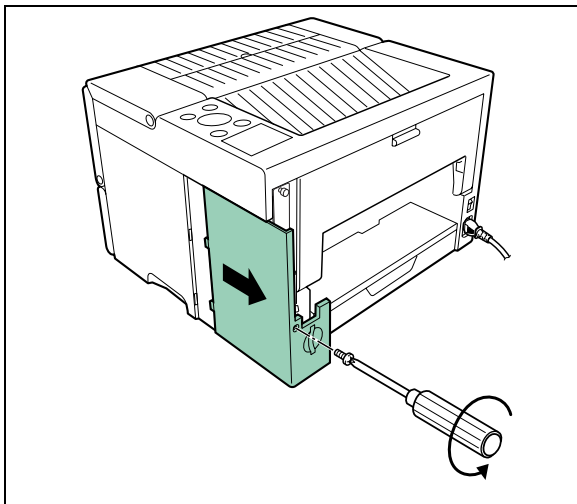
Insert the hard disk into its slot on the main circuit board of the printer. If a hard disk unit is installed in the printer, received data can be rasterized and stored on this hard disk. This enables high-speed printing of multiple copies using an electric sort function. Also, you can use the e-MPS functions. For details, see *e-MPS on page 1-35*.

For details of available hard disk, see your dealer.

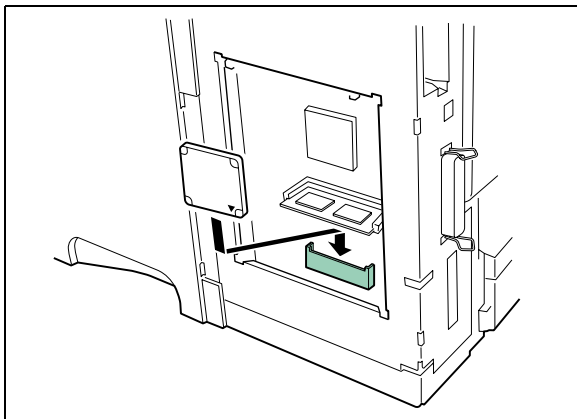
NOTE

- The network interface card 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 network interface card.
- The following instructions are intended for the technician only.

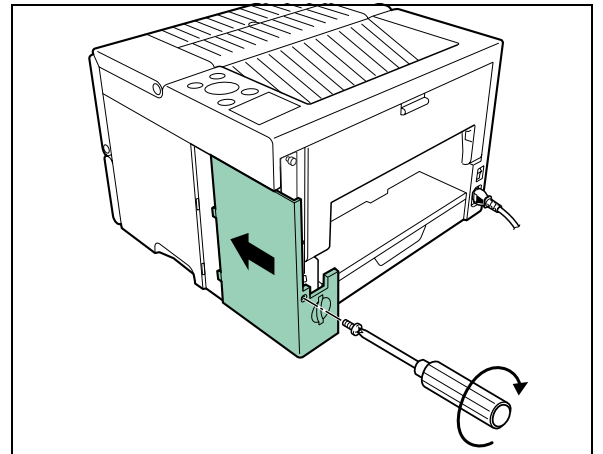
- 1 Turn off the printer and disconnect the power cord and printer cable.
- 2 Remove the screw from the printer's right side cover and pull the side cover.



- 3 Insert the optional hard disk unit into the slot.



- 4 Replace the right side cover on the printer and tighten the screw to secure the hard disk unit in the reverse order of removal in step 2 above.



Format the installed hard disk. For details, see *Operating Option Hard Disk on page 1-49*.

Memory Card

Insert the memory card into the memory card slot located on the rear side of the printer. A memory card is a microchip card that may contain option fonts, etc. The printer reads the contents of the card into its internal memory when the printer is turned on.

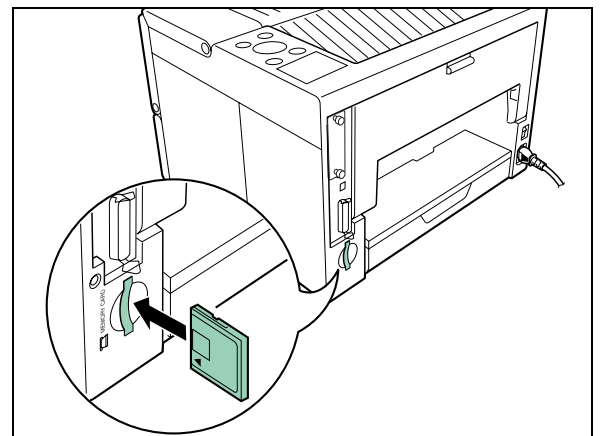
For details of available memory cards, see your dealer.

- 1 Turn off the printer.

NOTE

Do not insert or remove a memory card while power is on. If the memory card is removed while the printer is on, damage could result in the printer's electronics or the memory card.

- 2 Insert the memory card in the slot. Insert it as its surface facing toward the left, connector end first. Push it in all the way.



Format the installed memory card. For details, see *Operating Memory Card on page 1-46*.

Appendix C Host Computer Interface

This appendix explains the signals used in the printer's parallel, USB, and serial (option) interfaces. It also lists pin assignments, signal functions, timings, connector specifications, and voltage levels.

This appendix explains the following topics:

- Parallel Interface
- USB Interface
- Serial Interface (option)

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 [Changing Parallel Interface Modes on page 1-43](#).

NOTE

Use a parallel printer cable that complies with the IEEE1284 standard.

Auto (default)

The printer automatically changes its communication mode to the one the host computer is currently using.

Normal

The printer uses the standard communication method prescribed for Centronics interfaces.

High-speed

This mode enables faster data transmission between the printer and the host computer. (Select this mode if printing problems occur when the printer is connected to a workstation.)

Nibble (high)

High speed data communication is used in compliance with the IEEE1284 standard. Ordinarily, you should leave this setting unchanged.

Interface Signals

The pins of the parallel interface connector carry the signals listed in the following table [Parallel Connector Pin Assignment](#). 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.

Parallel Connector Pin Assignment

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 [PError], returns paper empty status if FRPO O2=2
13	Out	Online (Select) [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]

[]: 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.

Appendix C Host Computer Interface

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.

Online [Select] (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 [Serial and Parallel total], 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 USB 2.0. 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 Full-Speed USB 2.0 and not longer than 5 meters (16 feet).

Transfer Mode

Full speed (max. 12 Mbps)

Power Control

Self-power device

Interface Signals

USB Connector Pin Assignment

Pin	Signal	Description
1	Vbus	Power supply (+5 V)
2	D-	Data transmission
3	D+	Data transmission
4	GND	Signal ground
Shell		Shield

Serial Interface (Option)

Installing the optional 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.

Serial Connector Pin Assignment

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

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.

Appendix C Host Computer Interface

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 page. 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

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

The factory setting is "None" (0 on the status page).

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

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.

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.

		Serial interface error	
		Error not handled	Error handled
Timing of XON transfer to host while Ready or Waiting	XON sent every 3-5 seconds	D0=0 (default)	D0=1
	XON not sent	D0=10	D0=11

RS-232C Cable Connection

Obtaining 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 door knob.
- 2 Remove the plastic cap from the printer's RS-232C interface connector.
- 3 Plug the printer end of the RS-232C interface cable into the printer's RS-232C connector and screw it in place.
- 4 Plug the other end of the cable into the computer's RS-232C interface connector.
- 5 Switch on the printer's power.
- 6 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

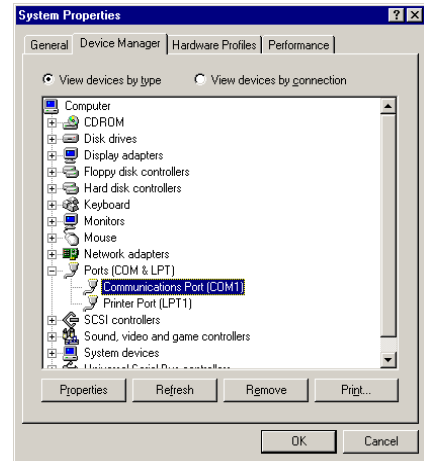
The two RS-232C protocols are XON/XOFF and DTR. The printer performs both of them simultaneously, using positive logic for DTR.

If you are uncertain as to the printer's current parameter settings, you can reset them to the values listed above. See *Changing Serial Interface Parameters on page 1-43*.

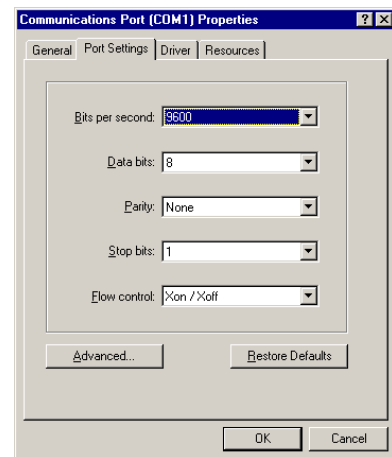
- 7 Set the computer to the same parameters as the printer. On many computers this can be done by setting DIP switches before the power is turned on. Another method is as follows:

With Windows 95/98/Me, make settings as follows:

- 1 Click on the **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 the **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 the **OK** button.

Appendix C Host Computer Interface

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 D Specifications

Specifications

Specifications

Item	Description
Printing method	Electrophotography, laser scan
Printing speed (): MP tray	A4/Letter: 20 (20) pages/minutes B4 : 12 (12) pages/minutes A3 : 11 (11) pages/minutes
Resolution	Fast 1200 mode 600 dpi with KIR (Kyocera Image Refinement) 300 dpi with KIR (Kyocera Image Refinement)
First print (A4)	Up to 22 seconds (Depending on the data to be printed)
Warm-up time (at 23°C)	Approx. 60 seconds or less (from power on) at 23 °C, 120 or 230 V
Controller	PowerPC 405 (200 MHz)
Main memory	16 MB, expandable up to 144MB
Operating system	Windows 95/98/ME, Windows NT/2000/XP, Macintosh, Linux
Interfaces	Parallel: IEEE1284 USB: Full-Speed USB 2.0 Option: Network interface card (KUIO-LV)
Memory card slot	One Memory card (CF)
Hard disk slot	1 (Microdrive)
Self test	Performed at power-up
Maximum duty cycle	65,000 pages/month
Drum	OPC
Developer	Mono-component dry developer
Main charger	Positive scorotron charger
Transferring	Negative charger roller
Separation	Small diameter separation and DC brush 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 Selection)
Paper feed trays	Cassette : A5 to A3/Ledger size universal cassette. Holds approx. 250 sheets of thickness 0.11 mm MP tray : 88 × 148 mm (3-1/2 × 5-13/16") to 297 × 450 mm (11-11/16 × 17-3/4") (See page 2-2). Holds approx. 100 sheets of thickness 0.11 mm

Appendix D Specifications

Item	Description
Capacity of output tray	Face-down tray: Approx 250 sheets of thickness 0.11 mm
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 (6500 feet) Illumination : Max. 1,500 lux
Power requirements	120 V, 60 Hz, max. 10.8 A (U.S.A./Canada) 220-240 V, 50 Hz/60 Hz, max. 7.2 A (European countries) 9.4 Max. allowable voltage fluctuation: ±10 % Max. allowable frequency fluctuation: ±2 %
Power consumption	Max.: 961 W 893 During printing: 382 W 422 During standby: 21 W 126 During low power mode: 8 W 9.4
Operating noise (in accordance with ISO 7779 [Bystander Position, sound pressure level at the front])	During printing: LpA=54 dB(A) During standby: LpA=31 dB(A) During sleep mode: Immeasurably low
Dimensions	310 (12.2) wide × 467 (18.3) high × 410 mm (16.1 inches) deep
Weight	18 kg (39.7 lb), main unit only

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. Cassette mode is specified as the factory setting, but you can change this setting from the printer's operator panel.

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 6, KC-GL, Line printer, IBM Proprinter, DIABLO 630, EPSON LQ-850, and KPDL.

Expansion memory

This option is used to increase printer memory. The printer has two expansion sockets, into both of which you can install a 16 MB, 32 MB, 64 MB, or 128 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. If there is paper inserted in the MP tray, the all paper will always feed from there even if another paper source is selected.

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

Kyocera Mita Digital Library

This is contained on the CD-ROM supplied with the printer. The contents of the CD-ROM include manuals, printer drivers, and various utilities.

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 Kyocera Mita Digital Library 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.

Glossary

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 Kyocera Mita Digital Library 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).

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.

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