KYOCERA

FS-9130DN
FS-9530DN

Advanced Operation Guide

Contents

Introduction

This guide has the following chapters:

- 1 Handling Paper

  Explains how to choose, handle and load paper.

- 2 Using the Operation Panel

  Explains how to use the operation panel to configure the printer.

- 3 Fonts

  Shows the available fonts.

- 4 Options

  Shows the available options.

- 5 Computer Interface

  Describes the possible connections between the printer and your computer.

- Glossary

  A Glossary of terms used is provided here.

Conventions

This manual uses the following conventions:

Convention	Description	Example
Italic Typeface	Used to emphasize a key word, phrase or references to additional information.	Close the *top cover*. Refer to *Toner Container Replacement on page 3-3*.
Courier Typeface	Used to denote messages or names displayed on the operation panel.	Replace the waste toner box when the `Check waste toner box` message is displayed.
Bracket Bold Text Typeface	Used to denote operation panel keys.	Press **[Go]**.
Bold Typeface	Used to emphasize button or items to be selected in dialog boxes, and titles displaying in dialog boxes.	Click **Next**.
Notes	Used to provide additional or useful information about a function or feature.	**NOTE:** For information about storing the pin, refer to step 10.
Important	Used to provide important information.	**IMPORTANT:** Ensure paper is not folded, curled, or damaged.
Caution	Cautions are statements that suggest *mechanical* damage as a result of an action.	**CAUTION:** Do not pull the cassette out when holding the front of the machine.
Warning	Used to alert users to the possibility of *personal* injury.	**WARNING:** High voltage is present in the charger section.

1 Handling Paper

This chapter explains the following topics:

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/m^2).
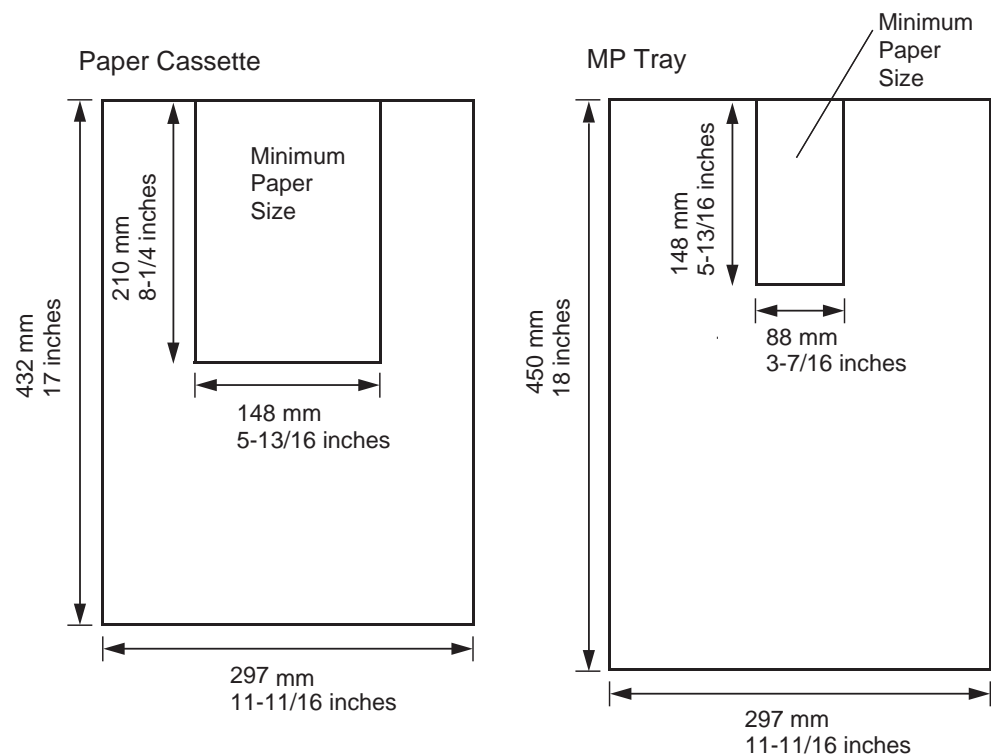
Paper Specifications

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: 45 to 200 g/m^2 (12 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

Minimum and maximum paper sizes

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

Paper Cassette

210 mm 8-1/4 inches

Minimum Paper Size

432 mm 17 inches

148 mm 5-13/16 inches

297 mm 11-11/16 inches

MP Tray

Minimum Paper Size

148 mm 5-13/16 inches

450 mm 18 inches

88 mm 3-7/16 inches

297 mm 11-11/16 inches

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

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

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

Composition

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

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

Paper Sizes

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

MP tray	Size	Cassette or MP tray	Size
Envelope Monarch	3-7/8 × 7-1/2 inches	Ledger	11 × 17 inches
Envelope #10	4-1/8 × 9-1/2 inches	Legal	8-1/2 × 14 inches
Envelope #9	3-7/8 × 8-7/8 inches	Letter	8-1/2 × 11 inches
Envelope #6	3-5/8 × 6-1/2 inches	Statement	5-1/2 × 8-1/2 inches
Envelope DL	110 × 220 mm	Folio	210 × 330 mm
Envelope C5	162 × 229 mm	A3	297 × 420 mm
A6	105 × 148 mm	A4	210 × 297 mm
B6	128 × 182 mm	A5	148 × 210 mm

MP tray	Size	Cassette or MP tray	Size
ISO B5	176 × 250 mm	B4	257 × 364 mm
Executive	7-1/4 × 10-1/2 inches	B5	182 × 257 mm
Envelope C4	229 × 324 mm	Oficio II	8-1/2 × 13 inches
Hagaki	100 × 148 mm		
Oufuku Hagaki	148 × 200 mm		
Youkei 2	114 × 162 mm		
Youkei 4	105 × 235 mm		
8K	273 × 394 mm		
16K	197 × 273 mm		

Paper with other sizes (custom sizes) can also be fed from the MP tray. The minimum size paper for manual feed is 88 × 148 mm (3-1/2 × 5-13/16 inches), fed lengthwise. The maximum size is 297 × 450 mm (11-11/16 × 17-3/4 inches).

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/m^2 for the paper cassette, and 45 to 200 g/m^2 for the MP tray.

Paper Weight Equivalence Table

The paper weight is listed in pounds (lb) and metric grams per square meter (g/m^2). The shaded part 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.

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
Colored paper	Color
Preprinted paper	Preprinted
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 preprinted 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.

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

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°

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.

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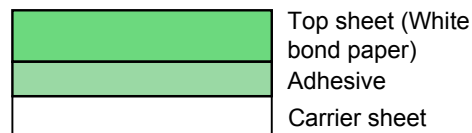
Adhesive label paper must be entirely covered by its top sheet, with no spaces between the individual labels. Labels with spaces in between are apt to peel off, causing serious paper jam problems.

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.
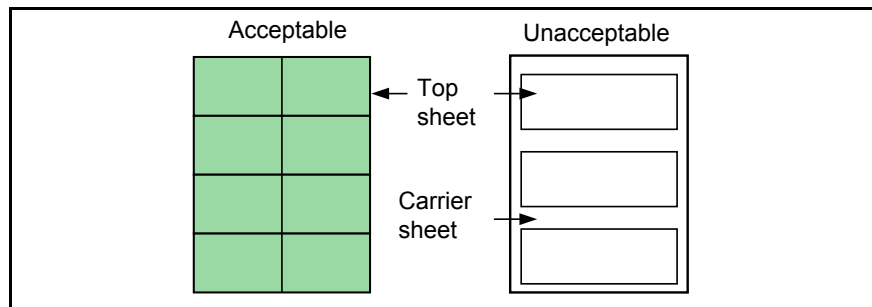
The table below lists the specifications for adhesive label paper.

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)

Postcards

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

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

Envelopes

The printer can print on envelopes using paper with a basis weight of 60 to 79 g/m^2 (16 to 21 lb/ream). Envelopes must be manually fed.

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

Many envelopes have a diagonal grain orientation (Refer to *Paper Grain on page 1-7*). This orientation is more likely to wrinkle and crease on its way through the printer. Before purchasing envelopes for use with the printer, test a sample to verify the envelope's suitability.

Do not use envelopes that have an encapsulated liquid adhesive.

Avoid long printing runs consisting of envelopes only. Extensive envelope printing can cause premature printer wear. To avoid jamming due to curled envelopes, do not leave more than approximately 10 printed envelopes stacked in the paper trays during multiple envelope printing.

Thick Paper

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

NOTE: If the paper jams even after you smooth it out, load the paper in the *MP Tray* with the leading edge raised up a few millimeters as shown in the illustration.

Colored Paper

Colored paper should satisfy the same conditions as white bond paper, listed in *Paper Specifications on page 1-3*. In addition, the pigments used in the paper must be able to withstand the heat of fusing during the printing process (up to 200 °C or 392 °F).

Preprinted Paper

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

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

Recycled Paper

Select recycled paper that meets the same specifications as the white bond paper (refer to *Paper Specifications on page 1-3*) except whiteness.

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

Media 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 operation 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. Refer to *Creating Custom Paper Type on page 2-82*.

The following types of paper can be set.

Paper source — Media Type	MP tray	Paper Cassette	Paper Weight	Duplex path (MP tray available only in Cassette mode)
Plain	Yes	Yes	Normal 2	Yes
Transparency	Yes	No	Extra Heavy	No
Preprinted	Yes	Yes	Normal 2	Yes
Labels	Yes	No	Heavy 1	No
Bond	Yes	Yes	Normal 3	Yes
Recycled	Yes	Yes	Normal 2	Yes
Vellum	Yes	Yes	Light	No
Rough	Yes	Yes	Normal 3	Yes
Letterhead	Yes	Yes	Normal 2	Yes
Color	Yes	Yes	Normal 2	Yes
Prepunched	Yes	Yes	Normal 2	Yes
Envelope	Yes	No	Heavy 2	No
Cardstock	Yes	No	Heavy 2	No
Thick	Yes	No	Heavy 2	No
High quality	Yes	Yes	Normal 2	Yes
Custom 1 (to 8)*	Yes	Yes	Normal 2	Yes
Yes: Can be used No: Cannot be used				

* This is a paper type defined and registered by the user. Up to eight types of user settings may be defined. For details, refer to *Creating Custom Paper Type on page 2-82*.

Loading Paper

The following explains the produre for loading paper. Paper can be loaded into the two paper cassettes and the MP tray.

IMPORTANT: Fan the paper, then tap it on a level surface. This avoid media jams or skewed printing.
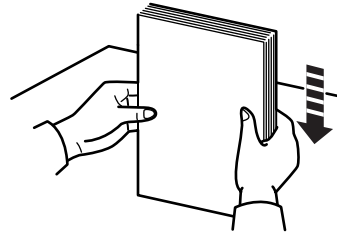
Loading Paper into the Paper Cassette

Up to about 500 sheets of standard paper (80 g/m^2) can be loaded into the each paper cassette.
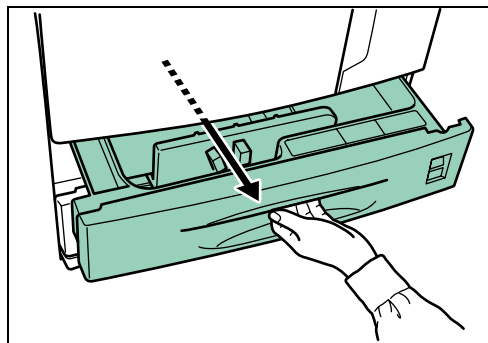
Inch specifications

Each paper cassette can be set to hold paper of any desired size from 11 × 17 to 5-1/2 × 8-1/2".

Metric specifications

Each paper cassette can be set to hold paper of any desired size from A3 to A5R.

1 Pull the paper cassette out toward you as far as it will go. Do not pull more than one paper cassette out at a time.
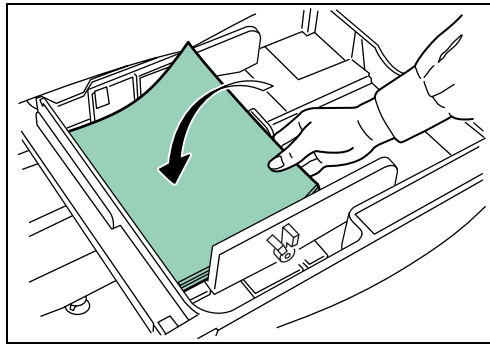
2 Hold the paper guide and move it to align the paper guide with the required paper width. Paper sizes are marked inside the paper cassette.
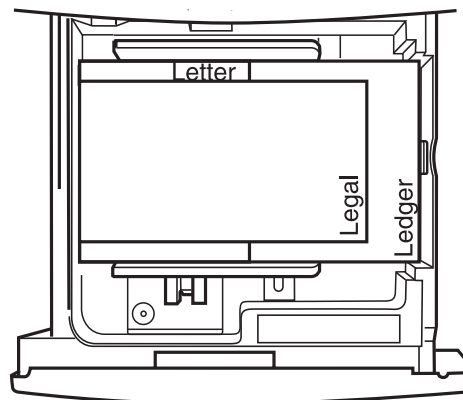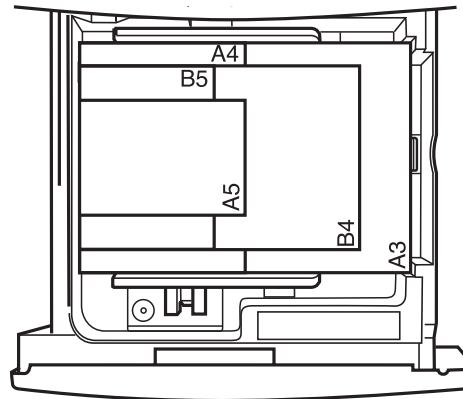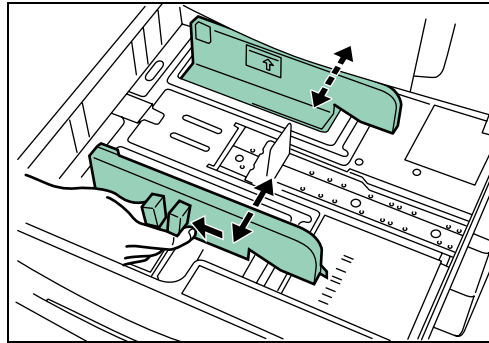
3 Hold the paper stopper and move it to align with the required paper length.
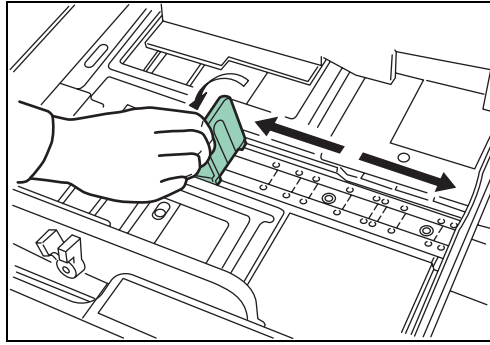
**4** Set the paper flush against the left-hand wall of the paper cassette.

IMPORTANT: There is a sticker (⇧ in the illustration) indicating paper capacity attached to the inside of the paper cassette. Do not load paper above this limit.
When loading paper into the paper cassette, make sure that the print side is facing upward. (The print side is the side facing upward when the package is opened.)
Check that the paper guide makes secure contact with the paper. If there is a gap, adjust the position of the paper guide.
If small-size paper jams occur frequently under high temperature and high humidity conditions, reduce the number of sheets to the level line indicated on the sticker ⇧.
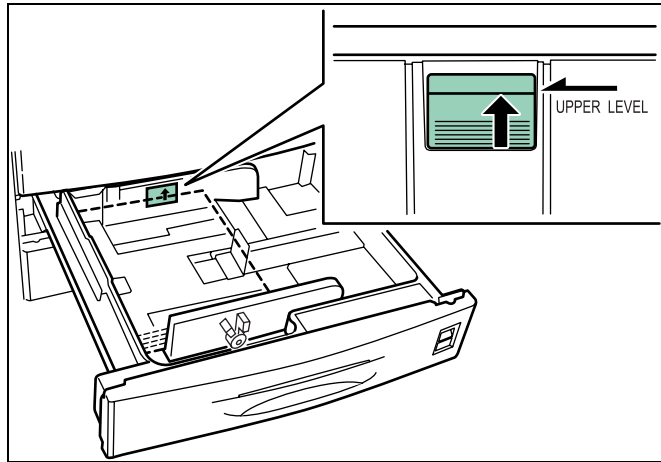
5 Set the supplied paper size plate so that the size of the paper loaded can be checked by looking at the front of the paper cassette.
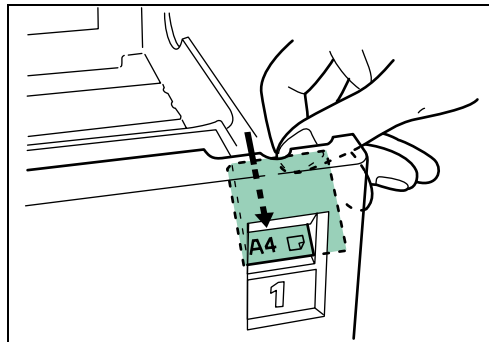
6 Push the paper cassette back until it stops.

NOTE: Before leaving the printer in disuse for a prolonged period of time, remove the paper from the paper cassette(s) and seal it in its original packaging to protect from moisture. Also, when storing paper in a high temperature and high humidity environment, seal it in a moisture-proof bag.

Loading Paper into the MP (Multi-Purpose) Tray

Special paper as well as standard paper can be loaded into the MP tray. When printing onto transparencies or thick paper, be sure to use the MP tray.

IMPORTANT: When setting special paper, such as transparencies and thick paper, into the MP tray, select the type of paper by referring to *Media Type on page 1-13*.

NOTE: The number of sheets of standard paper that can be loaded in the MP tray at a time is approximately 200. When using transparencies, load a single sheet at a time.
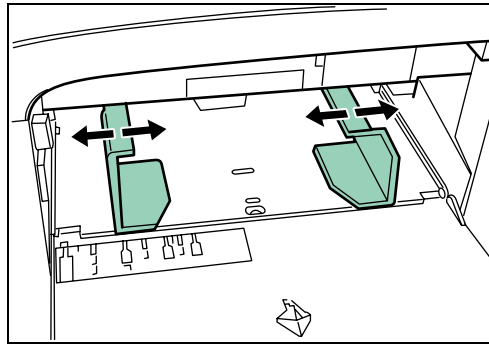
1 Fan the paper, then tap it on a level surface to avoid media jams or skewed printing.
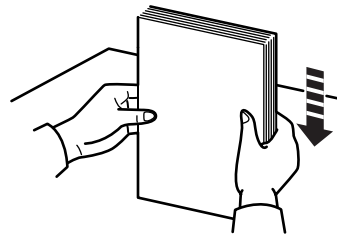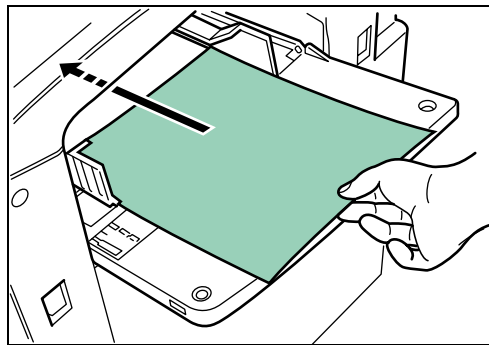

2 Open the MP tray.
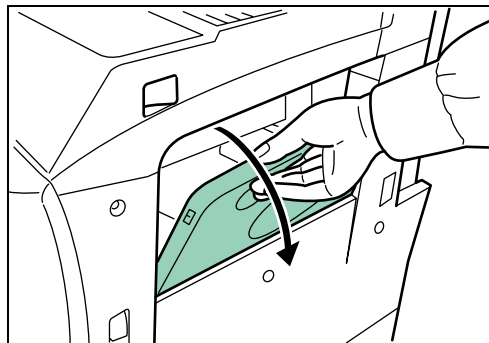
3   Adjust the insert guides to the size of the paper to be loaded.

4   Insert the paper along the guides as far as it will go.

IMPORTANT: When loading paper into the MP tray, make sure that the print side is facing upward. (The print side is the side facing upward when the package is opened.) If the leading edge of the paper is curled, straighten it out before loading the paper in the MP tray.

Setting Envelopes
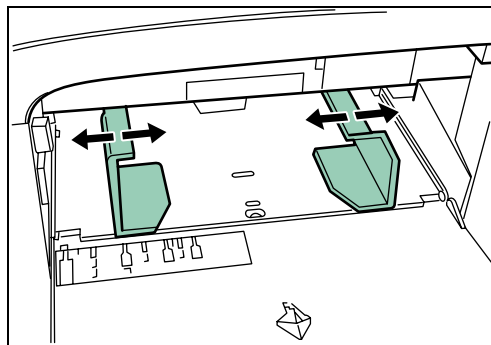
When using the optional printer function, envelopes can be set in the MP tray.

NOTE: Do not print on envelopes with flap adhesive exposed. This can cause printer malfunction.

1 Open the MP tray.
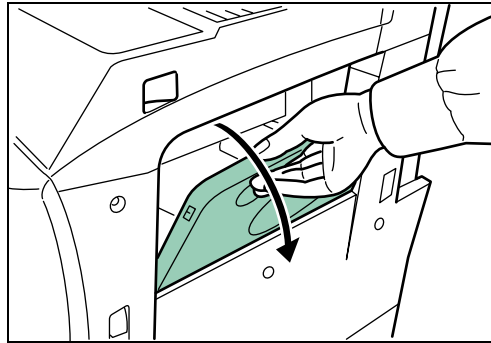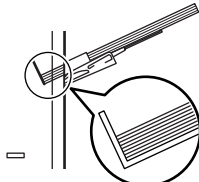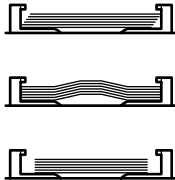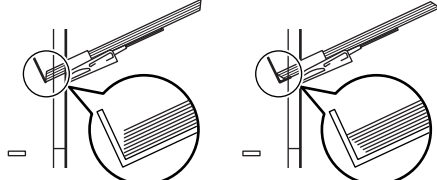
2 Align the insert guides with the envelope size.

3 Position the envelope against the insert guides with the print side facing upward, and insert it as far as it will go.
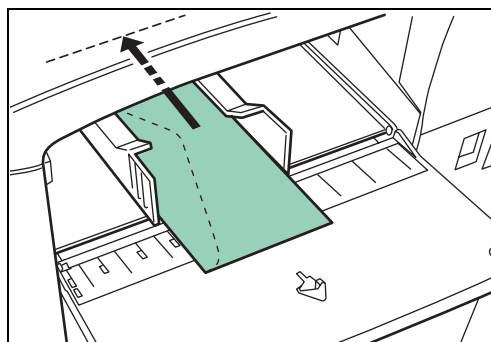
NOTE: Do not load more paper than will fit under the load limits on the inside of the MP tray. If the paper is considerably curled in one direction, for example, if the paper is already printed on one side, try to roll the paper in the opposite direction to counteract the curl. Printed sheets will then come out flat.

Correct		
Incorrect		

2 Using the Operation Panel

This chapter explains the following topics:

Understanding the Operation Panel

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

Operation Indicators (Refer to *page 2-3*)

Message Display
(Refer to *page 2-4*)

READY   DATA   ATTENTION

Ready
---   A4 PLAIN

INTERFACE   SIZE   TYPE

Paper Type Indicator
(Refer to *page 2-7*)
Paper Size Indicator
(Refer to *page 2-5*)

GO

MENU

CANCEL

Interface Indicator
(Refer to *page 2-5*)

Keys (Refer to *page 2-8*)
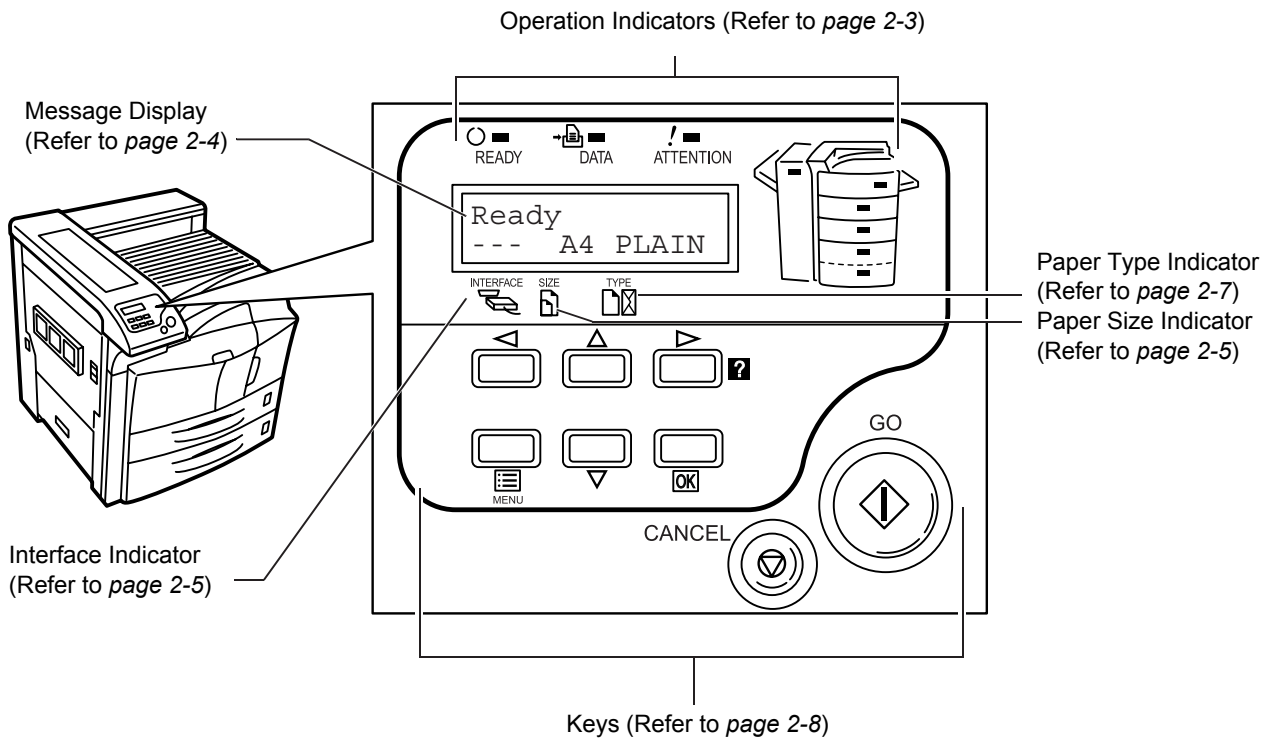
Operation Indicators

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

Indicator	Description
◯ ▬ READY	**Flashing:** Indicates when an error occurs that you can clear by yourself. **Lit:** Indicates that the printer is on-line. The printer prints received data. **Off:** Indicates that the printer is off-line. Data can be received but will not be printed. Also indicates when printing is automatically stopped due to occurrence of an error.
→▤ ▬ DATA	**Flashing:** Indicates data transfer is taking place. **Lit:** Indicates either that data is being processed, or that data is being written to the memory card.
! ▬ ATTENTION	**Flashing:** Indicates when the printer needs maintenance attention or the printer is warming up (Please wait). **Lit:** Indicates when a problem or an error occurs that you can clear by yourself. (For example, paper jam occurs.)
	①**Flashing:** Indicates when no paper is detected. **Fast-Flashing:** Indicates that a paper jam is occurring. **Lit:** Indicates that the MP tray is selected.
	②**Flashing:** Indicates when the cassette or paper is not detected, or when the paper is loading. **Fast-Flashing:** Indicates that a paper jam is occurring. **Lit:** Indicates that the cassette is selected.
	③**Flashing:** Indicates that there is paper jam in the optional finisher. **Lit:** Indicates that the document finisher is being selected.

Message Display

The message display gives information in the form of short messages. The nine 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 4-7 in the Operation Guide*.

Message	Meaning
Self test	The printer is self-testing after power-up.
Original toner installed	The installed toner container is displayed if determined to be original toner container by the self-diagnostic performed after power is switched on. When using an original Kyocera toner container, toner remaining warnings and toner replacement messages are at times displayed in the operation panel.
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 operation 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.
Canceling data	Jobs inside the printer are being canceled. To cancel a job, refer to the table *on page 2-8*.
Waiting	The printer is waiting for the end-of-job command before printing the last page. Pressing **[GO]** allows you to obtain the last page immediately.
FormFeed TimeOut	The printer is printing the last page after a waiting period.

Indicators in Message Display

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

```
┌─────────────────────────┐
│ Ready                   │
│ ---   A4 PLAIN          │
└─────────────────────────┘
 INTERFACE  SIZE   TYPE
```
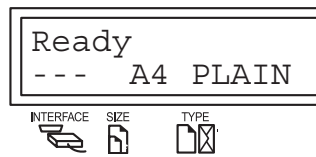
PAR	Parallel interface
USB	USB interface
NET	Network interface
OPT	Network interface card (option)
SER	Serial (RS-232C) interface (option)
---	No interface is active.

Each interface has a timeout time of 30 seconds during which the other interface should wait to receive a print job. Even if a print job has been completed 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
A3	A3
A4	A4
A5	A5
A6	A6*
B5	B5
B6	B6*
LT	Letter
LG	Legal
MO	Envelope Monarch*
10	Envelope #10*
B4	B4
LD	Ledger

Message Display	Paper Size
FO	Folio
Y4	Youkei 4*
DL	Envelope DL*
C5	Envelope C5*
b5	ISO B5*
EX	Executive*
#6	Envelope #6*
#9	Envelope #9*
HA	Japanese Postcard*
OH	Return Postcard*
CU	Custom Size
C4	Envelope C4
O2	Oficio II
ST	Statement
Y2	Youkei 2*
8K	8 kai*
16K	16 kai*

* 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.

Media Type Indicator

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

The media type can be specified at the operation panel. Refer to *Creating Custom Paper Type on page 2-82*.

The following abbreviations are used to indicate the media type.

Message Display	Media Type
(None)	Auto
PLAIN	Plain
TRNSPRNCY	Transparency*
PREPRINT	Preprinted
LABELS	Labels*
BOND	Bond
RECYCLED	Recycled
VELLUM	Vellum*
RECYCLED	Recycled
ROUGH	Rough
LETTERHEA	Letterhead
COLOR	Color
PREPUNCH	Prepunched
ENVELOPE	Envelope*
CARDSTOCK	Cardstock*
THICK	Thick paper*
HIGH QUAL	High quality paper
CUSTOM1 (to 8)	Custom 1 (to 8)

* With only the MP tray feeding

Keys

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

NOTE: Settings made with these keys affect only the interface currently in use.

◇ GO Key

This key switches the printer between on-line and off-line. Use this key to:

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

▽ CANCEL Key

This key is used to:

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

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

`Print Cancel?` appears on the message display followed by the interface in use. The interface is indicated by one of the following message:

```
Parallel
USB
Network
Serial (option serial interface)
Option (option network interface)
```

2 Select the interface to cancel using △ or ▽ and then press **[OK]**. `Cancelling data` appears on the message display and printing stops after the current page is printed.

☰ Menu Key

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

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

✧ **Cursor Keys**

The four cursor keys are used in the menu system to access an item or enter numeric values.

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

OK* OK Key

This key is used to:

- Finalize settings of numeric values and other selections.
- Set the paper source when Use alternative? is shown in the message display.

* If you hold down **[OK]** and press **[MENU]** when Ready is shown on this printer, Password will be displayed. This is the login screen for administration under the Job Accounting System and is normally not used. Press **[MENU]** to return to the Ready display.

Canceling a Printing Job

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

`Print Cancel?` appears on the message display followed by the interface in use. The interface is indicated by one of the following messages:

`Parallel`
`USB`
`Network`
`Serial` (option serial interface)
`Option` (option network interface)

2   Press **[OK]**. `Canceling data` appears on the message display and printing stops after the current page is printed.

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

Using the Operation Panel

This section explains how to use the menu selection system. **[MENU]** on the operation 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 operation panel settings.

Menu Selection System

The following is the hierarchy diagram of the menu selection system of the printer. The vertical transition is made with △ and ▽ and horizontal transition is made with ▷ and ◁. To change or finalize configuration on an item, use **[OK]**.

These items will not appear unless the printer is installed with the applicable option.

```
Ready
--- A4 PLAIN
```
MENU Key

```
Print
 Menu Map
```

```
Print
 Status Page
```

```
e-MPS          >
```
→
```
>Quick Copy
```
```
>Private/Stored
```
```
>Print VMB Data
```
```
>User ID
```
```
>Print
 VMB List
```
```
>Print
 Code Job List
```
```
>e-MPS         >
 Configuration
```
→
```
>>Quick Copy
            32
```
```
>>Temp. Code JOB
 Size      0500MB
```
```
>>Perm. Code JOB
 Size      0500MB
```
```
>>VMB Size
            0500MB
```

Continued

```
Interface      >
 Network
  Interface    >
   Option
```

```
>Netware
  Off
>Netware        >
  On
```

```
>>Frame Type
  Auto
```

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

```
>>DHCP
  Off
>>DHCP
  On
```

```
>>BOOTP
  Off
>>BOOTP
  On
```

```
>AppleTalk
  Off
>AppleTalk
  On
```

```
>>IP Address
  ###.###.###.###
```

```
>Network Status
 Page   Off
>Network Status
 Page     On
```

```
>>Subnet Mask
  ###.###.###.###
```

```
>>Gateway
  ###.###.###.###
```

```
>Opt. StatusPage
 Off
>Opt. StatusPage
  On
```

```
Interface      >
 Parallel
```

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

```
Interface      >
 Serial
```

```
>Baud Rate
 115200
```

```
>Data Bits
 7
>Data Bits
 8
```

```
>Stop Bits
 1
>Stop Bits
 2
```

```
>Parity
 None
```

```
>Protocol
 DTR(pos.)&XON
```

```
Interface
 USB
```

Continued on the next page

Continued

```
Emulation        >
 KPDL
```
```
>Print KPDL Errs
 On
```
```
 >Print KPDL Errs
  Off
```

```
Emulation        >
 KPDL(AUTO)
```
```
>Print KPDL Errs
 On
```
```
 >Print KPDL Errs
  Off
```
```
>Alt. Emulation
 PCL 6
```

```
Emulation
 Line Printer
```

```
Emulation
 IBM Proprinter
```

```
Emulation
 DIABLO 630
```

```
Emulation
 EPSON LQ-850
```

```
Emulation
 PCL 6
```

```
Emulation
 KC-GL
```
```
>KC-GL           >
  Pen Width
```
```
>>Pen(1) Width
   01dot(s)
```
```
>KC-GL Page Set
 [SPSZ]
```

```
Font             >
```
```
>Font Select     >
 Internal
```
```
 >Font Select    >
  Option
```
```
>>I000
```
```
>>Courier
  Regular
```
```
 >>Courier
   Dark
```
```
>>Letter Gothic
  Regular
```
```
 >>Letter Gothic
   Dark
```
```
>>Size
 012.00 point(s)
```
```
>>Pitch
      10.00 cpi
```
```
>Code Set
 IBM PC-8
```
```
>Print Internal
 Fonts List
```
```
>Print Option
 Fonts List
```

Continued on the next page

Continued

```
Page Set        >   ──────   >Copies
                                        001

                             >Zoom
                              [CS]→[CS]

                             >Orientation
                              Portrait
                               >Orientation
                                Landscape

                             >Page Protect
                              Auto
                               >Page Protect
                                on

                             >LF Action
                              LF only

                             >CR Action
                              CR only

                             >Wide A4
                              Off
                               >Wide A4
                                On

Print Quality   >   ──────   >KIR Mode
                              On
                               >KIR Mode
                                Off

                             >EcoPrint Mode
                              Off
                               >EcoPrint Mode
                                On

                             >Resolution
                              Fast 1200 mode

                             >Print Density
                              03

Hard Disk       >   ──────   >Read Data
                              >Write Data
                               >Delete Data
                                >Delete Font
                                 >Format
                                  >Print
                                   Partition List
```

Continued on the next page

Continued

```
RAM DISK Mode
 Off
RAM DISK Mode    >
 On
```
>RAM Disk Size
>Read Data
>Write Data
>Delete Data
>Delete Font
>Print
 Partition List

```
Memory Card      >
```
>Read Fonts
>Read Data
>Write Data
>Delete Data
>Format
>Print
 Partition List

```
USB Memory       >
```
>Read Data
>Remove Device
>Print
 Partition List

Continued on the next page

Continued

```
Paper Handling >
```

```
>MP Tray Mode
 Cassette
>MP Tray Mode
 First
```

```
>MP Tray Size
 A4
```

```
>MP Tray Type
 Plain
```

```
>Cassette1 Size >
 A4
```

```
>>Unit
   mm
>>Unit
   inch
```

```
>Cassette1 Type
 Plain
```

```
>Feed Select
 MP tray
```

```
>Duplex Mode
 Off
```

```
>Stack Select
 TopTrayFaceDn
>Stack Selects
 LeftTrayFaceUp
```

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

```
>Type Adjust   >
 Plain
```

```
>>Paper Weight
  Normal 1
```

```
>>Duplex Path
  Enable
>>Duplex Path
  Disable
```

```
>Reset Type
Adjust
```

Continued on the next page

Continued

```
Life Counters  >        >Printed Pages
                              0000001

Security       >        >Encryption Code
                        >Overwrite Mode
                         >Secure Format

Others         >        >MSG Language
                          English

                        >Form Feed
                        Time Out 000sec.

                        >Sleep timer   >     >>Auto Sleep
                              015 min.          On
                                              >>Auto Sleep
                                                Off

                        >Print HEX-DUMP

                        >Restart
                         Printer

                        >Resource Prot.
                         Off

                        >Buzzer         >     >>Error
                                                Off
                                              >>Error
                                                On

                                              >>Ready
                                                Off
                                              >>Ready
                                                On

                                              >>Job End
                                                Off
                                              >>Job End
                                                On

                                              >>Key Confirm.
                                                Off
                                              >>Key Confirm.
                                                On

                        >Auto Error
                         Clear Off
                         >Auto Error    >     >>Error Clear
                          Clear On             Timer   030sec.

                        >Finishing      >     >>Duplex
                         Error                  Off
                                              >>Duplex
                                                On

                                              >>Staple
                                                Off
                                              >>Staple
                                                On

                                              >>Punch
                                                Off
                                              >>Punch
                                                On
```

Continued on the next page

Continued

| >Service   > |

| >>Print
 Status Page |

| >>Paper Feed
 Normal |
| >>Paper Feed   >
 Special |

| >>Developer |

| >>Charger |

| >>Drum |

Using the Menu Selection System

This section explains the procedure for using the menu selection system. The menu selection system is activated by **[MENU]** while the printer is `Ready`.

Printing the Menu Map

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

1 Press **[MENU]**.

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

```
Print
 Menu Map
```

3 Press **[OK]**. A blinking question mark (`?`) appears.

```
Print
 Menu Map ?
```

4 Press **[OK]** again. The printer prints a menu map.
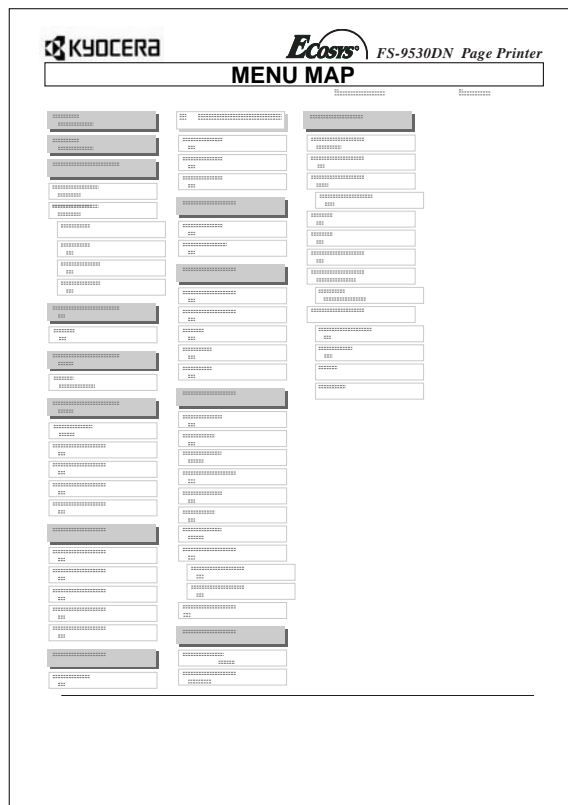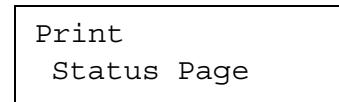
Status Pages

This section explains the procedure for printing the status pages. The status page is a list of parameters and settings for most basic printer configurations. You may be required to produce a status page when requesting service to the printer.
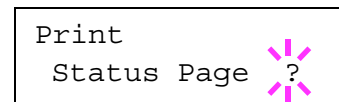
Printing Status Page

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 **[MENU]**.

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

```
Print
  Status Page
```

3 Press **[OK]**. A blinking question mark (`?`) appears.

```
Print
  Status Page    ?
```

4 Press **[OK]** again. The printer prints a status page.

NOTE: For a full description of the status, refer to the following sample status page.

The following is a sample status page. The numbers below refer to the contents explained on the next page.
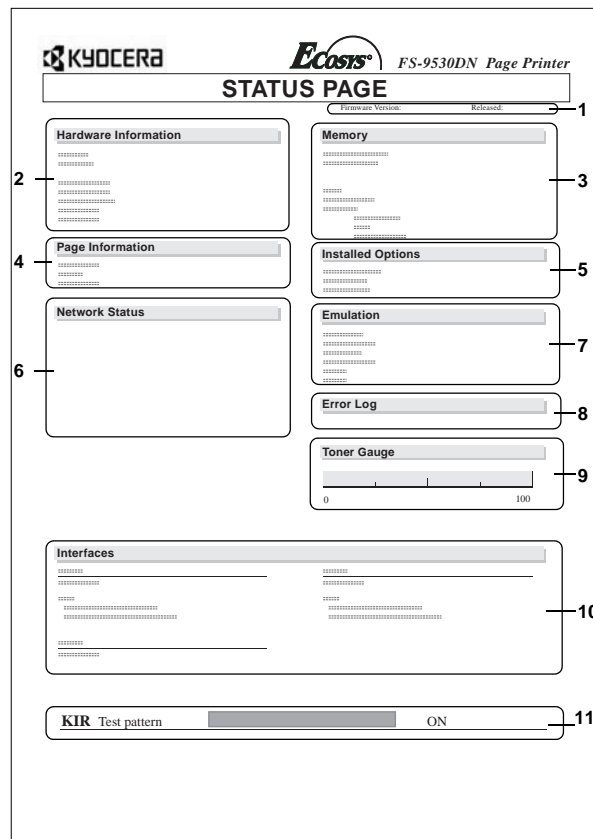
When the Network Status is turned on, the Network Interface Status Page will be printed after the Printer Status. (Refer to *page 2-37*.)

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

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

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

3 Memory
   This shows the amount of total memory installed in the printer, the amount of currently available memory, and the current status of the RAM disk. Refer to *Setting RAM Disk Size on page 2-71*.

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 (PostScript) errors
•   Memory card errors
•   Memory card, hard disk, RAM disk errors

The most recent error is displayed on the top line of the Error Log. For error remedies, refer to *Maintenance Messages on page 4-7 in the Operation Guide*. 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.

NOTE: If you are not using an original Kyocera toner container, the amount of toner remaining does not appear, and instead the following message appears.

```
We recommend the use of our own brand supplies.
We will not be liable for any damage caused by the use
of third party supplies in this machine.
```

---

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.

e-MPS

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

- Job Retention
- Job Storage

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

NOTE: To use the e-MPS system, an optional hard disk must be installed in the printer. For details, refer to *Options on page 4-1*. As an alternative to a hard disk, the RAM disk may be used in the Proof-and-Hold and Private Print modes. To activate the RAM disk in the printer, refer to *Operating the RAM Disk on page 2-70*.

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
Storing started	Printer driver	Printer driver
Retrieved by	Operation panel	Operation panel
Default number of copies printed at retrieval	Same as storing	One less
Maximum number of jobs stored*	32,expandable to 50	32,expandable to 50
PIN security	No	No
Data after printing	Retained	Retained
Data when 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
Storing started	Printer driver	Printer driver
Retrieved by	Operation panel	Operation panel
Default number of copies printed at retrieval	Same as storing	One
Maximum number of jobs stored*	Private jobs are deleted automatically once they are retrieved.	Depends on the hard disk capacity
PIN security	Yes	Yes (Option)
Data after printing	Deleted	Retained
Data when power off	Deleted	Retained

*   Jobs in excess will cause the earlier ones to be deleted.

Job Storage

Job storage stores print jobs either temporarily or permanently, or in virtual mailboxes, as you click an appropriate radio button on the printer driver when printing from a computer.

Virtual Mailbox

Virtual mailbox is part of Job Storage, which stores print jobs on the hard disk without printing. It enables you to retrieve jobs later from the operation panel.

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

To retrieve the stored job for printing, refer to *Retrieving Jobs from Virtual Mailbox (VMB) on page 2-29*.

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

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 operation panel.

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, refer to *Changing e-MPS Configuration on page 2-31*. 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 **[MENU]**.

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

```
e-MPS              >
```

3 Press ▷.

4 Press △ or ▽ 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 **[OK]**. A blinking question mark (`?`) appears before the user name.

```
>Quick Copy
?Harold
```

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

```
>Quick Copy
?Arlen
```

7 Press **[OK]**. 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 △ or ▽ to scroll to the desired job title.
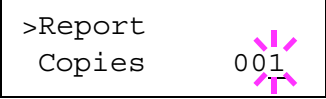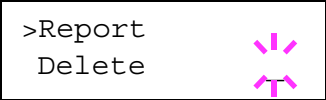
9 Press **[OK]**. The number of copies to be printed can be set. To increase the copy count, press △; to decrease the copy count, press ▽.

```
>Report
 Copies        001
```

10 Press **[OK]** 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 display the title of the job to be deleted.

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

```
>Report
 Copies      001
```

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

```
>Report
 Delete
```

4 Press **[OK]**. `Processing` appears and 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 operation 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 operation panel is similar to printing a quick copy job. To print remaining copies of a job held in the printer:

Printing a Private Print/Stored Job

In private printing, you can specify that a job is not printed until you release the job from the operation panel. When 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 operation panel. Thus, this function ensures confidentiality of the print job.

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 operation panel to print a stored job. Print data will be stored in the hard disk/RAM disk after printing.

Releasing a Private Print/Stored Job

1   Press **[MENU]**.

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

```
e-MPS            >

```

3   Press ▷.

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

```
>Private/Stored
 Harold
```

5   Press **[OK]**. A blinking question mark (`?`) appears before the user name.

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

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

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

7   Press **[OK]**. 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 △ or ▽ to display the desired job title.

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

```
>Agenda
 ID      0000
```

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

```
>Agenda
 Copies    001
```

11   Press **[OK]** to finalize the copy count. The printer prints the specified number of copies for the job.

Deleting a Private Print/Stored Job

You can individually delete stored jobs by performing the following procedure. Jobs saved using Private Print will be automatically deleted if you turn the power off after printing, but jobs saved using Stored Job will not be deleted automatically.

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 **[OK]**. Enter the four-digit access code entered in the printer driver and press **[OK]**.

```
>Agenda
 Copies      001
```
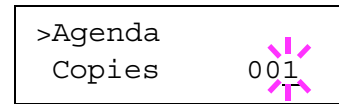
3 Press ▽ repeatedly until `Delete` appears for the number of copies.

```
>Agenda
 Delete
```
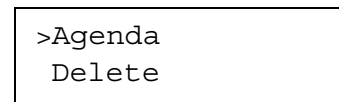
4 Press **[OK]**. `Processing` appears and private job is deleted from the hard disk.

Printing a code job

Install the *KM-NET for Clients* from the CD-ROM supplied with the printer.

1 Start the **KM-NET for Clients** by proceeding from the start menu > **All Programs** > **Kyocera** > **KM-NET for Clients**.

2 Click 🖥 on the Main screen. The **Job Manager** window appears.
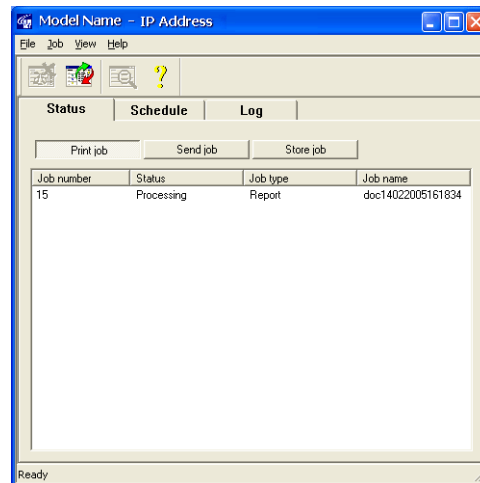
3 Select the job(s) to operate.

4 Select the desired operation from the Operation menu. When you select Print operation, the print job wizard starts.

5 Follow the instructions displayed by the wizard.

Printing a List of Code Jobs

If you select Permanent Job Storage on the printer driver, you can have a List of Code Jobs printed using the operation panel.

1 Press **[MENU]**.

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

```
e-MPS              >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Print Code Job List` appears.

```
>Print
 Code Job List
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Print
 Code Job List ?
```

6 Press **[OK]** again. `Processing` appears and printer prints a Code Job list as shown below.
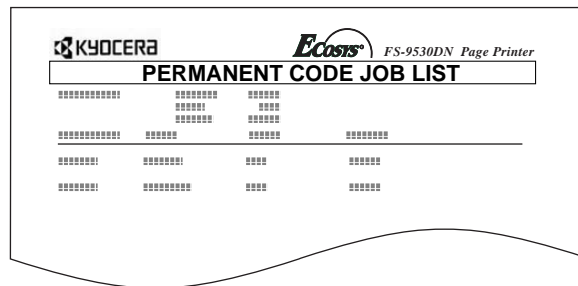
Retrieving Jobs from Virtual Mailbox (VMB)

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

1 Press **[MENU]**.

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

```
e-MPS              >
```

3 Press ▷.

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

```
>Print VMB Data
Tray001
```

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

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

5 Press **[OK]**. A blinking question mark (`?`) appears.

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

6 Press **[OK]**. The document in the mailbox is printed and automatically deleted from the mailbox.

Printing a List of VMB

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

1 Press **[MENU]**.

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

```
e-MPS              >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Print VMB List` appears.

```
>Print
 VMB List
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Print
 VMB List ?
```

6 Press **[OK]** again. The printer prints a list of jobs currently posted in the virtual mailboxes as shown below.
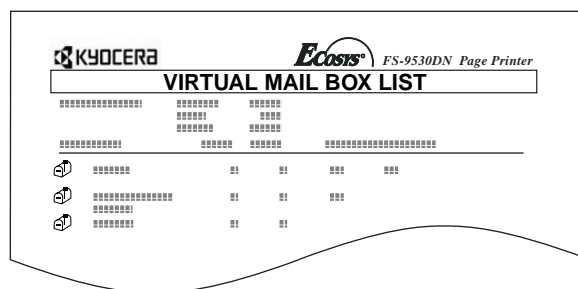
Changing e-MPS Configuration
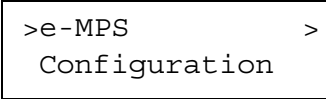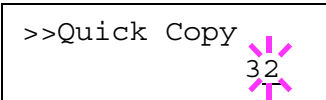
You can change the following parameters for e-MPS operation:

- 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 area specified must not exceed the total size of the hard disk. Otherwise, you may only be able to accommodate a smaller number 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 **[MENU]** key.

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

```
e-MPS              >
```

3 Press ▷.

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

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

5 Press ▷.

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

```
>>Quick Copy
             32
```

7 Press **[OK]**. A blinking cursor (_) appears.

```
>>Quick Copy
   32
```

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

9 When the desired maximum number of jobs is set, press **[OK]**.

10 Press **[MENU]**. The display returns to `Ready`.

Maximum Space Assigned to Temporary Code Jobs

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

1   Press **[MENU]**.

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

```
e-MPS            >


```

3   Press ▷.

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

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

5   Press ▷.

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

```
>>Temp. Code JOB
 Size     0500MB
```

7   To change the maximum disk space, press **[OK]**. A blinking cursor (_) appears.

```
>>Temp. Code JOB
 Size     0500MB
```

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

9   When the desired size is displayed, press **[OK]**.

10   Press **[MENU]**. The display returns to `Ready`.

Maximum Space Assigned to Permanent Code Jobs

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

1 Press **[MENU]**.

2 Press △ or ▽ and select `e-MPS >`.

```
e-MPS              >
```

3 Press ▷.

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

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

5 Press ▷.

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

```
>>Perm. Code JOB
 Size      0500MB
```

7 Press **[OK]**, the message display shows a blinking cursor (_).

```
>>Perm. Code JOB
 Size      0500MB
```

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

9 When the desired size is displayed, press **[OK]**.

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

Maximum Space Assigned to Virtual Mailboxes (VMB)

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

1   Press **[MENU]**.

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

```
e-MPS              >
```
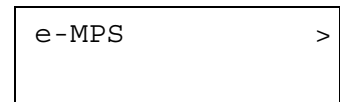
3   Press ▷.

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

```
>e-MPS             >
 Configuration
```
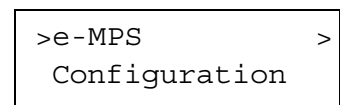
5   Press ▷.

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

```
>>VMB Size
            0500MB
```
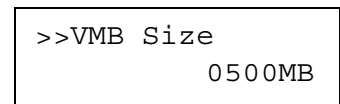
7   To change the maximum size, press **[OK]**. The message display shows a blinking cursor (_).
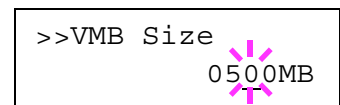
```
>>VMB Size
            0500MB
```

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

9   When the desired size is displayed, press **[OK]**.

10   Press **[MENU]** to exit the menu selection.

Changing the Interface Parameters

The printer is equipped with both a parallel and serial interface or a network interface. Further, an optional RS-232C interface card or network interface card may be installed if desired. 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.

Changing Parallel Interface Modes

The parallel interface supports a bi–directional/high–speed mode according to IEEE standards. Normally, this interface is used under the default setting Auto. For details, refer to *Chapter 5 Computer Interface*. After setting the interface, be sure to reset the printer or turn the power off at least once. The new setting will be enabled thereafter.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Interface >` appears. One of the interface names shown below appears, indicating the current interface.

`Parallel` (default)
`USB`
`Network`
`Option` (only when an optional network interface card is installed)
`Serial` (only when an optional RS-232C interface card is installed)

3 Press **[OK]**. A blinking question mark (`?`) appears.

If `Parallel` is not displayed, press △ or ▽ repeatedly until `Parallel` appears.

```
Interface      >
?Parallel
```

4 Press **[OK]** again.

5 Press ▷. The message display changes to the communication mode menu.

6 Press **[OK]**. A blinking question mark (`?`) appears.

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

7 Press △ or ▽ to display the desired mode. The display changes as shown below. Press **[OK]**.

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

8 Press **[MENU]**. The message display returns to `Ready`.

Changing Serial Interface Modes

You can make a serial connection by installing the optional RS-232C interface card. For details on an interface, refer to the *IB-11 Installation Guide*. After setting the interface, be sure to reset the printer or turn the power off at least once. The new setting will be enabled thereafter.
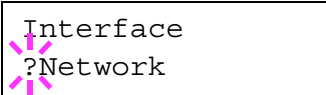
You can set the baud rate, data bits, stop bits, parity, and protocol for the serial interface.

NOTE: This section applies to the printer having the optional RS-232C interface card kit (IB-11) installed.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Interface >` appears. One of the interface names shown below appears, indicating the current interface.

```
Parallel
USB
Network    (default)
Option     (only when an optional network interface card is installed)
Serial     (only when an optional RS-232C interface card is installed)
```
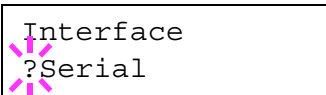
3 Press **[OK]**. A blinking question mark (`?`) appears.

```
Interface
?Network
```

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

```
Interface
?Serial
```

5 Press **[OK]** again.

6   Press ▷. Setting items (e.g., `Baud Rate`) are displayed in the message display. Press △ or ▽ to display each setting item.

Definable baud rates: 115200, 57600, 38400, 19200, 9600, 4800, 2400, 1200

```
>Baud Rate
  115200
```

Definable data bits: 7, 8

```
>Data Bits
  7
```

Definable stop bits: 1, 2

```
>Stop Bits
  1
```

Definable parity: None, Odd, Even, Ignore

```
>Parity
  None
```

Definable protocol: DTR(pos.)&XON, DTR(positive), DTR(negative), XON/XOFF, ETX/ACK

```
>Protocol
  DTR(pos.)&XON
```

7   Display the setting item to be changed and press **[OK]**. A blinking question mark (`?`) appears.

8   During setting, press △ or ▽ to display the desired item.

9   Press **[OK]**.

Repeat steps 6 through 9 for each setting item to be changed.

10 Press **[MENU]**. The message display returns to `Ready`.

Changing Network Interface Parameters

This printer supports TCP/IP, NetWare and AppleTalk protocols. In addition, you can install the optional network interface card in the option interface slot.

Using the operation panel, you can:

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

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

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Interface >` appears. One of the interface names shown below appears, indicating the current interface.

```
Parallel
USB
Network   (default)
Option    (only when an optional network interface card is installed)
Serial    (only when an optional RS-232C interface card is installed)
```

3 Press **[OK]**. A blinking question mark (`?`) appears.

```
Interface
?Parallel
```

4 Press △ or ▽ repeatedly until `Network` appears.

```
Interface
?Network
```

5 Press **[OK]** again.

6 Press ▷. Each time △ or ▽ is pressed, the display changes as shown below.

```
>NetWare
  Off
```

```
>TCP/IP
  Off
```

```
>AppleTalk
  Off
```

If `On`, print the standard Network Interface Status Page after the Printer Status Page. Refer to *page 2-20*.

```
>Network Status
Page    Off
```

If `On`, print the optional Network Interface Status Page after the Printer Status Page. Refer to *page 2-20*.

```
>Opt. StatusPage
  On
```

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

If TCP/IP is currently displays `Off`, select
`On` using △ or ▽. Press **[OK]** again.

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

```
>TCP/IP
? Off
```

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

8 Press ▷. Each time △ or ▽ is pressed, the item changes as shown below.

```
>>DHCP
  Off
```

```
>>BOOTP
  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 **[OK]**.

For DHCP or BOOTP, a question mark (`?`) appears. For IP Address,
Subnet Mask, and Gateway, the cursor (_) blinks.

10 For DHCP or BOOTP, select `On` or `Off` using △ or ▽. For IP Address,
Subnet Mask, and Gateway addresses, press △ or ▽ to change the
number (000 to 255) where the cursor is blinking. You can use ▷ and ◁ to
move the cursor right and left.

11 To obtain these addresses, consult your network administrator.

12 Press **[OK]**.

13 Press **[MENU]**. The message display returns to `Ready`.

Printing a Network Interface Status Page

You can print out a status page for the network interface. The network interface status page shows the firmware version, the network addresses, and other information under various network protocols about the network interface. The default setting is `On` (print). The network interface status page will be printed out 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, refer to the manual for the network interface.

1 Press **[MENU]**.

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

```
Interface        >
 Parallel
```

3 Press **[OK]**. A blinking question mark (`?`) appears.

```
Interface
?Parallel
```

4 Press △ or ▽ repeatedly until `Network` appears.

```
Interface
?Network
```

5 Press **[OK]** again. The question mark (`?`) disappears

```
Interface        >
 Network
```

6 Press ▷ and then press △ or ▽ repeatedly until the message display indicates `>Network Status Page`.

```
>Network Status
  Page    On
```

7 The default setting is `On`. If it is set to `Off`, change it as follows. Press **[OK]**. A blinking question mark (`?`) appears.

```
>Network Status
  Page ? On
```

8 Select `On` using △ or ▽.

```
>Network Status
  Page ? Off
```

9 Press **[OK]** again.

```
>Network Status
  Page    Off
```

10 Press **[MENU]**. The message display returns to `Ready`.
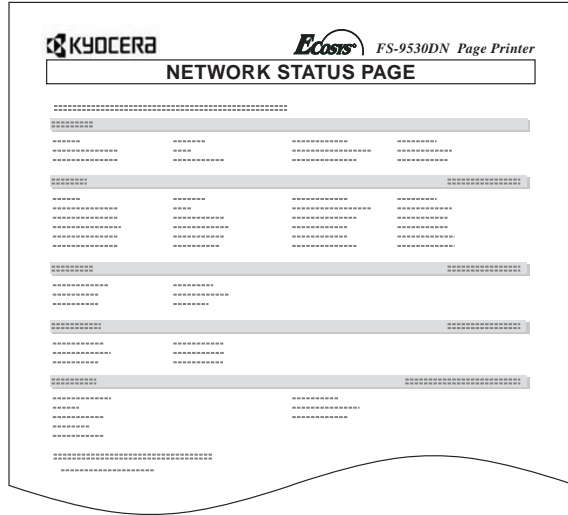
Making Default Settings

Using the operation panel, you can set the default for the following items.
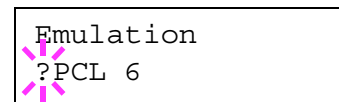
Default Emulation

The emulation mode for the current interface can be changed.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Emulation` appears. One of the emulation names shown below appears, indicating the current emulation.

```
PCL 6 (default)
KC-GL
KPDL
KPDL (AUTO)
Line Printer
IBM Proprinter
DIABLO 630
EPSON LQ-850
```

3 Press **[OK]**. A blinking question mark (`?`) appears.

```
Emulation
?PCL 6
```
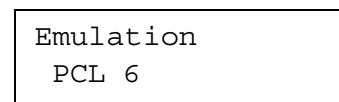
4 Press △ or ▽ repeatedly until the desired emulation mode appears.

5 Press **[OK]**.

6 Press **[MENU]**. The message display returns to `Ready`.

KPDL (AUTO) Emulation

KPDL is the Kyocera's implementation of the PostScript language. The KPDL (AUTO) emulation enables the printer to automatically change the emulation mode according to the data received when printing.
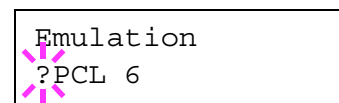
In addition to KPDL (AUTO) emulation, you can use the operation panel to set another emulation mode that is used very often. The default setting is PCL 6.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Emulation` appears.

```
Emulation
  PCL 6
```

3 Press **[OK]**. A blinking question mark (`?`) appears.

```
Emulation
?PCL 6
```

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

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

5 Press **[OK]**.

6 Press ▷. When `> Alt. Emulation` is displayed, press △ or ▽. The names of alternative emulations appear.

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

7 Press **[OK]**. A blinking question mark (`?`) appears.

```
Alt. Emulation
?PCL 6
```

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

9 Press **[OK]**.

10 Press **[MENU]**. The message display returns to `Ready`.

Auto Printing of KPDL Error

The printer can be set to print error data during KPDL emulation. If this is set to `On`, error data will be printed only when trouble occurs during printing. The factory default setting is `Off`.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Emulation` appears.

```
Emulation
 PCL 6
```

3 Press **[OK]**. A blinking question mark (`?`) appears.

```
Emulation
?PCL 6
```

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

```
Emulation
?KPDL
```

5 Press **[OK]**.

6 Press ▷. The message display changes to that shown below. If `>Print KPDL Errs` is displayed when the KPDL (AUTO) emulation is selected, press △ or ▽ to change it.

```
>Print KPDL Errs
  Off
```

7 Press **[OK]**. A blinking question mark (?) appears.

```
>Print KPDL Errs
 ?Off
```

8 Select `On` using △ or ▽.

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

9 Press **[OK]**.

10 Press **[MENU]**. The message display returns to `Ready`.

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 **[MENU]**.

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

```
Emulation
  PCL 6
```

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

```
Emulation
 ?PCL 6
```

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

```
Emulation
 ?KC-GL
```

5 Press **[OK]**.

```
Emulation
  KC-GL
```

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

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

7 Press ▷.

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

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

9 When the desired pen number is displayed, press **[OK]**.

10 To change the pen width, press ▷, then press **[OK]**. A blinking cursor appears at the width value.

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

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

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

12 To change the page size, press **[OK]**. A blinking question mark (?) appears.

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

Press △ or ▽ 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.

13 Press **[OK]** to set the page set you just selected.

14 Press **[MENU]**. The display returns to Ready.

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, hard disk, or option ROM, can be selected as the default font.

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

Selecting the Default Font

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until Font > appears.

```
Font               >
```

3 Press ▷ to select an internal font, press △ or ▽ repeatedly until Internal appears.

```
>Font Select    >
 Internal
```

To select an option font, press **[OK]** while > Font Select > is displayed. Press △ or ▽ repeatedly until the message display indicates Option. This operation is possible only when option fonts are installed in the printer.

4 Press ▷.

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

```
>> I000
```
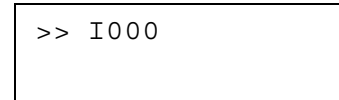
Letter	Description
I	Internal fonts
S	Soft (download) fonts
M	Fonts in an option memory card
H	Fonts in a RAM disk or hard disk

5 Press **[OK]**. A blinking question mark (?) appears.

```
>>?I000
```
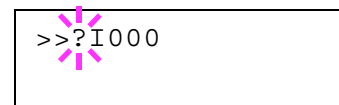
6 Press △ or ▽ repeatedly until the desired font number appears. For font numbers of the internal fonts, refer to *List of Fonts on page 3-2*.

```
>Font Select    >
 Internal
```
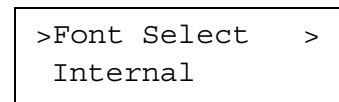
7 When the desired font is displayed, press **[OK]**.

8 Press **[MENU]**. 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 **[MENU]**.

2 Press △ or ▽ repeatedly until Font > appears.

```
Font             >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until >Font Select > appears.

5 Check that Internal is displayed and press ▷.

```
>Font Select    >
 Internal
```
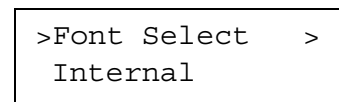
6 Press △ or ▽ repeatedly until >>Courier appears.

```
>>Courier
  Regular
```
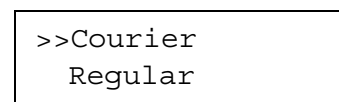
7 Press **[OK]**. A blinking question mark (?) appears.

```
>>Courier
? Regular
```

8 Select Regular or Dark using △ or ▽.

9 Press **[OK]**.

10 Press **[MENU]** and the message display returns to Ready.

Changing the Default 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 **[MENU]**.

2 Press △ or ▽ repeatedly until Font > appears.

```
Font             >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until >Font Select > appears.

5 Check that Internal is displayed and press ▷.

```
>Font Select   >
 Internal
```

6 Press △ or ▽ repeatedly until >>Size appears.

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

7 Press **[OK]**. A blinking cursor (_) appears.

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

8 Press △ or ▽ 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 ▷ and ◁ to move the cursor right and left.

9 When the desired size is displayed, press **[OK]**.

10 Press **[MENU]**. 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 **[MENU]**.

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

```
Font              >

```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Font Select >` appears.

5 Check that `Internal` is displayed and press ▷.

```
>Font Select    >
 Internal
```

6 Press △ or ▽ repeatedly until `>>Pitch` appears.

```
>>Pitch
        10.00 cpi
```

7 Press **[OK]**. A blinking cursor (_) appears.

```
>>Pitch
        10.00 cpi
```

8 Press △ or ▽ 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 ▷ and ◁ to move the cursor right and left.

9 When the desired size is displayed, press **[OK]**.

10 Press **[MENU]**. The message display returns to `Ready`.

Setting the character code set

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

1 Press **[MENU]**.

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

```
Font              >

```

3 Press ▷.

4 Press △ or ▽ repeatedly until `> Code Set` appears.

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

5 Press **[OK]**. A blinking question mark (`?`) appears.

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

6 Press △ or ▽ until the desired character code set appears.

7 Press **[OK]**.

8 Press **[MENU]**. The display returns to `Ready`.

Printing a List of Fonts

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

1 Press **[MENU]**.

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

```
Font              >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Print Internal Fonts List` appears or `>Print Option Fonts List` appears.

(Internal Fonts)

```
>Print Internal
  Fonts List
```

(Optional Fonts)

```
>Print Option
  Fonts List
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

(Internal Fonts)

```
>Print Internal
  Fonts List ?
```

(Optional Fonts)

```
>Print Option
  Fonts List ?
```

6 Press **[OK]** again. `Processing` appears, then `Ready`. The printer prints a list of fonts with a short sample and font ID (number) for each font.

Pagination

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

Number of Copies

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

1 Press **[MENU]**.

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

```
Page Set          >
```

3 Press ▷.

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

```
>Copies
              001
```

5 Press **[OK]**. A blinking cursor (_) appears.

```
>Copies
              001
```

6 Press △ or ▽ 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 ▷ and ◁ to move the cursor right and left.

7 When the desired size is displayed, press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Selecting the 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.

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

```
>Zoom
    [CS]→[CS]
```

Target size indicator
Source size indicator
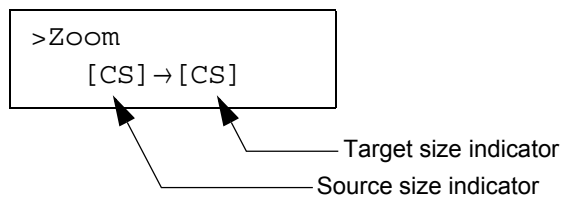
Source size indicator... This is the paper size before reduction.
This must be the same as the paper size set for print data from the computer.
Target size indicator... This is the paper size after reduction.
This must be the same as the paper size set for the paper cassette.
The message display will 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]`
	`[LT]98%`

`[LD]` Ledger size (12 × 15-1/2 inches)	`[LD]` `[LD]98%`
`[ST]`	`[ST]`
`[O2]`	`[O2]`
`[FO]`	`[FO]`
`[A5]` (148 × 210 mm)	`[A5]` `[A5]98%`

`[B5]`
(182 × 257 mm)
	`[B5]`
	`[A5]`
	`[B5]98%`

`[A4]`
(210 × 297 mm)
	`[A4]`
	`[LT]`
	`[B5]`
	`[A5]`
	`[A4]98%`

`[B4]`
(257 × 364 mm)
	`[B4]`
	`[B5]`
	`[A4]`
	`[B4]98%`

Source size indicator	Target size indicator
[A3] (297 × 420 mm)	[A3] [A4] [B4] [A3]98%

1   Press **[MENU]**.

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

```
Page Set        >
```

3   Press ▷.

4   Press △ or ▽ repeatedly until `>Zoom` appears.

```
>Zoom
    [CS]→[CS]
```

5   Press **[OK]**. A blinking cursor (_) appears under the paper size.

```
>Zoom
    [CS]→[CS]
```

6   Press △ or ▽ to select source size. Both sizes will change simultaneously.

```
>Zoom
    [B4]→[B4]
```

7   Press ▷ to move the cursor to the target size.

```
>Zoom
    [B4]→[B4]
```

8   To make a reduced print, press △ or ▽ to select the target size.

```
>Zoom
    [B4]→[A4]
```

9   Press **[OK]**.

10   Press **[MENU]**. The message display returns to `Ready`.

Printing Orientation
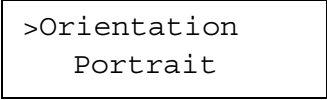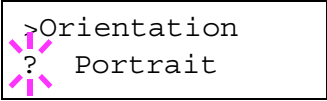
You can select the portrait or landscape page orientation. The page orientation can be set whenever the message display indicates `Ready`.
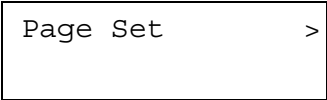
Portrait   Landscape

1 Press **[MENU]**.

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

```
Page Set          >
```

3 Press ▷.

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

```
>Orientation
     Portrait
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Orientation
 ?   Portrait
```

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

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

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 **[MENU]**.

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

```
Page Set          >
```

3 Press ▷.

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

```
>Page Protect
  On
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Page Protect
? On
```

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

```
>Page Protect
? Auto
```

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Linefeed (LF) Action

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

1 Press **[MENU]**.

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

```
Page Set          >
```

3 Press ▷.

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

```
>LF Action
  LF only
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

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

6 Press △ or ▽ 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 **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Carriage-Return (CR) Action

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

1 Press **[MENU]**.

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

```
Page Set            >
```

3 Press ▷.

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

```
>CR Action
  CR only
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

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

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

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

7 When the desired action is displayed, press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Wide A4 Pitch

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

1 Press **[MENU]**.

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

```
Page Set            >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Wide A4` appears.

```
>Wide A4
  Off
```

5 Press **[OK]**. A blinking question mark (?) appears.
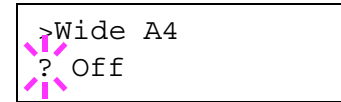
```
>Wide A4
? Off
```

6 Select `On` or `Off` using △ or ▽.

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Setting Print Quality

You can make the following settings to enhance the print quality: Kyocera Image Refinement (KIR), a software algorithm for increasing printout quality; EcoPrint, a printing mode that reduces toner consumption during printing; printing resolution; and Adjustment of Print Density.

KIR (Kyocera Image Refinement) Mode

This printer incorporates the KIR (Kyocera Image Refinement) smoothing function. At a resolution of 600 dpi this function provides high print quality by providing software enhanced print resolution.

With KIR `Off`   With KIR `On`
(default)
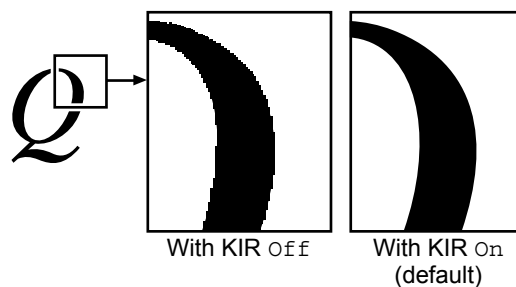
NOTE: Set the print density to 3 when setting the KIR mode. For details on print density, refer to *page 2-61*. You can monitor the KIR test pattern, the last line on a status page, to make the optimum KIR mode setting.

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

Status Page

KIR Test Pattern
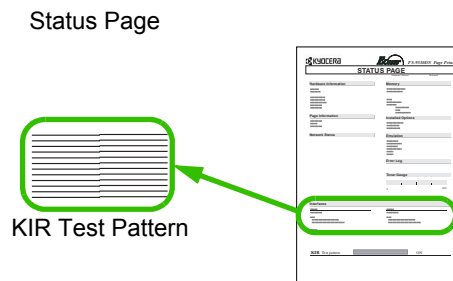
Optimized stripes

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 **[MENU]**.

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

```
Print Quality   >
```

3 Press ▷.

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

```
>KIR Mode
   On
```

5 Press **[OK]**. A blinking question mark (`?`)
appears.

```
>KIR Mode
 ? On
```

6 Select `On` or `Off` using △ or ▽.

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

EcoPrint

The EcoPrint enables you to reduce the amount of toner consumed on the
page so as to save your printing costs. You can set EcoPrint mode `On`, as
follows. (The factory default setting is `Off`.) The EcoPrint mode setting is
`On` when the printing image becomes lighter, yet very readable.

NOTE: The EcoPrint setting has no effect on the print speed.

E

EcoPrint setting is
Off (default)

E

EcoPrint setting is
On

1   Press **[MENU]**.

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

```
Print Quality   >
```

3   Press ▷.

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

```
>EcoPrint Mode
  Off
```

5   Press **[OK]**. A blinking question mark (?) appears.

```
>EcoPrint Mode
? Off
```

6   Select `On` or `Off` using △ or ▽.

7   Press **[OK]**.

8   Press **[MENU]**. The message display returns to `Ready`.

Print 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. (The factory setting is Fast 1200 mode.)

1   Press **[MENU]**.

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

```
Print Quality   >
```
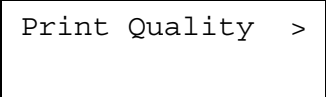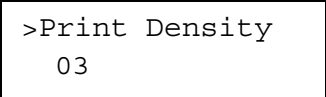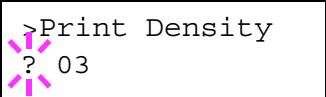
3   Press ▷.

4   Press △ or ▽ repeatedly until `>Resolution` appears.

```
>Resolution
  Fast 1200 mode
```

5   Press **[OK]**. A blinking question mark (?) appears.

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

6   Select Fast 1200 mode or 300 dpi, 600 dpi using △ or ▽.

7   Press **[OK]**.

8   Press **[MENU]**. The message display returns to `Ready`.

Print Density

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

1 Press **[MENU]**.

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

```
Print Quality   >


```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Print Density` appears.

```
>Print Density
  03
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Print Density
? 03
```

6 Select the print density from five steps from `01` (light) to `05` (dark) using △ or ▽.

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Operating the Storage Device

The printer supports four types of storage device; CompactFlash card, USB flash memory, an option hard disk, and RAM disk. The CompactFlash card and USB flash memory are installed into the dedicated slots of the printer. The RAM disk is an allocated part of the printer's memory. If an option hard disk is installed in the printer, the e-MPS function will be available. For details, refer to *e-MPS on page 2-23*.

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

Using the CompactFlash Card
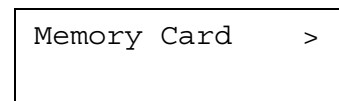
The printer is equipped with a slot for a memory card. By inserting a memory card into the printer, the following operations become available. For details about the handling of the memory card, refer to *chapter 4 Options*.

- Reading Font Data
- Reading Data
- Writing Data
- Deleting Data
- Formatting Memory card
- Printing of List of Partitions
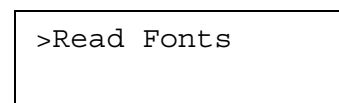
Reading Font Data

If a memory card with the font data is already inserted into the slot when the printer is turned on, the fonts are automatically read into the printer. To re-read fonts into the printer from a memory card, proceed as follows.
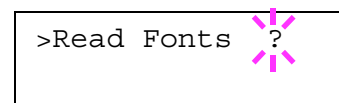
1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Memory Card >` appears.

```
Memory Card      >
```

3 Press ▷.

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

```
>Read Fonts
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Read Fonts     ?
```

6 Press **[OK]**. `Processing` appears and the reading of data from the memory card starts.

```
>Read Fonts
 Processing
```

7 Press **[MENU]** to return 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 **[MENU]**.

2 Press △ or ▽ repeatedly until `Memory Card >` appears.

```
Memory Card    >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Read Data` appears. The data name also appears.

```
>Read Data
 DataS001
```

5 Press **[OK]**. A blinking question mark (`?`) appears before the data name.

```
>Read Data
?DataS001
```

6 Press △ or ▽ to display the desired data name.

7 Press **[OK]**. `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 later in this section to print a list of data names for confirmation.

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

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 display.

If the memory card inserted in the memory card slot is not formatted, the `>Format` will automatically appear on the display. Refer to *Formatting on page 2-66*.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Memory Card >` appears.

```
Memory Card      >
```
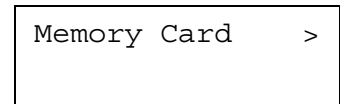
3 Press ▷.

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

```
>Write Data
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Write Data ?
```
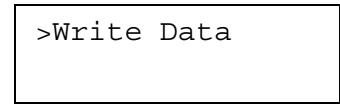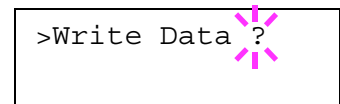
6 Press **[OK]**. `Processing` appears, then `Waiting`.

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

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)...

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

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

8 Check that the message display has changed to `Waiting`, then press **[GO]**. 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.

KYOCERA **Ecosys** *FS-9530DN Page Printer*
WRITE INFORMATION
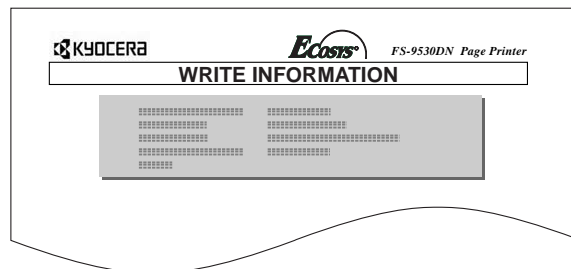
Partition Type:	Type of data written (currently only type 2 is supported).
Partition Name:	The destination name of data written to the card.
Write Partition Length:	The size of the written data on the memory card.
Others:	Error information.

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, refer to *Error Messages on page 4-10 in the Operation Guide*. If this happens, press **[GO]**. 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. Refer to *Printing a List of Data Names on page 2-67*.

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 **[MENU]**.

2 Press △ or ▽ repeatedly until `Memory Card >` appears.

```
Memory Card      >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Delete Data` appears. The data name also appears.

```
>Delete Data
 DataS001
```

5 Press **[OK]**. A blinking question mark (`?`) appears before the data name.

```
>Delete Data
?DataS001
```

6 Press △ or ▽ to display the desired data name.

7 Press **[OK]**. `Processing` appears and the data is deleted from the memory card. The display returns to `Ready`.

Formatting

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

To format a memory card, proceed as follows.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Memory Card >` appears.

```
Memory Card     >
```
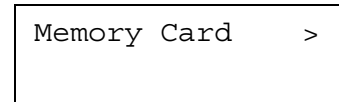
3 Press ▷.

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

```
>Format
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Format        ?
```
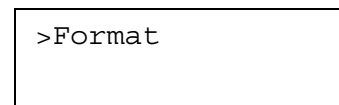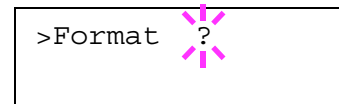
6 Press **[OK]**. `Processing` appears and formatting of the memory card starts.

When the formatting is successfully completed, the printer automatically prints out a format information page.
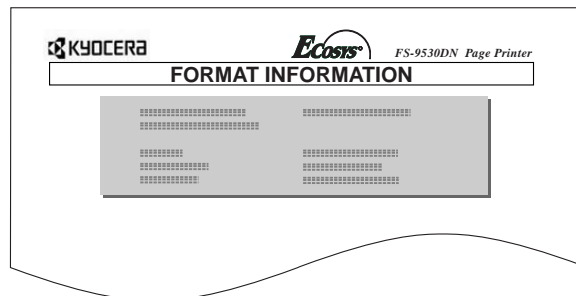
The format information page includes the following items;

Capacity: The total size of the memory card.
Used Space: The space the printer uses for its system.
Free Space: The space 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

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 **[MENU]**.

2   Press △ or ▽ repeatedly until `Memory Card >` appears.

```
Memory Card      >
```

3   Press ▷.

4   Press △ or ▽ repeatedly until `>Print Partition List` appears.

```
>Print
  Partition List
```

5   Press **[OK]**. A blinking question mark (`?`) appears.

```
>Print
  Partition List?
```

6   Press **[OK]**. `Processing` appears and the printing of the list starts.
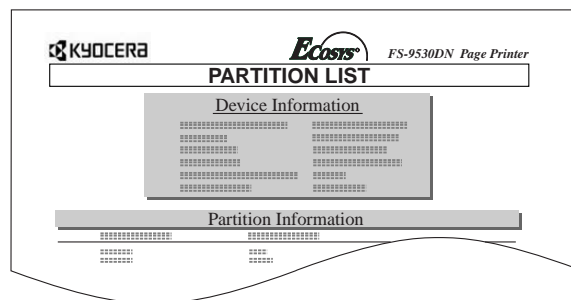
The printout (example above) includes the following information.

Device Name/Number:	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`.

Using USB Flash Memory

The USB flash memory is available for only PDF file. PDF files should be stored on the root directory of USB flash memory. The PDF file name can be up to 99 single-byte characters in length.

NOTE: The file name which is displayed on the message display can be up to 16 characters.

Installing the USB flash memory into the printer allows you to perform the following operations.

- Printing PDF Data
- Disconnecting a USB Memory Device
- Printing a List of Data Names (partitions)
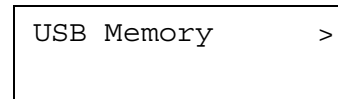
Printing PDF data

To print data stored in USB memory, proceed as follows.

NOTE: Only PDF data stored in a USB memory root folder is printable.

1 Press **[MENU]**.
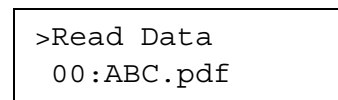
2 Press △ or ▽ repeatedly until `USB Memory >` appears.

```
USB Memory        >
```
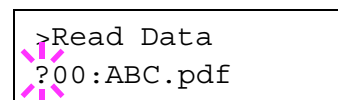
3 Press ▷.

4 Press △ or ▽ repeatedly until `>Read Data` appears. The name of the PDF data also appears.

```
>Read Data
  00:ABC.pdf
```

5 Press **[OK]**. A blinking question mark (`?`) appears in front of the name of the PDF data.

```
>Read Data
?00:ABC.pdf
```

6 Press △ or ▽ to display the name of the PDF data to be printed.

7 Press **[OK]**. `Processing` appears, and the selected PDF data is printed.

After the selected PDF data is printed, the message display returns to `Ready`.

Removing USB Flash Memory

When removing USB memory from the printer, be sure to proceed with this menu to ensure safe disconnection.

NOTE: If you remove USB memory without performing this operation, an error message will appear.

---

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `USB Memory >` appears.

```
>USB Memory
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Remove Device` appears. The name of the PDF data appears.

```
>Remove Device
```

5 Press **[OK]**. A question mark (`?`) appears.

```
>Remove Device ?
```

6 Press **[OK]**. The message display returns to `Ready`. Disconnect the USB memory from the printer.

Printing a List of Data Names (Partitions)

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `USB Memory >` appears.

```
USB Memory        >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Print Partition List` appears.

```
>Print
  Partition List
```

5 Press **[OK]**. A question mark (`?`) appears.

```
>Print
  Partition List?
```

6　Press **[OK]**. `Processing` appears, and the partition list is printed.
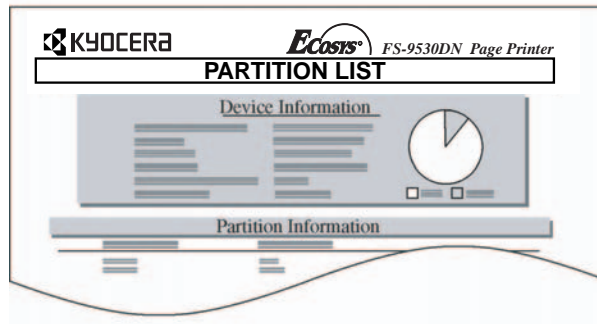
After the USB memory partition list is printed, the message display returns to `Ready`.

Operating an Option Hard Disk

By installing the option hard disk into the printer, the `e-MPS` function can be used. The printer's menu selection system allows you to perform the following operations on the hard disk.

If the option hard disk is not formatted, the `>Format menu` will automatically appear on the message display.

• Reading Data

• Writing Data

• Deleting Data

• Printing of List of Partitions

The operations of the option hard disk are the same as those of the memory card. Refer to the relevant sections in *Using the CompactFlash Card on page 2-62*.

It also prints out the Directory Status List to confirm the directory or data that is written in PJL or KPDL (PostScript).

Operating the 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 similarly to the hard disk except that the data is effective only when the printer is powered up.

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

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

Maximum RAM size = Total printer memory minus 36 MB

　　　　　　　　　　　　　　　　　　　　　　　ADVANCED OPERATION GUIDE

For example, if the total memory installed in your printer (FS-9130DN) is 64 MB (Default), you can set 28 MB of RAM disk. If you attempt to set the RAM disk size beyond this restriction, the printer automatically rounds it down so that the size is always 36 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 use the printer's menu selection system. The printer's menu selection system allows you to perform the following operations on the RAM disk.

- Setting RAM Disk Size
- Reading Data
- Writing Data
- Deleting Data
- Printing of List of Partitions

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

Setting RAM Disk Size

1 Press **[MENU]**.

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

```
>RAM Disk Mode
  Off
```

3 Press **[OK]**. A blinking question mark (`?`) appears.

```
>RAM Disk Mode
? Off
```

4 Press △ or ▽ to select `On`.

```
>RAM Disk Mode
?  On
```

5 Press **[OK]**. A blinking question mark (`?`) disappears and `>` appears on the right side.

```
>RAM Disk Mode  >
  On
```

6 Press ▷.

7 Press △ or ▽ repeatedly until `>RAM Disk Size` appears. The data size also appears.

```
>RAM Disk Size
   0028 MByte
```

8 Press **[OK]**. A blinking cursor (_) appears.

```
>RAM Disk Size
   0028 MByte
```

9 Press △ or ▽ to display the desired size.

10 Press **[OK]**. The selected RAM disk size is activated.

11 Press **[MENU]**. The message display returns to `Ready`.

The operations of the RAM disk are the same as those of the memory card. Refer to the relevant sections in *Using the CompactFlash Card on page 2-62*.

Paper Handling

You can change the MP tray mode, the paper size and type for each paper source, the sorter mode, the paper source, and paper destinations.

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 200 sheets of paper (A4 size, 0.11 mm thickness).

Cassette Mode

The cassette mode provides faster printing speed than the first mode. Approximately 200 sheets of paper can be continuously fed in this mode. (This is the factory 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 is printed, paper will be fed from the paper source originally selected.

1 Press **[MENU]**.

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

```
Paper Handling >
```

3 Press ▷.

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

```
>MP Tray Mode
   Cassette
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

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

6 Select `First` or `Cassette` using △ or ▽.

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.
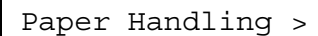
Setting the MP Tray Size

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 factory setting is A4 or Letter size.

For more details about the paper sizes that can be fed from the MP tray, refer to *Chapter 1 Handling Paper*.
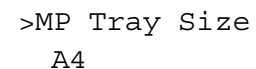
1 Press **[MENU]**.

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

```
Paper Handling >
```
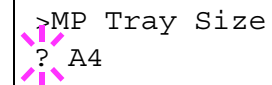
3 Press ▷.

4 Press △ or ▽ repeatedly until `>MP Tray Size` appears.

```
>MP Tray Size
   A4
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

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

6 Press △ or ▽ to display the desired MP tray size. The display changes as shown below.

```
A4
Executive
Letter-R
Letter
Legal
Ledger
A3
B4
Custom
Envelope C4
Oficio II
Statement
Folio
Youkei 2
Youkei 4
8K
16K
Hagaki
OufukuHagaki
Env. Monarch
Envelope #10
Envelope #9
```

```
Envelope #6
Envelope DL
Envelope C5
A6
B6
A5
B5
B5-R
ISO B5
A4-R
```

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Setting the MP Tray Type

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

For more details about the paper types that can be fed from the MP tray, refer to *Paper Size Unit Selection on page 2-77*.

1 Press **[MENU]**.

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

```
Paper Handling >
```

3 Press ▷.

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

```
>MP Tray Type
   Plain
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

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

6 Press △ or ▽ to display the desired MP tray type. The display changes as shown below.

```
Plain
Transparency
Preprinted
Labels
Bond
Recycled
Vellum
Rough
```

```
Letterhead
Color
Prepunched
Envelope
Cardstock
Thick
High quality
Custom 1 (to 8)
```

7   When the desired MP tray type is displayed, press **[OK]**.

8   Press **[MENU]** and the message display returns to `Ready`.

Setting the Cassette Paper Size

The paper loaded in the cassette will be automatically detected and its size can be displayed in the LCD. To display the correct size, the paper must be properly loaded in the cassette.
(For details of loading paper, refer to *Chapter 1 Handling Paper*.)

1   Press **[MENU]**.

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

```
Paper Handling >
```

3   Press ▷.

4   Press △ or ▽ repeatedly until `>Cassette1 Size>` appears. The paper size is also displayed.

```
>Cassette1 Size>
  A4
```

NOTE: `>Cassette3 Size >` or `>Cassette4 Size >` appears when an option paper feeder (PF-700) is installed. `>Cassette3 Size >` appears when an option paper feeder (PF-750) is installed.

If option paper feeders are added, `Cassette1 Size` and `Cassette2 Size` will appear for the standard paper cassette and `Cassette3 Size`, and `Cassette4 Size` will appear for the option paper feeders.

5   Press **[MENU]**. The message display returns to `Ready`.

Paper Size Unit Selection

The paper size unit (metric or inch system) used in the message display can be selected beforehand. At the time of `Ready` or when selecting the size display, the unit for some paper may be replaced with the counterpart as shown in the following table.

Metric	Inch
A3	Ledger
B4	Legal
A4	Letter
A4-R	Letter-R
B5	Letter-R
B5-R	Statement
A5	Statement
Folio	Legal

For example, when placing letter size paper in the cassette while `mm` unit is selected, `A4` will be displayed in the LCD. To correct the display, use the following procedures.

NOTE: You can set the option paper feeder PF-700 as cassettes 3 and 4 using the same procedures. When using the paper feeder PF-750, you can set it as cassette 3.

1 Press **[MENU]**.

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

```
Paper Handling >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Cassette1 Size>` appears.

```
>Cassette1 Size>
  A4
```

5 Press ▷. `>>Unit` appears.

```
>>Unit
  mm
```

6 Press **[OK]**. A blinking question mark (`?`) appears.

```
>>Unit
? mm
```

7 Press △ or ▽ to select `mm` or `inch`.

8 Press **[OK]**.

9 Press **[MENU]**. The message display returns to `Ready`.

Setting the Cassette Media Type

Make this setting to match the media type fed from the paper cassette of the printer. If the media 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 media types that can be fed from the paper cassette, refer to *Media Type on page 1-13*.

1 Press **[MENU]**.

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

```
Paper Handling >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Cassette 1 Type` appears. The media type also displayed.

```
>Cassette 1 Type
     Plain
```

NOTE: `>Cassette 3 Type` or `>Cassette 4 Type` appears when an option paper feeder (PF-700) is installed. `>Cassette 3 Type` appears when an option paper feeder (PF-750) is installed.

5 Press **[OK]**. A blinking question mark (`?`) appears.

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

6 Press △ or ▽ to display the desired cassette type. The display changes as shown below.

```
Plain
Preprinted
Bond
Recycled
Vellum
Rough
Letterhead
Color
Prepunched
High quality
Custom 1 (to 8)
```
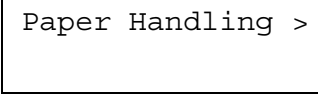
7 When the desired cassette type is displayed, press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Selecting the Paper Feed Source

You can select from which paper source printing will be performed. If no option units are installed, the only selections are the paper cassette and MP tray of the printer. If option paper feeders are installed, they can also be selected.
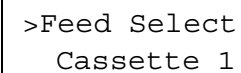
1 Press **[MENU]**.

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

```
Paper Handling >
```
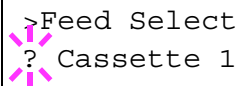
3 Press ▷.

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

```
>Feed Select
   Cassette 1
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

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

6 Press △ or ▽ to display the desired paper source. The display changes as shown below according to the installed option units.

```
MP tray      (MP tray)
Cassette 3   (Option upper paper feeder)
Cassette 4   (Option lower paper feeder)
```

7 When the desired paper source displayed, press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Duplex Printing

Using the duplex unit, you can automatically print on both sides of the paper. The duplex unit is installed underneath the printer.

You can automatically print on both sides of the paper.

Duplex printing is available for the following paper types:

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

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

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

Binding Mode

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.
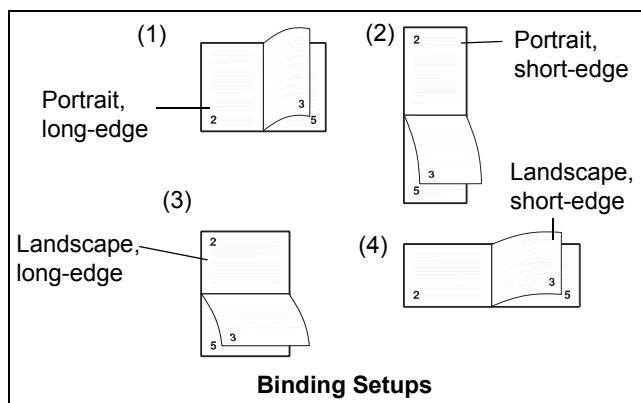
Binding Setups

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

1 Press **[MENU]**.

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

```
Paper Handling >
```
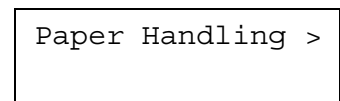
3 Press ▷.

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

```
>Duplex Mode
  Off
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Duplex Mode
? Off
```

6 Press △ or ▽ to display the desired duplex mode. The display changes as shown below.

```
Off (default)
Short edge bind
Long edge bind
```

7 When the desired duplex mode is displayed, press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Selecting the Output Stack

You can select whether printouts will be received by the printer's top tray (face-down) or to the optional document finisher's output tray.

1 Press **[MENU]**.

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

```
Paper Handling >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Stack Select` appears.

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

5 Press **[OK]**. A blinking question mark (`?`) appears. The selected output device will be displayed.

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

6 Press △ or ▽ to display the desired destination. The output tray changes depending on an installed option.

7 When the desired paper source is displayed, press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Overriding Difference between A4 and Letter

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

1 Press **[MENU]**.

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

```
Paper Handling >
```

3 Press ▷.

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

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

5 Press **[OK]**. A blinking question mark (?) appears.

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

6 Select On or Off using △ or ▽.

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to Ready.

Creating Custom Paper Type

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

The paper weight and duplex path can be set (refer to *Setting the Paper Weight on page 2-83*, and *Setting the Duplex Path on page 2-84*) after selecting the paper type to be customized as follows. For how to reset the customized settings, refer to *Resetting the Custom Paper Type on page 2-85*.

1 Press **[MENU]**.

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

```
Paper Handling >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Type Adjust >` appears.

```
>Type Adjust    >
  Plain
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Type Adjust
? Plain
```

6 Press △ or ▽ to display the desired paper type or a definable setting from among `Custom 1` through `Custom 8` to be registered.

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

NOTE: If you select the paper that is normally used, the paper's settings will be changed.

7 When the paper type to be customized is displayed, press **[OK]**.

8 Press ▷ and proceed to *Setting the Paper Weight* on the following page.

Setting the Paper Weight

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

1 Display the custom paper type (refer to *Creating Custom Paper Type on page 2-82*) and press ▷.

2 Press △ or ▽ repeatedly until `>>Paper Weight` appears.

```
>>Paper Weight
  Normal 1
```

3 Press **[OK]**. A blinking question mark (?) appears.

```
>>Paper Weight
? Normal 1
```
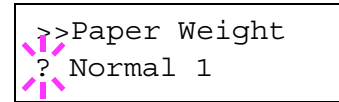
4 Press △ or ▽ to display the desired paper thickness. The display changes as shown below. For details of the default setting for each paper type, refer to *Media Type on page 1-13*.

Paper Thickness	Range
Light	Less than 64g/m^2
Normal 1	64 to 75g/m^2
Normal 2	75 to 90g/m^2
Normal 3	90 to 105g/m^2
Heavy 1	105 to 135g/m^2
Heavy 2	135 to 170g/m^2
Heavy 3	Over 170g/m^2
Extra Heavy	Transparency

5 When the desired paper thickness displayed, press **[OK]**.

6 Press **[MENU]**. The message display returns to Ready.

Setting the Duplex Path

You can set whether or not to enable duplex printing as follows. The default setting is Enable.

1 Display the custom paper type (refer to *Creating Custom Paper Type on page 2-82*) and press ▷.

2 Press △ or ▽ repeatedly until >>Duplex Path appears.

```
>>Duplex Path
  Enable
```

3 Press **[OK]**. A blinking question mark (?) appears.

```
>>Duplex Path
? Enable
```
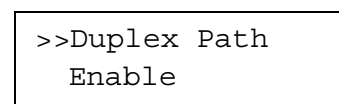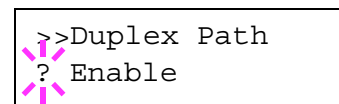
4 Select Enable or Disable using △ or ▽. For details of the default setting for each paper type, refer to *Media Type on page 1-13*.

5 Press **[OK]**.

6 Press **[MENU]**. The message display returns to Ready.

Resetting the Custom Paper Type

Resets the custom setting that are set in *Creating Custom Paper Type on page 2-82*.

1   Press **[MENU]**.

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

```
Paper Handling >
```

3   Press ▷.

4   Press △ or ▽ repeatedly until `>Reset Type Adjust` appears.

```
>Reset Type
Adjust
```

5   Press **[OK]**. A blinking question mark (`?`) appears.

```
>Reset Type
Adjust ?
```

6   Press **[OK]**. All the customized paper weight and duplex path settings will be reset to the default. The message display returns to `Ready`.

Reading Life Counters

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.

Displaying the Total Printed Pages

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

1   Press **[MENU]**.

2   Press △ or ▽ repeatedly until `Life Counters >` appears.

```
Life Counters   >
```

3   Press ▷.

4   Press △ or ▽ until `>Printed Pages` appears.

```
>Printed Pages
          0000001
```

5   Press **[MENU]**. The message display returns to `Ready`.

Other Modes

The modes described in the following pages can be accessed in the Others submenu. To enter the Others submenu, press ▷ while `Others` `>` is displayed.

The following submenus can be displayed by pressing ▷ and then △ or ▽.

- Message Language Selecting
- Automatic Form Feed Timeout Setting
- Sleep Timer Setting
- Received Data Dumping
- Restart Printer
- Resource Setting
- Alarm (Buzzer) Setting
- Auto Continue Setting
- Finishing
- Service Menu (for service personnel)

Selecting the Message Language

You can select the language of the messages on the message display by following the procedure given below.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others` `>` appears.

```
Others              >
```
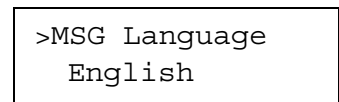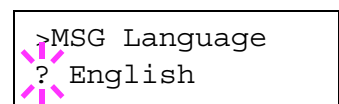
3 Press ▷.

4 Press △ or ▽ repeatedly until `>MSG Language` appears. The default message language is English.

```
>MSG Language
   English
```

5 To change the language, press **[OK]**. A blinking question mark (`?`) appears.

```
>MSG Language
? English
```

6 Press △. The display cycles through the available selections in the following order (▽ cycles in the reverse order):

```
English
Francais
Deutsch
Italiano
Nederlands
Español
Português
```

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Automatic Form Feed Timeout Setting

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 **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others              >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Form Feed Time Out` appears. The default setting is 30 seconds.

```
>Form Feed
Time Out 30 sec.
```

5 Press **[OK]**. A blinking cursor (_) appears.

```
>Form Feed
Time Out 30 sec.
```

6 Press △ or ▽ 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 ▷ and ◁ to move the cursor right and left.

7 Display the desired time and press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Setting the Sleep Timer

The printer has a sleep timer to conserve power when the printer is not printing, processing, or receiving data. You can turn off the sleep timer function by following the procedure given below.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others              >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Sleep timer >` appears.

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

5 Press ▷ and display `>>Auto Sleep`.

```
>>Auto Sleep
  On
```

6 Press **[OK]**. A blinking question mark (`?`) appears.

```
>>Auto Sleep
? On
```

7 Select `Off` using △ or ▽.

```
>>Auto Sleep
? Off
```

8 Press **[OK]**.

9 Press **[MENU]**. The message display returns to `Ready`.

Sleep Timer Timeout Time

You can adjust the timer value, the length of time the printer waits before entering sleeping mode in the absence of data.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others           >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Sleep timer >` appears. The default setting is `015 min.`

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

5 Press **[OK]**. A blinking cursor (_) appears.

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

6 Press △ or ▽ 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 ▷ and ◁ to move the cursor right and left.

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Received Data Dumping

It is possible to print data received by the printer as hexadecimal code for the purposes of debugging programs and files.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others              >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Print HEX-DUMP` appears.

```
>Print HEX-DUMP
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Print HEX-DUMP?
```

6 Press **[OK]** 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 while receiving the data.

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

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

Printer Resetting

The procedure described below resets the printer's temporary conditions, such as the current unit of measurement, page orientation, font, character code set, margins, etc., set by commands to their default values.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others              >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Restart Printer` appears.

```
>Restart
 Printer
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Restart
 Printer ?
```

6 Press **[OK]** again. `Self test` appears while the printer is resetting itself, then `Please Wait` followed by `Ready`.

```
Self test
```

```
Please Wait
```

```
Ready
```

Resource Protection

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

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others          >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Resource Prot.` appears.

```
>Resource Prot.
 Off
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

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

6 Press △ or ▽ to display the desired mode. The display changes as shown below.

`Off` (default)
`Permanent`
`Perm / Temp` (Permanent/Temporary)

7 When the desired mode is displayed, press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Alarm (Buzzer) Setting

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

The audio alarms are each set to `On` as a factory preset. If the alarms are set to `Off`, they will not sound.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others          >
```
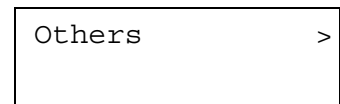
3 Press ▷.

4 Press △ or ▽ repeatedly until `>Buzzer >` appears.

```
>Buzzer         >
```
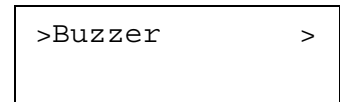
5 Press ▷.

6 Setting items (e.g., `Error`) are displayed in the message display. Press △ or ▽ to display each setting item.

```
>Error
  On
```
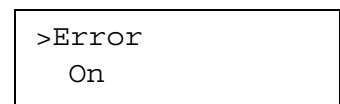
`Error`
`Ready`
`Job End`
`Key Confirm.`

7 Display the setting item to be changed and press **[OK]**. A blinking question mark (`?`) appears.

```
>Error
? On
```
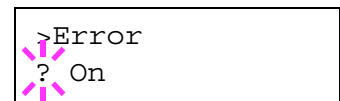
8 During setting, press △ or ▽ to select on/off for the audio alarm.

9 Press **[OK]**.

Repeat steps 6 through 9 for each item to be changed.

10 Press **[MENU]**. The message display returns to `Ready`.

Auto Continue Setting

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

```
Memory overflow Press GO
Print overrun Press GO
KPDL error Press GO
File not found Press GO
RAM disk error Press GO
MemoryCard err Press GO
Hard disk err Press GO
Duplex disabled Press GO
Add Staple Press GO
Check chad box Press GO
```

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

For setting the auto continue recovery time, refer to the next section.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others              >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Auto Error Clear` appears.

```
>Auto Error
 Clear   Off
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Auto Error
 Clear? Off
```

6 Select `On` or `Off` using △ or ▽.

7 Press **[OK]**.

8 Press **[MENU]**. The message display returns to `Ready`.

Setting the Auto Continue Recovery Time

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

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others          >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Auto Error Clear  >` appears.

```
>Auto Error     >
 Clear   On
```

5 Press ▷ and display `>>Error Clear`.

6 Press **[OK]**. A blinking cursor (_) appears.

```
>>Error Clear
 Timer    030sec.
```

7 Press △ or ▽ 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 ▷ and ◁ to move the cursor right and left.

8 Display the desired time and press **[OK]**.

9 Press **[MENU]**. The message display returns to `Ready`.

Finishing

These settings are possible only when the optional finisher is installed on the printer.

Duplex Printing Error Detection Setting

This setting controls whether or not the message `Duplex disabled Press GO` appears when label or some other type of paper that is not supported for duplex printing is specified as the paper type when duplex printing is being performed.

On	• Press **[GO]** to perform simple printing. • Press **[CANCEL]** to cancel the print job.
Off	Disable duplex printing. (reverts to simplex printing)

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others              >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Finishing Error >` appears.

```
>Finishing >
 Error
```

5 Press ▷.

6 Press △ or ▽ repeatedly until `>>Duplex` appears.

```
>>Duplex
  Off
```

7 Press **[OK]**. A blinking question mark (`?`) appears.

```
>>Duplex
? Off
```

8 Press △ or ▽ to change `Off` to `On`.

9 Press **[OK]**.

10 To exit the menu selection, press **[MENU]**.

Staple Error Detection Setting

This setting controls whether or not message `Add staples` appears when the finisher units runs out of staples during output of a stabled job.

On	Message is displayed and printing pauses. Printing resumes automatically when staples are replenished.
Off	Message is displayed, but printing continues without stapling.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others          >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `> Finishing Error >` appears.

```
>Finishing >
 Error
```

5 Press ▷.

6 Press △ or ▽ repeatedly until `>>Staple` appears.

```
>>Staple
  Off
```

7 Press **[OK]**. A blinking question mark (`?`) appears.

```
>>Staple
? Off
```

8 Press △ or ▽ to change `Off` to `On`.

9 Press **[OK]**.

10 To exit the menu selection, press **[MENU]**.
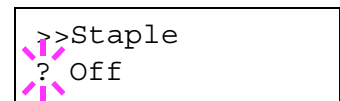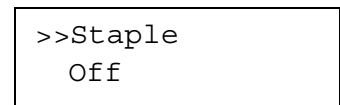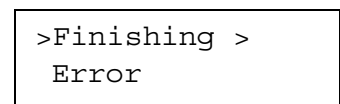
Punch Error Detection Setting

This setting is possible only when the Punch Unit is installed on the optional finisher unit. This setting controls whether or not the message `Chad box full` appears when the chad box on the punch unit becomes full.

On	Message is displayed and printing pauses. Printing resumes automatically when the chad box is emptied and replaced back into the punch unit.
Off	Message is displayed, but printing continues without punching.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others          >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Finishing Error >` appears.

```
>Finishing >
 Error
```

5 Press ▷.

6 Press △ or ▽ repeatedly until `>>Punch` appears.

```
>>Punch
  Off
```

7 Press **[OK]**. A blinking question mark (`?`) appears.

```
>>Punch
? Off
```

8 Press △ or ▽ to change `Off` to `On`.

9 Press **[OK]**.

10 To exit the menu selection, press **[MENU]**.
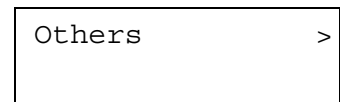
Service Menu

The service menu contains maintenance operations to be performed by service personnel. The `Print Status Page`, `Developer`, and `Drum` menus appear; however, in general, you will only need to use the `Print Status Page` menus.

Printing the Service Status Page

The service status page contains printer settings information that is more detailed than the standard status page and is therefore for mostly service purposes.

1 Press **[MENU]**.
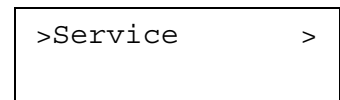
2 Press △ or ▽ repeatedly until `Others >` appears.

```
Others            >
```
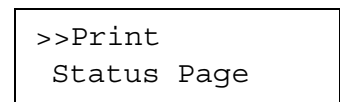
3 Press ▷.

4 Press △ or ▽ repeatedly until `>Service >` appears.

```
>Service          >
```

5 Press ▷.

6 Press △ or ▽ repeatedly until `>>Print Status Page` appears.

```
>>Print
  Status Page
```

7 Press **[OK]**. A blinking question mark (`?`) appears.

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

8 Press **[OK]**. The message display indicates `Processing` and printing starts.

NOTE: The network interface status page will be printed after the printer service status page.

---

3 Fonts

This chapter contains explanations on the following:

List of Fonts

This section contains a full list of the printer's internal fonts. The printer has 80 PCL fonts and 136 PostScript Level 3 compatible fonts, as well as 1 bitmap font. You can print the font list from the printer by using the printer's operation panel key. To print a list of fonts, refer to *Printing a List of Fonts on page 2-49*. Fonts may be downloaded to the printer's memory from an option memory card or hard disk.

PCL (Scalable and Bitmap) Fonts

AlbertusMd
ABCDEabcde?*'012345'

AlbertusExtBd
ABCDEabcde?*'012345'

AntiqueOlive
ABCDEabcde?*'012345'

AntiqueOlive-Bd
ABCDEabcde?*'012345'

AntiqueOlive-It
ABCDEabcde?'012345'*

Arial
ABCDEabcde?*'012345'

Arial-Bd
ABCDEabcde?*'012345'

Arial-It
ABCDEabcde?'012345'*

Arial-BdIt
ABCDEabcde?*'012345'

CGOmega
ABCDEabcde?*'012345'

CGOmega-Bd
ABCDEabcde?*'012345'

CGOmega-It
ABCDEabcde?'012345'*

CGOmega-BdIt
ABCDEabcde?*'012345'

CGTimes
ABCDEabcde?*'012345'

CGTimes-Bd
ABCDEabcde?*'012345'

CGTimes-It
ABCDEabcde?'012345'*

CGTimes-BdIt
ABCDEabcde?*'012345'

Clarendon-Cd
ABCDEabcde?*'012345'

Courier
ABCDEabcde?*'012345'

Courier-Bd
ABCDEabcde?*'012345'

Courier-It
ABCDEabcde?'012345'*

Courier-BdIt
ABCDEabcde?*'012345'

CourierPS
ABCDEabcde?*'012345'

CourierPS-Bd
ABCDEabcde?*'012345'

CourierPS-Ob
ABCDEabcde?'012345'*

CourierPS-BdOb
ABCDEabcde?*'012345'

Coronet
ABCDEabcde?'012345'*

GaramondAntiqua
ABCDEabcde?*'012345'

Garamond-Hlb
ABCDEabcde?*'012345'

Garamond-Krsv
ABCDEabcde?'012345'*

Garamond-HlbKrsv
ABCDEabcde?*'012345'

Helvetica
ABCDEabcde?*'012345'

Helvetica-Bd
ABCDEabcde?*'012345'

Helvetica-Ob
ABCDEabcde?'012345'*

Helvetica-BdOb
ABCDEabcde?*'012345'

Helvetica-Nr
ABCDEabcde?*'012345'

Helvetica-NrBd
ABCDEabcde?*'012345'

Helvetica-NrOb
ABCDEabcde?'012345'*

Helvetica-NrBdOb
ABCDEabcde?*'012345'

ITCAvantGardeGothic-Bk
ABCDEabcde?*'012345'

ITCAvantGardeGothic-Dm
ABCDEabcde?*'012345'

ITCAvantGardeGothic-BkOb
ABCDEabcde?'012345'*

ITCAvantGardeGothic-DmOb
ABCDEabcde?*'012345'

ITCBookman-Lt
ABCDEabcde?*'012345'

ITCBookman-Dm
ABCDEabcde?*'012345'

ITCBookman-LtIt
ABCDEabcde?'012345'*

ITCBookman-DmIt
ABCDEabcde?*'012345'

ITCZapfChancery-MdIt
ABCDEabcde?'012345'*

ITCZapfDingbats
✧✛·✧✤✧❀✿❍✳✺✼✸†☛ ✎✑➡✓✗

LetterGothic
ABCDEabcde?*'012345'

LetterGothic-Bd
ABCDEabcde?*'012345'

LetterGothic-It
ABCDEabcde?'012345'*

Marigold
ABCDEabcde?*'012345'

NewCenturySchoolbook-Rom
ABCDEabcde?*'012345'

NewCenturySchoolbook-Bd
ABCDEabcde?*'012345'

NewCenturySchoolbook-It
ABCDEabcde?'012345'*

NewCenturySchoolbook-BdIt
ABCDEabcde?*'012345'

Palatino
ABCDEabcde?*'012345'

Palatino-Bd
ABCDEabcde?*'012345'

Palatino-It
ABCDEabcde?'012345'*

Palatino-BdIt
ABCDEabcde?*'012345'

Symbol
ABXΔEαβχδε?*012345

SymbolPS
ABXΔEαβχδε?*012345

TimesNewRoman
ABCDEabcde?*'012345'

TimesNewRoman-Bd
ABCDEabcde?*'012345'

TimesNewRoman-It
ABCDEabcde?'012345'*

TimesNewRoman-BdIt
ABCDEabcde?*'012345'

Times-Rom
ABCDEabcde?*'012345'

Times-Bd
ABCDEabcde?*'012345'

Times-It
ABCDEabcde?'012345'*

Times-BdIt
ABCDEabcde?*'012345'

Univers-Md
ABCDEabcde?*'012345'

Univers-Bd
ABCDEabcde?*'012345'

Univers-MdIt
ABCDEabcde?'012345'*

Univers-BdIt
ABCDEabcde?*'012345'

Univers-MdCd
ABCDEabcde?*'012345'

Univers-BdCd
ABCDEabcde?*'012345'

Univers-MdCdIt
ABCDEabcde?'012345'*

Univers-BdCdIt
ABCDEabcde?*'012345'

Windings
✂✾✎✆☎✉♫♍ℳ♌✍✉✉❻▢▢▢📄📄📄

LinePrinterBM8.5-Roman (Bitmap font)
ABCDEabcde?*'012345'

KPDL Fonts (1)

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-DemiItalic
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
A BCDE A BCDE ?*'012345'

Copperplate-ThirtyTwoBC
A BCDE A BCDE ?*'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
ABCDabcde?*'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'

KPDL Fonts (2)

JoannaMT
ABCDEabcde?*'012345'
JoannaMT-Bold
ABCDEabcde?*'012345'
JoannaMT-BoldItalic
ABCDEabcde?*'012345'
JoannaMT-Italic
ABCDEabcde?'012345'*
LetterGothic
ABCDE abcde?*'012345'
LetterGothic-Bold
ABCDE abcde?*'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
ABCDE abcde?*'012345'
NewCenturySchlbk-Bold
ABCDEabcde?*'012345'
NewCenturySchlbk-BoldItalic
ABCDEabcde?*'012345'
NewCenturySchlbk-Italic
ABCDEabcde?'012345'*
NewCenturySchlbk-Roman
ABCDEabcde?*'012345'
New York
ABCDEabcde?*'012345'
Optima
ABCDE abcde?*'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
ΑΒΧΔΕαβχδε?*012345
Taffy
ABCDE abcde?*'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
ABCDE abcde?*'012345'
Univers-Bold
ABCDEabcde?*'012345'
Univers-BoldExt
ABCDE abcde?*'012345'
Univers-BoldExtObl
ABCDEabcde?*' 012345'
Univers-BoldOblique
ABCDEabcde?*'012345'
Univers-Condensed
ABCDE abcde?*'012345'
Univers-Condensed-Bold
ABCDE abcde?*'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
✿✛⁑✤❀☯❋✳✲✢☛☜ ✎✑➡✓✔✗

ADVANCED OPERATION GUIDE

4 Options

This chapter contains explanations on the following topics:

For availability of the options, consult your service technician.

General Information

The printer has the following options available. For instructions on installing individual options, refer to the documentation included with the option.

USB Flash Memory

CompactFlash (Memory) Card

RS-232C Serial Interface IB-11

Network Interface Card IB-21E/23

Expansion Memory (DIMM 128/256/512 MB)

Hard Disk Unit

Document Finisher DF-730

Document Finisher DF-710

Mail Box MT-710 (for DF-710)

Paper Feeder PF-700

Paper Feeder PF-750

Booklet Folder BF-710 (for DF-710)

Punch Unit PH-5A/5C/5D (for DF-710)
* Installed inside DF-710
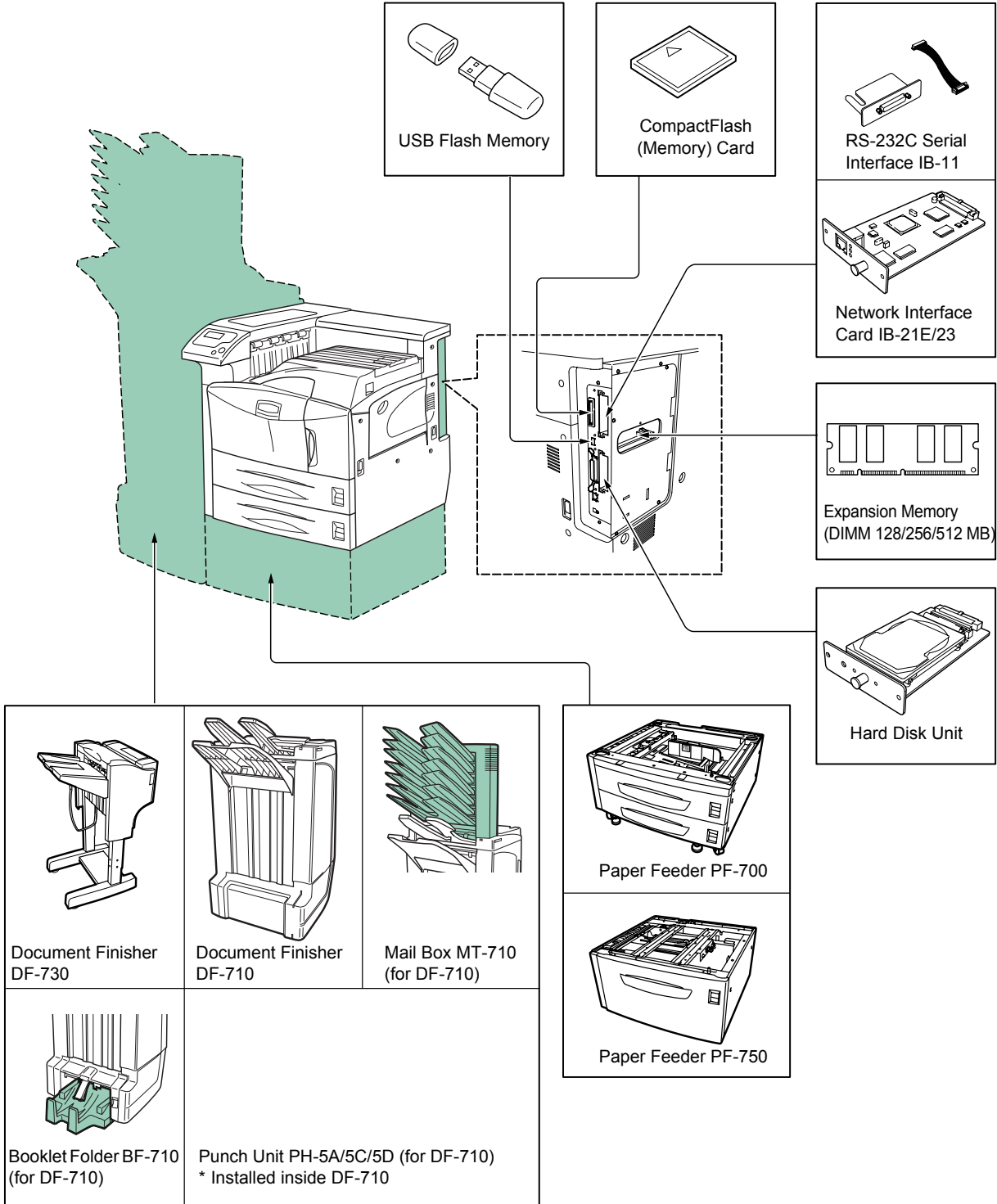
PF-700 Paper Feeder

Holds approximately 500 sheets of A5 to A3 or Ledger size paper. Up to two paper feeders can be attached to the bottom of the printer.

PF-700
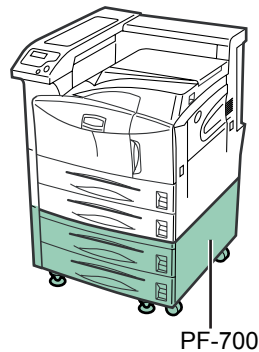
PF-750 Paper Feeder

Holds approximately 3000 sheets of A4, B5 or Letter size paper. Only one paper feeder can be attached to the bottom of the printer.

PF-750
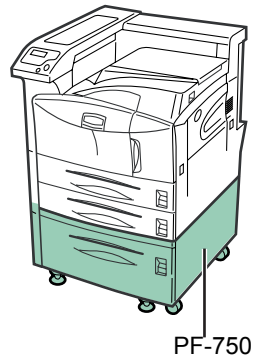
IB-21E/IB-23 Network Interface Cards

Along with the standard for the network interface on the printer, the network interface card supports TCP/IP, IPX/SPX, NetBEUI and AppleTalk protocols, so that the printer can be used on network environments including Windows, Macintosh, UNIX, NetWare, etc.

Network interface card	Network connections
IB-21E	10Base-T/100Base-TX
IB-23	10Base-T/100Base-TX/1000Base-T

IB-11 RS-232C Serial Interface

Enables connection to a computer with an RS-232C standard serial interface.

DF-710 Document Finisher

Provides finishing with about 3,000 sheets at a time with high-speed and large-capacity processes. Also provides a punch function. They are installed to the left side of the printer.
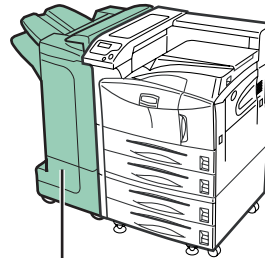
DF-710

DF-730 Document Finisher

Provides finishing with about 1,000 sheets at a time. Also provides staple and off set functions. It is installed to the left side of the printer.
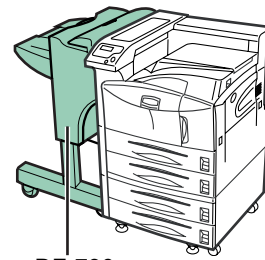
DF-730

BF-710 Booklet Folder

Provides the staple, punch (option), offset and stitch functions. It is installed to the left side of the printer.

PH-5A/5C/5D Punch Unit

It mounts to the DF-710 Document Finisher and can punch holes automatically in printed out paper.

Other Options

- **Hard Disk Unit**
  Enables the electronic sorting and job retention functions. To be inserted into the slot OPT1/HDD designed for it on the main circuit board of the printer.

- **CompactFlash (Memory) Card**
  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 right of the printer. See your dealer for purchasing information regarding the memory Cards that are best suited for use with this printer.

- **Memory DIMM**
  See your dealer for purchasing information of the DIMM that are best suited for use with this printer. Refer to *Chapter 4 Options* for the installation procedure.

- **USB Memory**
  USB memory for directly printing out PDF data inserts in the USB memory connector on the right side of the printer. Consult your dealer for USB memory usable with the printer.

Data Security Kit (C)

Activates the HDD security function. This kit is attached to the printer by the service representative. For details on HDD security function, refer to *HDD Security Function on page 4-15*.

Data Security Kit (C)
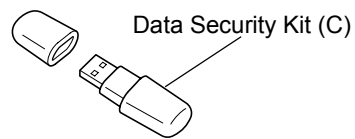
Network Interface

The FS-9130DN/FS-9530DN have the standard Network interface. This printer supports the TCP/IP, IPX/SPX, NetBEUI, and AppleTalk protocols, so the network printing under various platforms such as Windows, Macintosh, UNIX, and NetWare is available.

An option network interface card can be added by the following procedure.

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

2 Remove the two screws from the Option Interface Slot Cover (OPT).
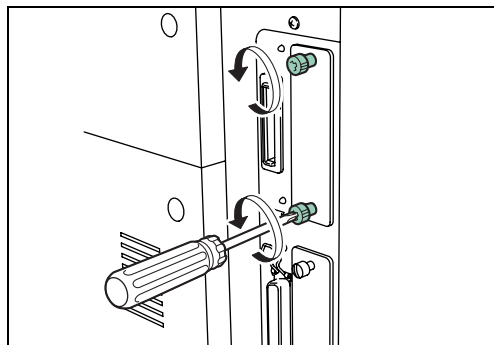
3 Insert the network interface card and secure it with the screws removed in step 2.
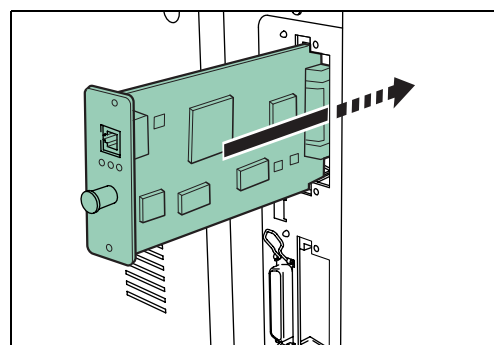
4 Connect the network cable.
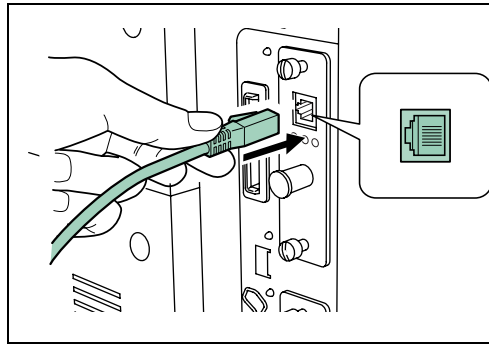
5 Set the network address from the printer operation panel (for details about the modes, refer to *Changing Network Interface Parameters on page 2-37*).

Hard Disk

Insert the hard disk into option hard disk unit slot on 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, refer to *e-MPS on page 2-23*.

Further, by using the hard disk together with the Data Security Kit (C), data in the hard disk can be encrypted and thereby enhance the security of hard disk data.

For details on available hard disks, see your dealer.

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

2 Remove the two screws and remove the slot cover (HDD).
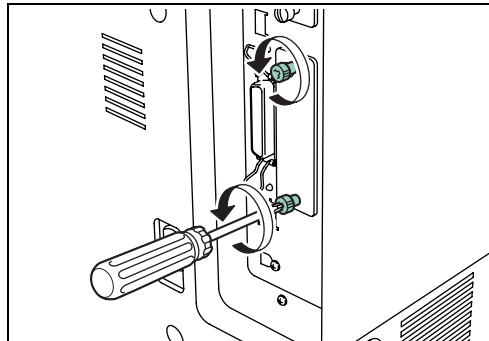
3 Insert the optional hard disk unit into the slot.
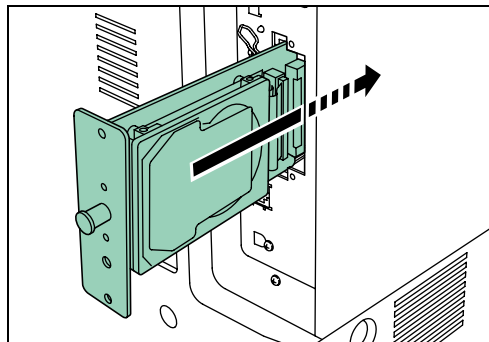
4 Tighten the two screws to secure the hard disk unit to the main circuit board.
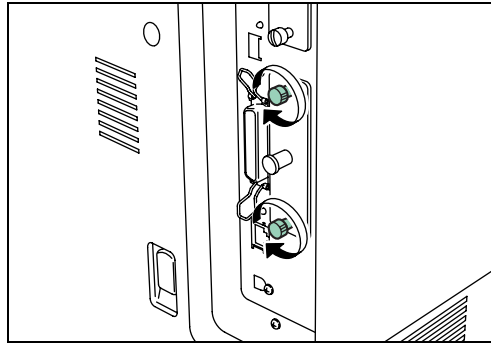
CompactFlash (Memory) Card

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

For details of available memory cards, see your dealer.

1 Turn off the printer.

NOTE: Do not insert or remove a memory card while the 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 with its label surface facing toward the outside, connector end first. Push it in all the way.

ADVANCED OPERATION GUIDE
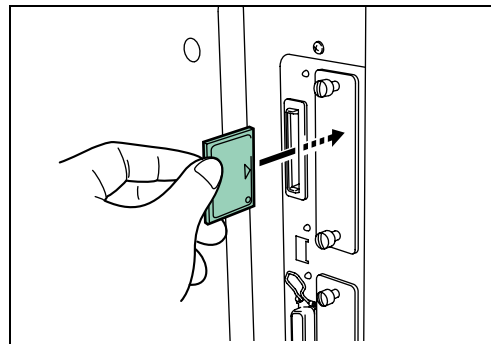
USB Flash Memory

Connect the USB memory to the USB memory slot on the right side of the printer. You can then print PDF data stored in the USB memory.

Consult your dealer for USB flash memory usable with the printer.

1 Insert the USB memory into the USB memory slot.
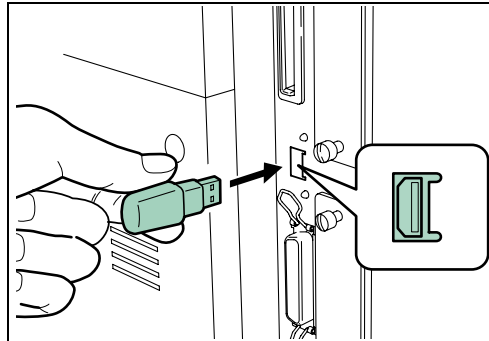
After installation, refer to *Using USB Flash Memory on page 2-68*.

NOTE: When disconnecting USB flash memory from the printer, be sure to perform `Remove Device` in the USB Memory operation menu to ensure safe disconnection.

Expansion Memory Modules

To expand the printer memory for more complex print jobs and faster print speed, you can plug in optional memory module (dual in line memory module) in the memory slot provided on the printer main controller board. You can select additional memory module from 64, 128, 256 or 512MB. The maximum memory size is 576MB.

NOTE: The expansion memory should only be installed by your service technician. We shall not be liable for any damages caused by improper installation of expansion memory.

Precautions for handling the memory module

To protect electronic parts, discharge static electricity from your body by touching a water pipe (faucet) or other large metal object before handling the memory module. Or, wear an antistatic wrist strap, if possible, when you install the memory module.

Always hold the main controller board or a memory module by its edges as shown below to avoid damaging electronic parts.
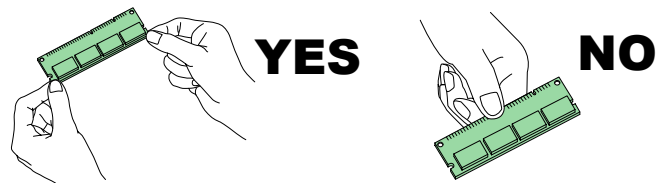
Installing the Memory Module

See your dealer for purchasing information of the memory module that is best suited for use with this printer. 128 MB, 256 MB and 512 MB memory module can be used for memory expansion.

Remove the memory slot cover completely from the printer as follows:

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

2 Remove the screw from the memory slot cover at the back of the printer and remove the memory slot cover.
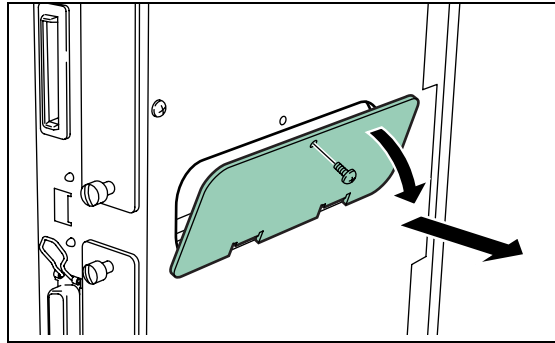
3 Remove the DIMM from its package.

4 Open the clips on both ends of the DIMM socket.

5 Insert the DIMM into the socket, so that the notches on the DIMM align with the corresponding protrusions in the socket.

Clamp

Clamp
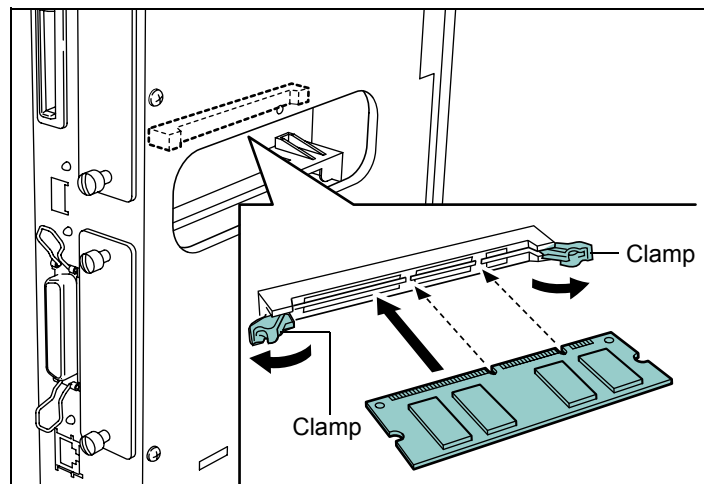
6 Close the clips of the DIMM socket to secure the DIMM.
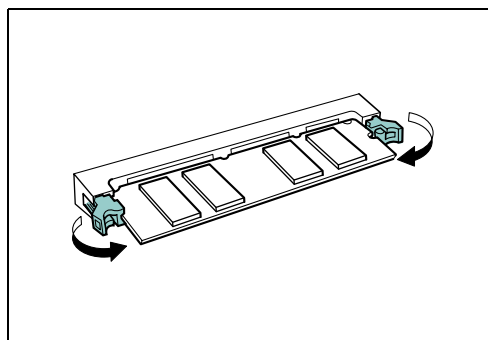
7 When you finish installing the DIMM, mount the memory slot cover and fasten it with the screw.

Removing Memory Module

To remove a memory module, carefully pull the end clips outwards, then pull the memory module out of the socket.
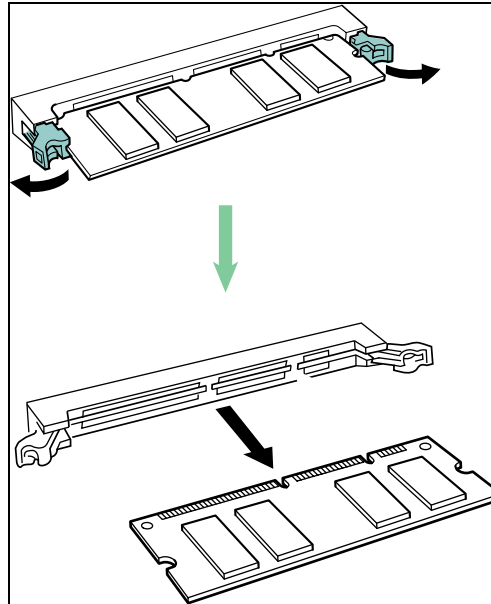
Testing the Expanded Memory

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 the printer is turned off. Plug the power cord into the printer and turn the printer on.

2 Press **[MENU]** on the operation panel.

3 Press △ or ▽ repeatedly until `Print Status Page` appears.

4 Press **[OK]** 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 64 MB for FS-9130DN, 128 MB for FS-9530DN.)

HDD Security Function

Data Security Kit(C) has the functions of overwriting and encryption.

NOTE: To use the HDD Security feature, an option hard disk and the Data Security Kit (C) need to be pre- installed.

Overwrite Function

The printer to install this security functions (hereinafter, the machine) by temporarily storing print jobs on an internal hard disk. Printing is performed using this data. Also, various data can be stored by a user. Even after the printing is completed or the data is deleted by a user, the actual area of the data remains stored on the hard disk until it is overwritten by other data. Therefore, there is a possibility that confidential information will be leaked if special tools are used to recover this remaining data.

The Security Kit overwrites and deletes (hereinafter, overwriting) unnecessary data storage area of data that has been printed or deleted to ensure that data cannot be recovered. Since the overwriting is performed automatically, no special operation is required.

NOTE: The Security Kit immediately overwrites the data stored on the hard disk when printing is cancelled while processing.

Overwrite Methods

Overwriting has the following two methods. You can change the method anytime.

- Once Overwrite

  Overwrites the unnecessary data storage area (when overwriting) or the entire area (when system initialization) of the hard disk with zeroes to reject recovery of the data.

- 3-time Overwrite (Default)

  Overwrites the same data area as for the Once Overwrite twice with a random pattern and then a third and final time with zeroes. Because overwriting is performed three times, even highly-sophisticated recovery methods are unable to recover the data. Thus this method provides higher security than the once overwrite method.

When overwriting large amount of data, this method may take longer than the Once Overwrite.

Encryption Function

The printer temporarily stores print jobs on an internal hard disk. If the hard disk is stolen, there is a risk that the data might be passed to unauthorized parties or modified.

The Security Kit encrypts data before storing data on the hard disk. The stored data cannot be decrypted by other than normal printing or operations, higher security is provided in case the hard disk is stolen.

Since the encryption is performed automatically, no special operation is required.

IMPORTANT: Although the encryption function strengthens data security, data stored in the virtual mailbox can be decrypted by normal print operations. Therefore do not store data that must not be leaked on the virtual mailbox.

Operation with a hard disk

The following operations are performable with the HDD Security feature.

• Changing the Hard Disk Overwrite Method
• Secure Formatting

Changing the Hard Disk Overwrite Method

When performing Overwrite Function for a hard disk, you can set the number of times that data is overwritten.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Security >` appears.

```
Security        >
```

3 Press ▷.

4 Press △ or ▽ repeatedly until `>Overwrite Mode` appears.

```
>Overwrite Mode
  Normal
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

```
>Overwrite Mode
? Normal
```

6 Press △ or ▽ to display the desired mode. The display changes as shown below.

`Normal` (default)	:	Overwrites 3 times. (Overwrites 2 times with random data, then 1 more time with NULL data.)
`Quick`	:	Overwrites 1 time. (Overwrites with NULL data.)

7 Press **[OK]**.

8 Press **[MENU]**. The display returns to `Ready`.

NOTE: When the printer is overwriting data while Ready is displayed, Ready and Overwriting appear alternately in the message display.
When the printer is overwriting data while Processing is displayed, Processing and Overwriting appear alternately in the message display.

Secure Formatting

Overwrites the hard disk data completely. Use this function when stopping the use of the hard disk.

1 Press **[MENU]**.

2 Press △ or ▽ repeatedly until `Security >` appears.

```
Security        >
```

3 Press ▷.

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

```
>Secure Format
```

5 Press **[OK]**. A blinking question mark (`?`) appears.

Pressing **[CANCEL]** here returns to the `>Secure Format` display.

```
>Secure Format ?
```

6 Press **[OK]**. Secure Formatting is performed.

`##` indicates the progress of the Secure Formatting.
When Secure Formatting is completed, the display returns to `>Secure Format`.

```
>Secure
Formatting    ##%
```

7 Press **[MENU]**. The display returns to `Ready`.

5 Computer Interface

This chapter contains explanations on the following topics:

General Information

This chapter 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 chapter explains the following topics:

- Parallel Interface
- USB Interface
- Serial Interface (Option)

Parallel Interface

Communication Modes

The printer features fast data transmission with the parallel interface. The parallel interface mode can be activated from the operation panel.

Refer to *Changing Parallel Interface Modes on page 2-35*.

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

You can choose from four communication modes:

Communication Mode	Reception	Transmission
Auto (default)	High-speed/ECP	Nibble/ECP
Nibble	High-speed	Nibble
High-speed	High-speed	—
Normal	Normal	—

Interface Signals

Table shows the connector pins and corresponding input and output signals of the parallel interface. Explanation of each signal is also given in the table.

The description in [ ] indicates signal names in Auto mode and Nibble (high) mode (IEEE 1284-compliant). In Auto and Nibble modes, these signals are bidirectional.

Pin	In or out	Signal	Description
1	In	Strobe* [nStrobe]	A negative-going-strobe pulse causes the printer to read and latch the data on the Data 0 [1] to Data 7 [8] signal lines.
2	In	Data 0 [Data 1]	These eight signals form one byte of data sent from host computer to printer. Data 7 [8] is the most significant bit.
3	In	Data 1 [Data 2]	
4	In	Data 2 [Data 3]	
5	In	Data 3 [Data 4]	
6	In	Data 4 [Data 5]	
7	In	Data 5 [Data 6]	
8	In	Data 6 [Data 7]	
9	In	Data 7 [Data 8]	

Pin	In or out	Signal	Description
10	Out	Acknowledge* [nAck]	This negative-going pulse acknowledges the previous character received.
11	Out	Busy [Busy]	When this signal is high, the printer is busy. When it is low, the printer is able to receive more data.
12	Out	Paper Empty [PError]	This signal goes high when the printer runs out of paper.**
13	Out	Online (Select) [Select]	This signal goes high when the printer is online and low when the printer is offline. The signal goes low when you press **[GO]** to make the printer go off line.**
14	In	— [nAutoFd]	Ignored
15	—	—	Not used
16	—	0 V DC	
17	—	Chassis Ground	
18	—	+5 V DC	This pin is used for the printer's +5 V DC power supply (+5±0.5 V, 400 mA maximum, with fuse)
19	—	Ground return	
20	—	Ground return	
21	—	Ground return	
22	—	Ground return	
23	—	Ground return	
24	—	Ground return	
25	—	Ground return	
26	—	Ground return	
27	—	Ground return	
28	—	Ground return	
29	—	Ground return	
30	—	Ground return	
31	In	— [nInit]	Ignored
32	Out	Error* [nFault]	When the high-speed parallel line control is on, this line returns an error status.**
33	—	—	Not used
34	—	—	Not used
35	Out	Power Ready	This signal goes high when the printer is powered on.
36	In	Select In [nSelect In]	When this line is high, IEEE1284 mode is enabled.

* Indicates signals that are low active.

** The Paper Empty, Online, and Error signals work only after you have enabled them using the O2 parameter of the FRPO command.

USB Interface

This printer supports the Hi-Speed USB (Universal Serial Bus) interface specifications and interface signals are as follows.

Specifications

Basic specification

Complies with the Hi-Speed USB

Connectors

Printer: B-type receptacle (female) with upstream port

Cable: B-type plug (male)

Cable

Use a shielded cable that complies with Hi-Speed USB and not longer than 5 meters (16 feet).

Transfer Mode

Hi-Speed (max. 480 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)

Interface Signals

The pins of the printer's RS-232C interface connector carry the signals listed in the table below. The table also indicates whether each signal is incoming or outgoing with respect to the printer.

Pin	In or out	Signal	Description
1	—	FG	Frame Ground. This pin is connected directly to the printer frame.
2	Out	TXD	Transmit Data. This pin is used to output asynchronous data sent from the printer to the computer. This signal is often used in handshaking.
3	In	RXD	Receive Data. This pin is used to input serial asynchronous data sent from the computer to the printer.
4	Out	RTS	Request To Send. This output is always high (above 3 volts).
5	In	CTS	Clear To Send. Not used.
6	In	DSR	Data Set Ready. Not used.
7	—	SG	Signal Ground. This pin is used to establish a common reference level for the voltages of all signals other than Frame Ground.
20	Out	DTR	Data Terminal Ready. This pin is used to notify the status of the printer buffer (i.e., nearly full or nearly empty) when handshaking is used. The pin goes high (above 3 volts) when the buffer is able to accept more data.

Interface voltage levels

The voltage levels of the interface signals conform to EIA RS-232C specifications. The voltage level of SPACE is 3 to 15 volts. The voltage level of MARK is -3 to -15 volts. Voltages between -3 and 3 volts are undefined.

RS-232C Protocol

Parameters of the RS-232C Protocol

A protocol is a set of rules the computer follows in sending data to the printer. They are indicated on the status page. Parameters can be changed from the operation panel. Refer to *Changing Serial Interface Modes on page 2-36*. The parameters and their identification codes are given below.

- H1: Baud rate
- H2: Number of data bits
- H3: Number of stop bits
- H4: Parity
- H5: Protocol logic
- H6: Buffer-nearly-full threshold
- H7: Buffer nearly-empty threshold
- H8: Received data buffer size

This following section outlines the parameters and their values you can select on the operation panel:

H1: Baud rate

Parameter value	Baud rate
12	1200
24	2400
48	4800
96	9600
19	19200
38	38400
57	57600
11	115200

The factory default setting is 9600 baud.

H2: Data bits

7 or 8; the factory default setting is 8.

H3: Stop bits

1 or 2; the factory default setting is 1.

H4: Parity

Parameter value	Meaning
0	None
1	Odd
2	Even
3	Ignore

The factory default setting is None (0 on the status printout).

H5: Protocol logic

Parameter value	Meaning
0	Combination of 1 and 3 below
1	DTR/DSR, positive logic
2	DTR, negative logic
3	XON/XOFF
4	ETX/ACK
5	XON/XOFF recognized only as protocol

The factory default setting is 0.

H6: Buffer nearly-full threshold

This is a percentage from 0 to 99. The factory default setting is 90.

H7: Buffer nearly-empty threshold

This is a percentage from 0 to 99. The factory setting is 70.

The factory default 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.

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

RS-232C Cable Connection

Connecting the Printer to the Computer

Check that the power of both the printer and the computer is switched off.

1 Discharge yourself of static electricity by touching a metal object such as a doorknob.

2 Remove the plastie 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.

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:

Setting the RS-232C Parameters

Windows XP, proceed as follows:

1 Proceed from the **start menu** > **Control panel**.

2 The **Control Panel** window opens. Click on **Performance and Maintenance**, then click on **System**.

3   **System Properties** window opens. Click on the **Hardware** tab, then click on the **Device Manager** button, and double click on **Ports (COM & LPT)**.
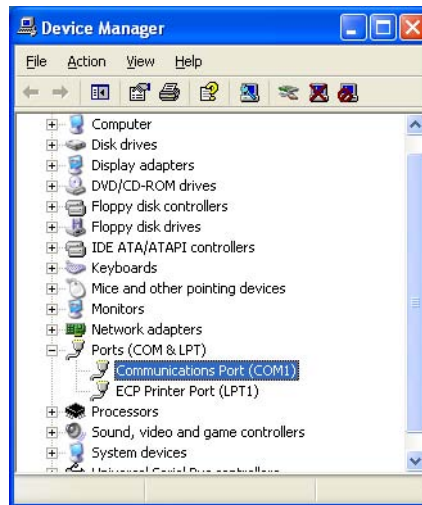
4   Double click on **Communications Port**.

5   The **Communications Port Properties** dialog is displayed for the selected COM port. Click on the **Port Settings** tab and set the port properties.
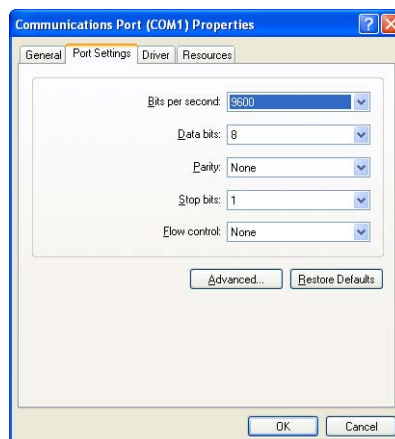
6   After setting the properties, click the **OK** button.

Windows 95/98/Me

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.
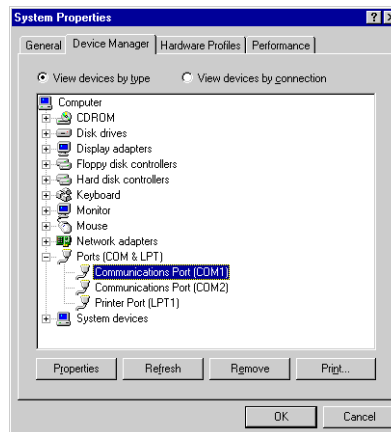
4 Click on the **Properties** button.

5 The Properties sheet is displayed for the selected **COM** port. Click on the **Port Settings** tab and set the port properties.
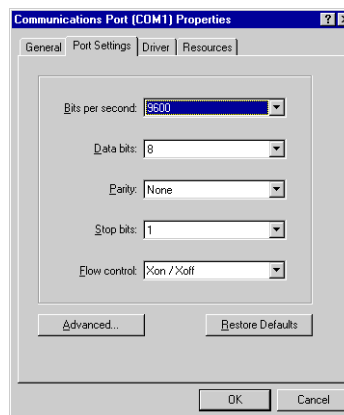
6 After setting the properties, click the **OK** button.

Glossary

AppleTalk
AppleTalk offers file sharing and printer sharing and it also enables you to utilize application software that is on another computer on the same AppleTalk network.

Default Gateway
This indicates the device, such as a computer or router, that serves as the entrance/exit (gateway) for accessing computers outside of the network that you are on. When no specific gateway is designated for a destination IP address, data is sent to the host that is designated as the Default Gateway.

DHCP (Dynamic Host Configuration Protocol)
This is a protocol that automatically resolves the IP address, Subnet Mask and Gateway address on a TCP/IP network. Use of DHCP minimizes the load of network administration, especially on network environments with a large number of client computers where it is not specifically necessary to assign a separate IP address to each client, including printers.

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 the 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 an expansion socket, into which you can install a 128 MB, 256 MB and 512MB DIMM (Dual Inline Memory Module). See your Kyocera Mita dealer to purchase the DIMM that is best suited for use with this printer.

Form Feed Timeout
While data is being sent to a printer, some pauses may occur. At this time, the printer waits for the next data without making a page break. Form feed timeout is a function to wait only a preset amount of time before it executes an automatic page break. After the waiting period begins, once the designated amount of time is exceeded, the printer will automatically process the currently received data and print it out. If the machine has received no print data for the last page, the printer ends processing of that job without outputting paper.

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.

IP Address (Internet Protocol Address)
The Internet Protocol address is a unique number that represents a specific computer in a network. The format of an IP Address is four numbers separated by dots, e.g. 192.168.110.171. Each number should be a decimal between 0 and 255.

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.
KPDL	KPDL is Kyocera's implementation of the PostScript page description language Level3.
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.
NetBEUI (NetBIOS Extended User Interface)	An enhanced version of the NetBIOS protocol, it enables the utilization of more advanced functions on small-scale networks than do other protocols such as TCP/IP, etc.
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.
PostScript	This is a page description language developed by Adobe Systems, Inc. It enables flexible font functions and highly-functional graphics, allowing higher quality printing.
Printer driver	The printer driver makes it possible for you to print data created using application software. The printer driver for the printer is on the Kyocera Mita Software Library CD-ROM supplied with the printer. Install the printer driver on the computer connected to the printer.
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 operation 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.
Subnet Mask	This is a 32-bit numerical value that defines which bits of the IP address specify the network address and which specify the host address.
TCP/IP (Transmission Control Protocol/Internet Protocol)	TCP/IP is a suite of protocols designed to define the way computers and other devices communicate with each other over a network.
USB (Universal Serial Bus)	An interface standard for low to middle speed serial interfaces. This printer supports Hi-Speed USB. The maximum transfer rate is 480 Mbps and the maximum cable length is 5 meters (16 feet).

Index

A1

QUALITY CERTIFICATE

This machine has passed all quality controls and final inspection.

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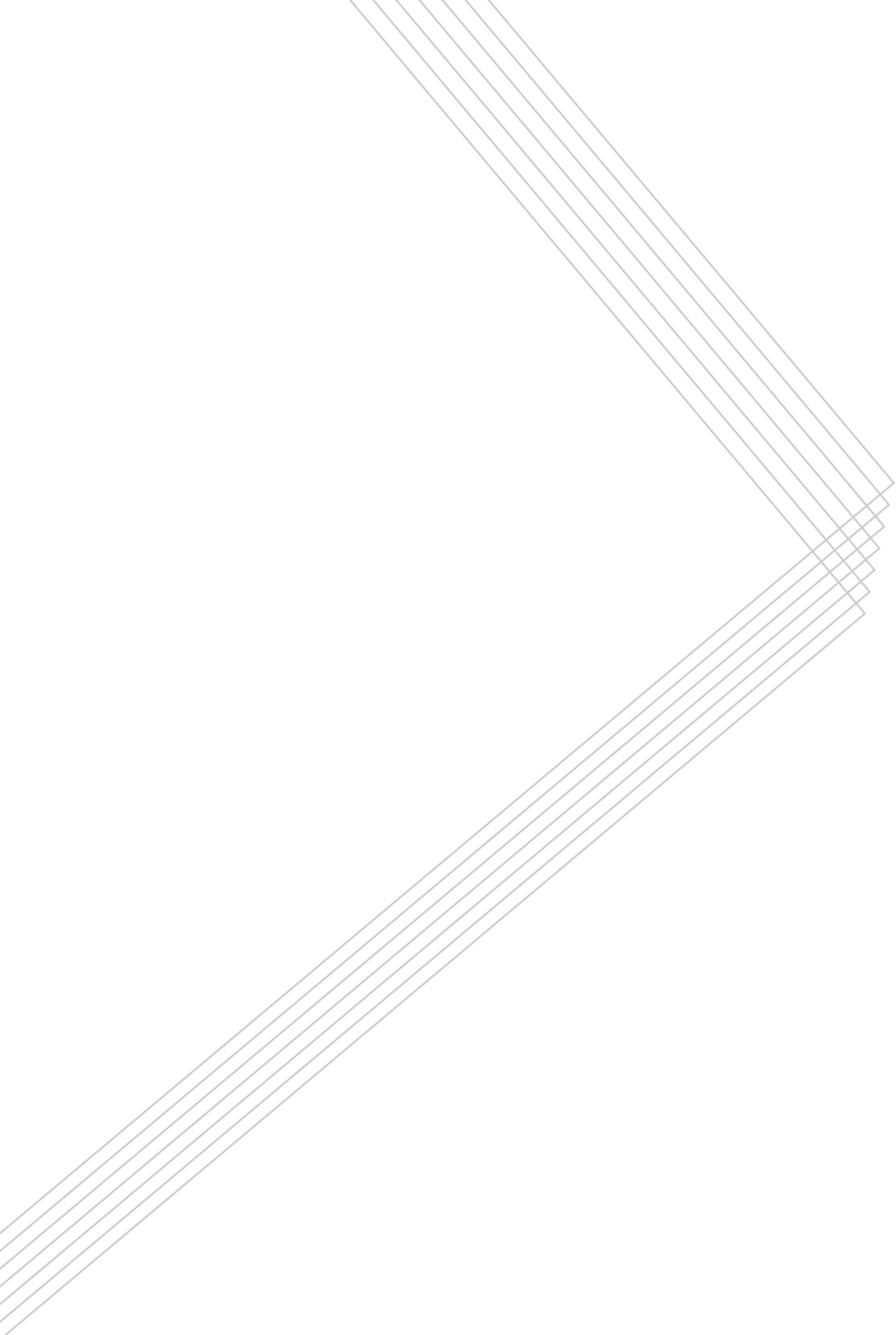Hong Kong
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