

# FS-2020D FS-3920DN FS-4020DN

# ADVANCED OPERATION GUIDE





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# Introduction

This guide has the following chapters:

#### 1 Paper Handling

Explains how choose, handle and load paper.

#### 2 Using the Operation Panel

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

#### 3 Option

Shows the available options.

#### 4 Computer Interface

Describes the possible connections between the printer and your computer.

#### Glossary

A Glossary of terms used is provided here.

# **Conventions in This Guide**

This manual uses the	following conventions.

Convention	Description	Example
Italic Typeface	Used to emphasize a key word, phrase or reference to additional information.	For font numbers of the internal fonts, refer to <i>Print Fonts List</i> on <i>page 2-15</i> .
Bracket Bold	Used to denote operation panel keys.	Press <b>[OK]</b> . A blinking cursor (_) appears.
Note	Used to provide additional or useful information about a function or feature.	Note Check with your network administrator when selecting network settings.
Important	Used to provide important information.	<b>IMPORTANT</b> Format is only displayed when a memory card is installed in the printer and protection is disabled.
Caution	Cautions are statements that suggest mechanical damage as a result of an action.	<b>CAUTION</b> If the security level is set to Low, error message Low security is displayed. For more details, refer to the <i>Error Message</i> section in the <i>Operation</i> <i>Guide</i> .

# **1** Paper Handling

This chapter explains paper specifications for this printer and how to load paper into the cassette or MP tray.

General Guidelines	1-2
Selecting the Right Paper	1-4
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# **General Guidelines**

The machine is designed to print on standard copier paper, 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, curling, poor print quality, and paper waste, and in extreme cases can damage the machine. The guidelines given below will increase the productivity of your office by ensuring efficient, troublefree printing and reducing wear and tear on the machine.

### Paper Availability

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

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 machine. 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 machine's performance. A high-quality printer cannot produce highquality 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 60 to  $120 \text{ g/m}^2$  (16 to 31.9b).

# **Paper Specifications**

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

ltem	Specifications
Weight	Cassette: 60 to 120 g/m <sup>2</sup> (16 to 31.9 lb/ream)
	MP tray: 60 to 220 g/m <sup>2</sup> (16 to 58.5 lb/ream)
Thickness	0.086 to 0.110mm (3.4 to 4.3 mils)
Dimensional	±0.7 mm (±0.0276 inches)
Accuracy	
Squareness of	90±0.2°
Corners	
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, the MP tray must be used.



# **Selecting the Right Paper**

This section describes the guidelines for selecting paper.

#### 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 and paper jams, and can shorten the life of the machine. In particular, avoid using paper with a surface coating or other surface treatment. 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 the MP Tray are available for the paper sizes shown below. The dimensional tolerances are  $\pm 0.7$ mm for the length and width. The angle at the corners must be 90°  $\pm 0.2$ °.

MP Tray Size		Cassette or MP Tray	Size
Envelope Monarch	3-7/8 x 7-1/2 inches	Legal	8-1/2 x 14 inches
Envelope #10	4-1/8 x 9-1/2 inches	Letter	8-1/2 x 11 inches
Envelope DL	110 x 220 mm	ISO A4	210 x 297 mm
Envelope #9	3-7/8 x 8-7/8 inches	ISO A5	148 x 210 mm
Envelope #6	3-5/8 x 6-1/2 inches	ISO A6	105 x 148 mm (FS-2020D: MP Tray only)
JIS B6	128 x 182 mm	Envelope C5	162 x 229 mm
Hagaki	100 x 148 mm	ISO B5	176 x 250 mm
Ofuku-Hagaki	148 x 200 mm	JIS B5	182 x 257 mm
Youkei 2	114 x 162 mm	Executive	7-1/4 x 10-1/2 inches
Youkei 4	105 x 235 mm	Oficio II	8-1/2 x 13 inches
	•	Folio	210 x 330 mm
		Statement	5-1/2 x 8-1/2 inches
		16 kai	197 x 273 mm
Custom	Cassette: 140 x 210 mm to 216 x 356 mm MP Tray: 70 x 148 mm to 216 x 356 mm		

#### Smoothness

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

#### **Basis weight**

Basis weight is the weight of paper expressed in grams per square meter (g/m<sup>2</sup>). Paper that is too heavy or too light may cause feed errors or paper jams as well as premature wear of the product. Uneven weight of paper, namely uneven paper thickness may cause multiple-sheet feeding or print quality problems such as blurring because of poor toner fusing.

The recommended basis weight is between 60 and  $120g/m^2$  (16 to 31.9 lib/ream) for the cassette and between 60 and  $220g/m^2$  (16 to 59 lib/ream) 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 (Ib)	Europe Metric Weight (g/m²)
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

The paper used with the machine 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 correct thickness is 0.086 to 0.110mm (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, feed ability, 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 jams and alignment anomalies. The moisture content of the paper should be 4 to 6%.

To ensure correct 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. Re-wrap 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 machine 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 machine. All paper used in the machine should be long grain.

#### **Other Paper Properties**

Porosity: Indicates the density of paper fiber.

**Stiffness**: Limp paper may buckle in the machine, resulting in paper jams.

**Curl**: Most paper naturally tends to curl one way if left unpacked. When paper passes through the fixing unit, it curls upward a little. To produce flat printouts, load the paper so that the upward pressure from the machine can correct their curling.

**Electrostatic discharge**: 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 machine 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 correctly packaged.

#### **Special Paper**

Paper type to be used	Paper type to be selected
Thin paper (60 to 64 g/m <sup>2</sup> )	Vellum
Thick paper (90 to 220 g/m <sup>2</sup> )	Thick
Colored paper	Color
Recycled paper	Recycled
Overhead projector transparencies	Transparency
Cardstock	Cardstock
Envelopes	Envelope
Label	Labels

The following types of special paper can be used:

Use paper that is sold specifically for use with copiers or printers (heatfusing type). When using transparencies, labels, envelopes, cardstock, coated, or thick paper, feed the paper from the MP Tray.

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 and so forth given off during printing on special paper causes harm to the machine or operator.



**Note** Before purchasing any type of special paper, test a sample on the machine and check that printing quality is satisfactory.

#### Transparency

Transparencies must be fed to the MP Tray. One transparency can be loaded at a time.

Transparencies must be able to withstand the heat of fusing during the printing process. The recommended transparency product is 3M PP2500 (Letter, A4).

Transparencies must be placed on the MP tray with the long edge towards the printer.



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

#### Labels

Labels must be fed to the MP Tray. One label can be loaded at a time.

The basic rule for printing on adhesive labels is that the adhesive must never come into contact with any part of the machine. Adhesive paper sticking to the drum or rollers will damage the machine. Label paper has a structure comprising of three layers, as shown in the diagram. 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 used. Due to the complexity of its composition, adhesive-



backed label paper is particularly likely to give printing problems.

Adhesive label paper must be entirely covered by its top sheet, with no spaces between the individual labels. Labels with spaces in between are liable 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 74g/m <sup>2</sup> (12 to 20 lb/ream)
Composite weight	104 to 151g/m <sup>2</sup> (28 to 40 lb/ream)
Thickness of top sheet	0.086 to 0.107mm (3.9 to 4.2 mils)
Composite thickness	0.115 to 0.145mm (4.5 to 5.7 mils)
Moisture content	4 to 6% (composite)

#### Postcards

Up to 10 postcards can be loaded at a time. 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

Up to 5 envelopes can be loaded at a time. Envelopes should be fed in the face-up position, right edge first.

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



Normally, envelopes have a diagonal grain direction. Refer to *Paper Grain* 

on page *1-6*. This direction can easily cause wrinkles and creases when envelopes pass through the printer. Before purchasing envelopes, make a test print to check whether the printer accepts the envelope.

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

#### **Thick Paper**

Fan the stack of paper and align the edges before loading them in the MP tray. Align the edges before loading it 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 thick paper jams:

- Load one sheet at a time.
- Hold the paper with your hands when it is being fed.
- Load the paper in the MP Tray with the leading edge



#### **Colored Paper**

Colored paper should satisfy the same conditions as white bond paper. Refer to *Paper Specifications* on page *1-2*. In addition, the pigments used in the paper must be able to withstand the heat of fusing during the printing process (up to  $200^{\circ}$ C or  $392^{\circ}$ F).

#### **Preprinted Paper**

Preprinted paper should satisfy the same conditions as white bond paper. Refer to *Paper Specifications* on page *1-2*. The preprinted ink must be able to withstand the heat of fusing during the printing process, and must not be affected by silicone oil.

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

#### **Recycled paper**

Select recycled paper that meets the same specifications as the white bond paper except for whiteness. Refer to *Paper Specifications* on page *1-2*.



**Note** Before purchasing recycled paper, test a sample on the machine and check that the printing quality is satisfactory.

# Paper Type

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

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. Paper type can be changed using the printer driver and the operation panel. The following types of paper can be used.

	Paper source				
Paper Type		Demon	Paper Weight		
	MP tray	Paper Cassette	Range	Display in Operation Panel	Duplex path
Plain	Yes	Yes	75 to 90g/m <sup>2</sup>	Normal2	Yes
Transparency	Yes	No	Transparency	Extra Heavy	No
Preprinted	Yes	Yes	75 to 90g/m <sup>2</sup>	Normal2	Yes
Labels	Yes	No	105 to 135g/m <sup>2</sup>	Heavy1	No
Bond	Yes	Yes	90 to 105g/m <sup>2</sup>	Normal3	Yes
Recycled	Yes	Yes	75 to 90g/m <sup>2</sup>	Normal2	Yes
Vellum	Yes	No	60 to 64g/m <sup>2</sup>	Light	No
Rough	Yes	Yes	90 to 105g/m <sup>2</sup>	Normal3	Yes
Letterhead	Yes	Yes	90 to 105g/m <sup>2</sup>	Normal3	Yes
Color	Yes	Yes	90 to 105g/m <sup>2</sup>	Normal3	Yes
Prepunched	Yes	Yes	75 to 90g/m <sup>2</sup>	Normal2	Yes
Envelope	Yes	No	170 to 220g/m <sup>2</sup>	Heavy3	No
Cardstock	Yes	No	170 to 220g/m <sup>2</sup>	Heavy3	No
Thick	Yes	No	170 to 220g/m <sup>2</sup>	Heavy3	No
High quality	Yes	Yes	75 to 90g/m <sup>2</sup>	Normal2	Yes
Custom 1 (to 8) <sup>*</sup>	Yes	Yes	75 to 90g/m <sup>2</sup>	Normal2	Yes
Yes: Can be stored No: Cannot be stored					

\*. This is a paper type defined and registered by the user. Up to eight types of user settings may be defined. User can also enable or disable the duplex path when using Custom. For more information, refer to *Type Adjust* (*Creating custom paper type*) on page 2-32.

# 2 Using the Operation Panel

This chapter contains explanations on the following topics:

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Report Print	2-11
USB Memory (USB flash memory selection)	2-17
Job Box	2-19
Counter (Viewing the counter value)	2-25
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Network (Network settings)	2-47
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Security	2-64
Job Accounting (Job Accounting selection/setting)	2-72
Admin (Administrator settings)	2-78
Adjust/Maintenance (Adjust/Maintenance selection/setting)	2-81

# **General Information**

This chapter provides the information you need to configure the Ecosys printer. In general you need to use the operation panel only to make default settings. You can make most changes to the printer settings using the printer driver through the application software.



**Note** Changes to printer settings made using a software application override changes made using the operation panel.

You can also access the printer's various settings from a remote location, by using the control panel, the printer driver or other utilities such as the Status Monitor Utility. Other printer utilities can be installed using the CD-ROM supplied with the printer.

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

# **Understanding the Operation Panel**

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



Messages that appear on the display and functions of indicators and keys are explained in this chapter.

# Message Display

The message display on the operation panel shows:

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

### **Status Information**

Message	Meaning	
Self test	The printer is performing self-diagnostics after power-up.	
Please wait	The printer is warming up and is not ready. When the printer is switched on for the first time, this message will take several minutes.	
Please wait (Adding toner)	Toner is currently being replenished. This message may be displayed during continuous printing of a large volume of pages which require a large amount of toner such as with photographs, etc.	
Ready	The printer is ready to print.	
Processing	The printer is receiving data to print. This is also shown when the printer is reading a CF card, USB memory, hard disk, or RAM disk.	
Sleeping	The printer is in Auto Sleep. The printer wakes from Auto Sleep whenever a print job is received. The printer then warms up and goes on-line. For details on Auto Sleep, refer to <i>Sleep Timer (Sleep timer timeout time)</i> on page <b>2-61</b> .	
Canceling data	Jobs inside the printer are being canceled. To cancel a job, refer to <b>Canceling a Printing Job</b> on page <b>2-6</b> .	

# **Error Codes**

Refer to the *Troubleshooting* section in the *Operation Guide*.

# Indicators in Message Display



# Ready, Data, and Attention Indicators

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

Indicator	Description
() Ready	<ul> <li>Flashing. Indicates an error that you can resolve. For details, refer to the <i>Troubleshooting</i> section in the <i>Operation Guide</i>.</li> <li>On. Indicates that the printer is ready and on-line. The printer prints the data it receives.</li> <li>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 an error condition. For details, refer to the <i>Troubleshooting</i> section in the <i>Operation Guide</i>.</li> </ul>
<b>→</b> ြ Data	<b>Flashing.</b> Indicates that a data is being received. <b>On.</b> Indicates either that data received is being processed before printing starts, or that data received is being written to or read from a CompactFlash card, hard disk, RAM disk, or USB flash memory.
Attention	<ul><li>Flashing. Indicates that the printer requires maintenance or is warming up.</li><li>On. Indicates the occurrence of a problem or an error. For details, refer to the <i>Troubleshooting</i> section in the <i>Operation Guide</i>.</li></ul>

#### Keys

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

#### GO Key



Use this key to:

- Recover from certain errors.
- Recover from Auto Sleep mode.

#### 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.

#### **Canceling a Printing Job**

1 While the printer displays Processing, press [Cancel].

Print Cancel? appears on the message display followed by the job name currently in progress.

**2** Press  $\triangle$  or  $\nabla$  to display the desired job and **[OK]**.

Canceling data appears on the message display and printing stops after the current page is printed.

#### **MENU Key**



**[MENU]** 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. Use  $\triangle$  and  $\bigtriangledown$  to change menus, and  $\triangleleft$  and  $\triangleright$  to move to the sub menu.

The cursor key with the question mark (2) 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.

When  $\tt Use \ alternative?$  is shown in the message display, use the  $\bigtriangleup$  and  $\bigtriangledown$  key to select the paper source.

#### **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.

# Using the Menu Selection System

#### **Menu Selection System**

This section explains how to use the menu selection system. **[MENU]** on the operation panel allows you to use the menu to configure the printer settings to your specific needs. Settings can be made when Ready is indicated on the printer message display.



**Note** Settings that are received from application software and the printer driver will take priority over settings made in the operation panel.

# **Entering the Mode Selection Menu**

Press [MENU] when Ready, Please wait, Sleeping or Processing is indicated on the printer message display.

The mode selection menu is displayed.



**IMPORTANT** Job Box is displayed in the selection menu when the hard disk or RAM Disk is installed. For more information, refer to **Job Box** on page **2-19** or **RAM Disk Mode (Using the RAM disk)** on page **2-55**.

#### Selecting a Menu

The mode selection menu is hierarchical. Press  $\bigtriangleup$  or  $\bigtriangledown$  to display the desired menu.



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

Press  $\triangleright$  to move to the sub-menu or  $\triangleleft$  to go back.

Press  $\triangleright$  to move to another sub-menu or  $\triangleleft$  to go back.

Indicates that there is a sub-menu



Indicates that this is Inc the sub-menu and

Indicates that there is another sub-menu

>> is displayed before the second sub-menu.

> is displayed before the sub-menu.



Normal 1

>>Paper Weight

# Setting a Menu

Select the desired menu and press **[OK]** to set or change the configuration.

Press  $\bigtriangleup$  or  $\bigtriangledown$  to display the desired item and [OK] to finalize the value or selections set.

# **Cancelling Menu Selection**

If you press [MENU] when a menu is selected, the message display returns to  ${\tt Ready}.$ 

# Setting a Mode Selection Menu

This section explains the setting procedures used for each menu item in the mode selection menu.

Report Print

>

- 1 While the printer displays Ready, Please wait, Sleeping and Processing, press [MENU]. The mode selection menu is displayed. (For example : Report Print)
- **2** Each time you press  $\triangle$  or  $\nabla$ , the selection changes.
  - Report Print
  - USB Memory
  - Job Box
  - Counter
  - Paper Settings
  - Print Settings
  - Network
  - Device Common
  - Security
  - Job Accounting
  - Admin
  - Adjust/Maintenance

1

**Note** If you use the mode first selected when the printer is turned on, Report Print is displayed. For the second and subsequent times, the last menu option you selected the previous time is displayed.

# **Report Print**

The printer prints the report. Report Print includes the following items:

- Print Menu Map
- Print Status Page
- Print Fonts List
- Print Hard Disk File List
- Print RAM Disk File List
- Print Mem. Card File List
- 1 Press [MENU].
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until Report Print > appears.

Note that menus shown in the list may vary depending on which optional units installed in the printer.

# Print Menu Map

The printer prints a full list of the menu selection system menu map.

- **1** Press ▷ while Report Print > is displayed.
- 2 >Print Menu Map appears. In other displays, press  $\triangle$  or  $\nabla$  repeatedly until the map appears.
- **3** Press **[OK]**. A question mark (?) appears.
- 4 Press [OK]. The message Processing appears and the printer prints a Menu Map.

Report Print >

>Print Menu Map ? Menu Map Sample


### **Print Status Page**

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

- **1** Press ▷ while Report Print > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Print Status Page appears.
- **3** Press **[OK]**. A question mark (?) appears.
- 4 Press [OK] again. The message Processing appears and the printer prints a status page.

For a sample status page and its full description, refer to the next section *Understanding the Status Page*.

#### **Understanding the Status Page**

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



>Print Status Page ?

#### 1 Firmware Version

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

#### 2 Printer Settings Information

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

- MP tray paper size and type
- Paper cassette size and type
- Sleep time
- Formfeed timeout time

#### 3 Installed Options

This item shows the options installed in the printer:

- Hard disk
- Memory card (CompactFlash card)

#### 4 Network Status

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

#### 5 Interface Information

This information shows the settings for all interfaces installed in the printer.

#### 6 Memory

This item shows:

- Standard memory in the printer
- Option memory slot status in megabytes
- Total memory in the printer
- Current status of the RAM disk

#### 7 Emulation

This item shows all available emulations of the printer. The PCL 6 emulation is set as default when the printer is shipped from the factory. The emulations are:

- PCL 6
- KPDL
- Line Printer
- IBM Proprinter
- DIABLO 630
- EPSON LQ-850

#### 8 Page Information

This item shows the page related items:

- Total printed page count
- Total page count of each paper size

#### 9 Consumable Status

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

### **Print Fonts List**

To help you decide in selecting a font, you can printout lists of the internal fonts or the optional fonts.

- **1** Press ▷ while Report Print > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Print Fonts List appears.
- **3** Press **[OK]**. A question mark (?) appears.

4 Press [OK] again. The message Processing appears and the printer prints a list of fonts with a sample and font ID (number) for each of them.

### **Print Hard Disk File List**

This allows you to print a list of the files on the hard disk.

This menu is displayed only when the optional hard disk is installed on the printer.

**IMPORTANT** This is only displayed when the printer has a hard disk installed and the disk is correctly formatted.

- **1** Press ▷ while Report Print > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Print Hard Disk File List appears.
- **3** Press **[OK]**. A question mark (?) appears.

>Print Hard Disk File List ?

>Print

Fonts List ?

4 Press [OK] again. The message Processing appears and the printer prints a list of files stored in a hard disk.

# Print RAM Disk File List

This allows you to print a list of the files on the RAM disk.

**IMPORTANT** This is displayed when RAM disk mode is enabled.

- **1** Press ▷ while Report Print > is displayed.
- 2 Press △ or ▽ repeatedly until >Print RAM Disk File List appears.
- **3** Press **[OK]**. A question mark (?) appears.

4 Press [OK] again. The message Processing appears and the printer prints a list of files stored in a RAM disk.

>Print RAM Disk File List ?

# Print Mem. Card File List

This allows you to print a list of the files on a CompactFlash (memory) card.

**IMPORTANT** This message will be displayed when the CompactFlash card installed in the printer.

- **1** Press ▷ while Report Print > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Print Mem. Card File List appears.
- **3** Press **[OK]**. A question mark (?) appears.
- **4** Press **[OK]** again. The message **Processing** appears and the printer prints a list of files stored in a CompactFlash card.

>Print Mem. Card File List ?

# USB Memory (USB flash memory selection)

This specifies the settings for removing the USB flash memory and printing USB flash memory content.

**IMPORTANT** This message is displayed only when the USB host block is set to Unblock. For more information, refer to *I/F Block* (*Interface (external device) block setting*) on page 2-65.

The options available in USB flash memory are as follows:

- Print File (Printing a file)
- Copies (Number of copies)
- Paper Source (Selecting the paper feed source)
- Remove Device (Removing the USB flash memory)
- Print File List (Printing a list of the files on a USB flash memory)
- 1 Press [MENU].
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until USB Memory > appears.

Note that menus shown in the list may vary depending on which optional units installed in the printer.

#### Print File (Printing a file)

You can use this to specify printing for files in the USB flash memory.

- **1** Press ▷ while USB Memory > is displayed.
- **2** >Print File appears. In other displays, press  $\triangle$  or  $\nabla$  repeatedly until the map appears.
- **3** Press **[OK]**. A question mark (?) appears.
- 4 Press [OK] again. The folder or file appears. (For example : Folder 1) Each time you press △ or ▽, the next folder or file appears in succession.

To view lower-level folders or files, press ▷. (For example : Folder 2)

To view folders or files on still lower levels, press ▷. (For example : File 3)

**IMPORTANT** The Print File menu option is only displayed when there is a PDF or TIFF file in the USB memory. Note also that up to 3 levels of folders or files are displayed. It might take some time before the folder or file name appears, depending on the size of the USB flash memory or the number of files.

You can move between the folder levels by pressing  $\bigtriangleup$  and  $\bigtriangledown$  or  $\lhd$  and  $\vartriangleright.$ 

- 5 Press [OK]. A question mark (?) appears. (For example : File 3)
- 6 Press [OK] again. Copies appears.

USB Memory

>



/00:Folder 1 /01:Folder 2

/.../01:Folder 2 02:File 3

/.../01:Folder 2 ? 02:File 3

001

Copies

Using the Operation Panel

#### **Copies (Number of copies)**

Sets the number of copies printed of the specified file in USB flash memory.

While Copies in step 5 above is displayed, press △ and ▽ or ⊲ and ▷ to display the number of copies. (E.g.: 10)

Copies 010

Paper Source ? Cassette 1 **2** Press [OK]. Paper Source and a question mark (?) appears.

#### Paper Source (Selecting the paper feed source)

Sets the paper used for printing the specified file in USB flash memory.

Paper	Source
? Cas	sette 2

While Paper Source in step 2 above is displayed, press △ and ▽ or ⊲ and ▷ repeatedly until the paper source appears. (For example : Cassette 2)

Note that menus shown in the list may vary depending on which optional units installed in the printer.

**2** Press **[OK]**. The message **Processing** appears and the printer prints a file stored in a USB memory.

#### Remove Device (Removing the USB flash memory)

Specifies the setting for USB flash memory removal.

- **1** Press ▷ while USB Memory > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Remove Device appears.
- **3** Press **[OK]**. A question mark (?) appears.
- **4** Press **[OK]** again. Menu display ends and the USB flash memory device can be removed.

# Print File List (Printing a list of the files on a USB flash memory)

This allows you to print a list of the files on a USB flash memory device.

- **1** Press ▷ while USB Memory > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Print File List appears.
- **3** Press **[OK]**. A question mark (?) appears.
- 4 Press [OK] again. The message Processing appears and the printer prints a list of files stored in a USB flash memory.

>Remove Device ?

>Print File List ?
# Job Box

Job box implements the Job Retention function and Job Storage function that are available from the printer driver. The settings are specified from the printer driver. Refer to *KX Printer Driver User Guide* for the driver settings.

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.

**IMPORTANT** To use the Job Box, an optional hard disk must be installed in the printer.

The RAM disk may also be used in the Proof-and-Hold and Private Print modes.

#### **Job Retention**

Job Retention has four modes as summarized below. These modes are selected from the printer driver through the application software:

	Quick Copy	Proof-and-Hold	Private Print	Stored Job
Primary function	To later print additional copies	To proof the first copy before printing multiple copies	To hold the document in printer to prevent unauthorized access	To electronically store documents such as fax cover pages
Start storing by	Printer driver	Printer driver	Printer driver	Printer driver
On terminating print setting from application software	Prints simultaneously	Prints one copy simultaneously	Does not print	Does not print
Retrieved by	Operation panel	Operation panel	Operation panel	Operation panel
Default number of copies printed at retrieval	Same as storing (can be changed)	One less (can be changed)	Same as storing (can be changed)	One (can be changed)
Maximum number of jobs stored *	32, expandable to 50	32, expandable to 50	Depends on the hard disk capacity	Depends on the hard disk capacity
PIN security	No	No	Yes	Yes (if necessary)
Data after printing	Stored	Stored	Deleted	Stored
Data at power off	Deleted	Deleted	Deleted	Stored
Hard disk	Necessary	Unnecessary (RAM disk may also be used)	Unnecessary (RAM disk may also be used)	Necessary

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

#### **Job Storage**

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

There are two types of code job:

- Permanent (permanently saved) code jobs
- Temporary (temporarily saved) code jobs

If there is insufficient space on the hard disk, existing temporary code jobs are deleted, starting from the oldest files. Permanent jobs are not

automatically deleted in this way. To print, select the printer driver.



**Note** Refer to the *KX Printer Driver User Guide* for the driver settings and print (save) procedures.

The options available in Job Box are as follows:

- Using Quick Copy/Proof-and-Hold Quick Copy (User Name) (Selecting the User) (User Name) (Data Name) (Selecting the data) (Data Name) Copies (number of copies) (Number of copies / deleted)
- Printing a Private Print/Stored Job Private/Stored (User Name) (Selecting the User) (User Name) (Data Name) (Selecting the data) (Data Name) ID (number of copies) (Input passwords) (Data Name) Copies (number of copies) (Number of copies / deleted)
- Job Box Configuration (Job Box Configuration)

#### 1 Press [MENU].

**2** Press  $\triangle$  or  $\nabla$  repeatedly until Job Box > appears.

Job Box

>

Note that menus shown in the list may vary depending on which optional units installed in the printer.

# Quick Copy (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/RAM disk. When additional copies are required, you can reprint the required number of copies from the printer operation panel. To print a job as a quick copy job, refer to *KX Printer Driver User Guide*.

The default number of print jobs that can be stored on the hard disk is 32. This value can be increased to up to 50 from the Job Box Configuration menu. For details, refer to *Changing the Maximum Number of Quick Copy* on page *2-24*. 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.



**Note** Refer to the *KX Printer Driver User Guide* for the driver settings.

#### Printing Additional Copies using Quick Copy

- **1** Press ▷ while Job Box > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Quick Copy appears. The name entered in the printer driver (Harold, in this example) also appears.
- 3 Press [OK]. A blinking question mark (?) appears before the user name.
- 4 Press  $\triangle$  or  $\nabla$  to display the desired user name, Arlen, in this example.
- **5** Press **[OK]**. The job name entered in the printer driver (Report, in this example) appear with a blinking question mark (?) before the letters.
- **6** Press  $\triangle$  or  $\nabla$  to scroll to the desired job title.
- Press [OK]. The number of copies to be printed can be set. To 7 increase the copy count, press  $\triangle$ ; to decrease the copy count, press  $\nabla$
- 8 Press [OK] to finalize the copy count. The printer prints the specified number of copies for the job.

#### **Deleting a Quick Copy Job**



001

>Quick Copy

>Quick Copy

?Harold

?Arlen

>Arlen

?Report

>Report

Copies

- **1** Follow steps 1 through 6 in the above section to let the title of the job to be deleted displayed.
- **2** When the title of the job to be deleted is displayed, e.g. Report, press [OK]. The cursor () below the copy count starts to blink.
- **3** Press  $\nabla$  repeatedly until Delete appears below the title.
- **4** Press [OK]. The message 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/RAM 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.



Note Refer to the KX Printer Driver User Guide for the driver settings.

>Quick Copy ?Harold
>Quick Copy
?Arlen
• • • • • • • • • • • • • • • • • • • •
>Arlen
?Report
report

>Report

Copies



- **1** Press ▷ while Job Box > is displayed.
- **2** Press △ or ▽ repeatedly until >Quick Copy appears. The name entered in the printer driver (Harold, in this example) also appears.
- **3** Press **[OK]**. A blinking question mark (?) appears before the user name.
- **4** Press  $\triangle$  or  $\nabla$  to display the desired user name, Arlen, in this example.
- **5** Press **[OK]**. The job name entered in the printer driver (Report, in this example) appear with a blinking question mark (?) before the letters.
- **6** Press  $\triangle$  or  $\nabla$  to scroll to the desired job title.
- 7 Press [OK]. The number of copies to be printed can be set. To increase the copy count, press △; to decrease the copy count, press ▽.
- 8 Press **[OK]** to finalize the copy count. The printer prints the specified number of copies for the job.

#### **Deleting a Proof-and-Hold Job**

>Report Copies 001 >Report Delete

001

- **1** Follow steps 1 through 6 in the above section to let the title of the job to be deleted displayed.
- **2** When the title of the job to be deleted is displayed, e.g. Report, press **[OK]**. The cursor (\_) below the copy count starts to blink.
- **3** Press  $\nabla$  repeatedly until Delete appears below the title.
- 4 Press [OK]. The message Processing appears and the stored job is deleted.

# Private/Stored (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, 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 ensuring confidentiality of the print job.

In the stored job mode, access codes are not mandatory, but can be set on the printer driver if printing with 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. Refer to *KX Printer Driver User Guide* for the driver settings.

#### **Releasing a Private/Stored Job**

- **1** Press  $\triangleright$  while Job Box > is displayed.
- 2 Press △ or ▽ repeatedly until >Private/Stored appears. The name entered in the printer driver (Harold, in this example) also appears.
- **3** Press **[OK]**. A blinking question mark (?) appears before the user name.
- **4** Press  $\triangle$  or  $\nabla$  to display the desired user name (Arlen, in this example).
- **5** Press **[OK]**. The user name and the job name (Agenda, in this example) entered in the printer driver appear with a blinking question mark (?).
- **6** Press  $\triangle$  or  $\nabla$  to display the desired job title.
- **7** 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  $\triangleleft$  or  $\triangleright$  to move the cursor to the number to be changed and then enter the correct number by pressing  $\triangle$  or  $\nabla$ .

- 8 You can set the number of copies to be printed. To increase the copy count, press △; to decrease the copy count, press ▽.
- **9** Press **[OK]** to finalize the copy count. The printer prints the specified number of copies for the job.

<pre>&gt;Private/Stored ?Harold</pre>
>Arlen ?Agenda

>Agenda ID	0000

>Agenda	
Copies	00 <u>1</u>

#### **Deleting a Private/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 6 in the above section.



- **3** Press  $\nabla$  repeatedly until Delete appears for the number of copies.
- 4 Press [OK]. The private job is deleted.

#### **Job Box Configuration**

This allows you to change the number of print jobs that can be stored on the hard disk and disk capacity allocated to each function.

#### Changing the Maximum Number of Quick Copy

This changes maximum number of Quick Copy from 0 to 50. The default is  $\ensuremath{32}.$ 

- **1** Press ▷ while Job Box > is displayed.
- 2 Press △ or ▽ repeatedly until >Job Box Configuration > appears.
- **3** Press  $\triangleright$ .
- **4** Press  $\triangle$  or  $\nabla$  repeatedly until >>Quick Copy appears.
- **5** Press **[OK]**. A blinking cursor () appears.
- 6 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.
- 7 When the desired maximum number of jobs is set, press [OK].
- 8 Press [MENU]. The display returns to Ready.



**.**|,

>

>Agenda

Delete

>Job Box



>>Quick Copy

Configuration

# Counter (Viewing the counter value)

This only displays the total number of pages printed. You cannot change the displayed number.

Counter	>
>Printed	Pages
	0002000

**2** Press  $\triangle$  or  $\nabla$  repeatedly until Counter > appears.

1 Press [MENU].

- **3** Press ▷. >Printed Pages appears as he total number of pages printed. (E.g.: 2000)
- 4 Press [MENU]. The display returns to Ready.

# **Paper Settings**

This sets the paper size and type for the MP tray and cassettes from which paper is supplied.

The options available in Paper Settings are as follows:

- MP Tray Size (Setting MP tray paper size)
- MP Tray Type (Setting the MP tray paper type)
- Cassette (1 to 4) Size (Setting the cassette paper size)
- Cassette (1 to 4) Type (Setting the cassette paper type)
- Type Adjust (Creating custom paper type)
- Reset Type Adjust (Resetting the custom paper type)

#### 1 Press [MENU].

**2** Press  $\triangle$  or  $\nabla$  repeatedly until Paper Settings > appears.

Paper Settings >

#### MP Tray Size (Setting MP tray paper size)

When you use the MP tray, you should set the MP tray size to the paper size that is used to format the job to print. If the sizes do not match, printing will not be performed on the correct size paper.

The default setting is Letter size for the U.S. and Canada and A4 for other countries. For more information about the paper sizes that you can feed from the MP tray, refer to Paper Specifications on page 1-2.



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

- **1** Press ▷ while Paper Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >MP Tray Size appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- 4 Press  $\triangle$  or  $\nabla$  to display the desired paper size. The message display toggles through the following paper sizes:

Env. Monarch Envelope #10 Envelope #9 Envelope #6 Envelope DL Envelope C5 A6 B6 A5 B5 ISO B5 A4 Executive Letter Legal Custom Oficio II Statement Folio Youkei 2 Youkei 4 16K Hagaki

- OufukuHagaki
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### MP Tray Type (Setting the MP tray paper type)

You can use this to set the paper type that can be supplied from the MP tray. The default setting is **PLAIN**.

For more information about paper types that you can feed from the MP tray, refer to Paper Specifications on page 1-2.

- **1** Press ▷ while Paper Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >MP Tray Type appears.

>MP Tray Size **A**4

>MP	Tray	Туре
? P	LAIN	

- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Press  $\triangle$  or  $\nabla$  to display the desired paper type. The message display toggles through the following paper types:

PLAIN TRANSPARENCY PREPRINTED LABELS BOND RECYCLED VELLUM ROUGH LETTERHEAD COLOR PREPUNCHED ENVELOPE CARDSTOCK THICK HIGH QUALITY CUSTOM 1 (to 8)



**Note** You can define any paper type and store that definition in the printer. For more information, refer to **Type Adjust** (Creating custom paper type) on page 2-32.

- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

# Cassette (1 to 4) Size (Setting the cassette paper size)

To set the standard sizes A5, A4, B5, Letter, and Legal size for the paper cassette, load the paper and turn the paper size dial so that the size of the paper you are going to use appears in the paper size window. To load a non-standard paper size (sizes other than A5, A4, B5 and Letter) into a paper cassette, refer to the custom paper sizes listed on *page 2-29*.

If the PF-310 optional paper feeder is installed, use the same procedure to load paper into the paper feeder cassettes.

**1** Pull the cassette out of the printer and set the paper size using the paper size dial.

**2** Adjust the position of the width guides located on the left and right sides of the cassette. Press the release button on the left guide and slide the guides to the paper size required, and load the paper into the cassette.



#### **Custom Paper Size**

If you use a non-standard size paper, load the paper and select the paper size dial to OTHER (refer to the *Loading Paper* section in the *Operation Guide*).

#### Setting the Paper Size from the Operation Panel

Use the operation panel to set the size of paper loaded in the cassette on the printer. This menu appears if the size dial for the cassette is set to **Other**.

- **1** Press ▷ while Paper Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Cassette Size > appears.

If optional paper feeders are added, <code>Cassette1 Size will appear</code> for the standard paper cassette and <code>Cassette2 Size</code>, <code>Cassette3 Size</code> (FS-3920DN/FS-4020DN) and <code>Cassette4 Size</code> (FS-3920DN/FS-4020DN) will appear for the optional paper feeders.

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

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

```
Envelope C5
A6 (FS-3920DN/FS-4020DN only)
A5
B5
ISO B5
A4
Executive
Letter
Legal
Custom
Oficio II
Folio
16K
When the desired paper size is dis
```

**5** When the desired paper size is displayed, press **[OK]**. The paper size is set for the paper cassette.

If you selected Custom in step 4, be sure to set the unit of measurement and the dimensions of the paper as described in the following sections.

Select the units of measurement as described in the next section.



#### Unit (Selecting the unit of measurement)

- 1 Press  $\triangleright$ .
- 2 Press △ or ▽ repeatedly until >>Unit appears. The unit of measurement can be selected between millimeters and inches. The current unit of measurement is displayed (the default setting is mm).
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select mm or inch using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].

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

#### **Entering the Width and Length**

Enter the paper size for  ${\tt X}\,$  Dimension and  ${\tt Y}\,$  Dimension as shown in the figure.



- 1 When the unit of measurement is set, press *∇*. >>X Dimension appears (the paper width setting).
- **2** Press **[OK]**. A blinking cursor (\_) appears.
- 3 Press △ or ▽ to increase or decrease the value of the figure where the cursor is blinking and display the desired width. Acceptable paper widths are 140 to 216 mm (5-1/2 to 8-1/2 inches).
- 4 Display the paper width and press [OK].
- 5 When the width is set, press *∇*. >>Y Dimension appears (the paper length setting). Set the desired length in the same way as the width.

Acceptable paper lengths are 210 to 356 mm (8-1/4 to 14 inches).

- **6** Display the paper length, press **[OK]**.
- 7 Press [MENU]. The display returns to Ready.



>>X Dimension

216 mm

# Cassette (1 to 4) Type (Setting the cassette paper type)

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

If the PF-310 optional paper feeder is installed, use the same procedure to setting the cassette paper type.

For more information about paper types that you can feed from the paper cassette, refer to *Paper Specifications* on page *1-2*.

- **1** Press ▷ while Paper Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Cassette Type appears.

If optional paper feeders are added, <code>Cassette1 Size</code> will appear for the standard paper cassette and <code>Cassette2 Size</code>, <code>Cassette3 Size</code> (FS-3920DN/FS-4020DN) and <code>Cassette4 Size</code> (FS-3920DN/FS-4020DN) will appear for the optional paper feeders.

- **3** To change paper type, press **[OK]**. A blinking question mark (?) appears.
- **4** Press  $\triangle$  or  $\nabla$  to display the desired paper type. The message display toggles through the following paper types:

```
PLAIN
PREPRINTED
BOND
RECYCLED
ROUGH
LETTERHEAD
COLOR
PREPUNCHED
HIGH QUALITY
CUSTOM 1 (to 8)
```



**Note** You can define any paper type and store that definition in the printer. For more information, refer to *Type Adjust (Creating custom paper type)* on page *2-32*.

- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

>Cassette Type
? PLAIN

# Type Adjust (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 *Paper Weight* (Setting the paper weight) on page 2-32, and *Duplex Path* (Setting the duplex path) on page 2-33) after selecting the paper type to be customized as follows. For how to reset the customized settings, refer to *Reset Type Adjust (Resetting the custom paper type)* on page 2-33.

- **1** Press ▷ while Paper Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Type Adjust > appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Press  $\triangle$  or  $\nabla$  to display the desired paper 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)
- 5 Press [OK].
- 6 Press ▷ and proceed to the next step *Paper Weight* (Setting the *paper weight*).

#### Paper Weight (Setting the paper weight)

You can set the paper thickness for your custom paper type to be customized. The default setting is Normal 2.

- 1 Display the custom paper type (refer to *Type Adjust (Creating custom paper type)* on page 2-32) and press ▷.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >> Paper Weight appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.



>Paper Weight Normal 2

- **4** Press  $\triangle$  or  $\nabla$  to display the desired paper thickness. The display changes as shown below. For details of the default setting for each paper type, refer to **Paper Type** on page **1-11**.
  - Light Normal 1 Normal 2 Normal 3 Heavy 1 Heavy 2 Heavy 3 Extra Heavy
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### Duplex Path (Setting the duplex path)

- 1 Display the custom paper type (refer to *Type Adjust (Creating custom paper type)* on page 2-32) and press ▷.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Duplex Path appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- 4 Select Enable or Disable using △ or ▽. For details of the default setting for each paper type, refer to *Paper Specifications* on page 1-2.
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

The custom paper type setting is completed.

#### Reset Type Adjust (Resetting the custom paper type)

Reset all the custom paper type that was set in *Type Adjust (Creating custom paper type)* on page 2-32.

- 1 Press ▷ while Paper Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Reset Type Adjust appears.
- **3** Press **[OK]**. A question mark (?) appears.
- 4 Press [OK] again. All customized paper types will be reset to the default. The display returns to Ready.

>>Duplex Path ? Enable

>Reset Type Adjust ?

# **Print Settings**

These settings specify printing parameters such as the print quality used for printing (Normal or Fine), the gloss mode (Low or High), the number of copies, reduced printing and the page orientation.

The options available in Print Settings are as follows:

- Paper Source (Selecting the paper feed source)
- Paper Feed Mode (Setting the paper feed source)
- Duplex (Duplex Printing)
- Paper Output (Selecting the output stack)
- Override A4/LT (Overriding difference between A4 and Letter)
- Emulation (Setting the emulation)
- Font Select (Selecting the default font)
- Code Set (Setting the code set)
- Print Quality (Setting print quality)
- Page Set (Setting pagination)

#### 1 Press [MENU].

**2** Press  $\triangle$  or  $\nabla$  repeatedly until Print Settings > appears.

### Paper Source (Selecting the paper feed source)

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

- **1** Press ▷ while Print Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Paper Source appears.
- **3** To change the current paper feed source, press **[OK]**. A blinking question mark (?) appears.
- 4 Press △ or ▽ to display the desired paper feed source. The message display toggles through the following paper feed sources, depending on the installed optional paper feeders (from the top most paper cassette to the bottom paper cassette):

```
MP tray
Cassette 1
Cassette 2
Cassette 3 (FS-3920DN/FS-4020DN only)
Cassette 4 (FS-3920DN/FS-4020DN only)
EF (FS-3920DN/FS-4020DN only)
Bulk feeder (FS-3920DN/FS-4020DN only)
```

 $\tt Cassettes~2, 3 \mbox{ and } 4$  are available for selection when the optional paper feeders are installed.

- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.



Print Settings >

# Paper Feed Mode (Setting the paper feed source)

This mode specifies how the paper should be fed, after the paper feed source and paper type has been chosen. If Auto is selected, the printer searches for a paper feed source that matches the paper size and type, and paper is delivered from that source. An error message is displayed if Fixed is selected, but a match is not found. The default setting is Auto. To change the settings, follow the steps described below.

- **1** Press ▷ while Print Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Paper Feed Mode appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Press  $\triangle$  or  $\nabla$  until Auto or Fixed appears.
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### When the Paper Runs Out During Printing

When Paper Feed Mode is set to Fixed, if the paper in the cassette runs out during printing, Load Cassette 1 is displayed and the printer stands by. In this event, either replenish the paper in the empty cassette or use the procedure below to print from another paper source.

- **1** While Load Cassette 1 is displayed, press  $\triangle$  or  $\nabla$  repeatedly until Use alternative? appears.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until the desired paper source and size appears.

Each time you press  $\triangle$  or  $\bigtriangledown$ , another paper cassette or the paper size that can currently be fed from the MP tray appears.

**3** Press **[OK]**. Printing continues.

>Paper Feed Mode ? Auto

#### **Duplex (Duplex printing)**

Using the duplexer, you can automatically print on both sides of the paper. The duplexer is mounted underneath the printer.

Duplex printing is available for the following paper types:

PLAIN PREPRINTED BOND RECYCLED ROUGH 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. If the paper to be fed from the MP tray does not match the paper size and paper type of the current paper feed source cassette, a paper jam may occur.

#### **Binding Modes**

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

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



- **1** Press ▷ while Print Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Duplex appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.



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

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

- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### Paper Output (Selecting the output stack)

The Paper Output menu on the operation panel allows you to select either the face-down tray or the faceup tray option for the output stack.



- **1** Press ▷ while Print Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Paper Output appears.



- 4 Press △ or ▽ to select output stack Top tray FaceDn or RearTray FaceUp.
- 5 When the desired output stack is displayed, press [OK].
- 6 Press [MENU]. The display returns to Ready.

# Override A4/LT (Overriding difference between A4 and Letter)

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

By default, this feature is On.

- **1** Press ▷ while Print Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Override A4/LT appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- **5** Press **[OK]**.
- 6 Press [MENU]. The display returns to Ready.

#### **Emulation (Setting the emulation)**

You can change the emulation mode. Use the procedure below to select the mode.

**1** Press ▷ while Print Settings > is displayed.





- 2 Press △ or ▽ repeatedly until >Emulation > appears on the message display. One of the emulation modes appears, indicating the emulation currently in use.
- >Emulation ? PCL 6
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Press  $\triangle$  or  $\nabla$  repeatedly until the desired emulation mode is displayed.

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

- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### Alternative Emulation for KPDL Emulation

KPDL is 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 on the message display.
- **3** Press **[OK]**. A blinking question mark (?) appears.



#### 5 Press [OK].

- 6 Press ▷. When >>Alt. Emulation is displayed, press △ or ▽. The names of alternative emulations appear - PCL 6, Line Printer, IBM Proprinter, DIABLO 630 or EPSON LQ-850.
- 7 Press [OK]. A blinking question mark (?) appears.
- **8** Press  $\triangle$  or  $\nabla$  repeatedly until the desired alternative emulation appears.
- 9 Press [OK].
- **10** Press [MENU]. The display returns to Ready.



>Emulation ? KPDL (AUTO)



	5 Press △ or ▽ repeatedly until the desired font number appears. For font numbers of the internal fonts, refer to <i>Print Fonts List</i> on page 2-15.
	<b>6</b> When the desired font is displayed, press <b>[OK]</b> .
	7 Press [MENU]. The display returns to Ready.
:	Selecting Regular or Dark Courier/Letter Gothic
1	Courier or Letter Gothic font thickness can be selected as Regular or Dark. In the procedure below, it is assumed that Courier is selected. The procedure is the same for Letter Gothic.
	Press ▷ while Print Settings > is displayed.
Nont Colort	<b>2</b> Press $\triangle$ or $\nabla$ repeatedly until >Font Select > appears.
>Font Select > Internal	
:	3 Make sure that Internal is displayed and press ▷.
>>Courier	<b>4</b> Press $\triangle$ or $\nabla$ repeatedly until >>Courier appears. If you are
Regular	selecting the thickness of the Letter Gothic font, choose >>Letter Gothic here instead.
>>Courier ?Regular	<b>5</b> Press <b>[OK]</b> . A blinking question mark (?) appears.
	<b>6</b> Select Regular or Dark using $\triangle$ or $\nabla$ .
	7 Press [OK].
	B Press [MENU]. The display returns to Ready.
	Changing the Default Font Size
	You can change the size of the default font. If you selected a proportional
	font, the character size can also be changed.
	Press ▷ while Print Settings > is displayed.
>Font Select > Internal	<b>2</b> Press $\triangle$ or $\nabla$ repeatedly until >Font Select > appears.
	<b>3</b> Make sure that Internal is displayed and press ▷.
	<b>4</b> Press $\triangle$ or $\nabla$ repeatedly until >>size appears.
>>Size 012.00 point(s)	
	<b>5</b> Press <b>[OK]</b> . A blinking question mark (?) appears.
>>Size 012.00 point(s)	
	6 Press △ or ▽ to increase or decrease the value at the blinking cursor. The font size can be set between 4 and 999.75 points, in 0.25-point increments. Use ▷ or ⊲ to move the cursor right and left.
	7 When the desired size is displayed, press <b>[OK]</b> .
	<b>B</b> Press [MENU]. The display returns to Ready.
	·

Using the Operation Panel

#### **Character Pitch**

You can set the character pitch for fixed fonts.

- **1** Press ▷ while Print Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Font Select > appears.

```
>Font Select >
Internal
```

>>Pitch	10.00	cpi

10.00 cpi

>>Pitch

- **3** Make sure that Internal is displayed and press ▷.
- **4** Press  $\triangle$  or  $\nabla$  repeatedly until >>Pitch appears.
- **5** Press **[OK]**. A blinking question mark (?) appears.
- 6 Press △ or ▽ to increase or decrease the value at the blinking cursor. The character pitch can be set 0.44 and 99.99 characters per inch, in 0.01 character-per-inch increments. Use ▷ or < to move the cursor right and left.</p>
- 7 When the desired size is displayed, press [OK].
- 8 Press [MENU]. The display returns to Ready.

#### Code Set (Setting the code set)

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

- **1** Press ▷ while Print Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Code Set appears.

>Code Set IBM PC-8

>Code Set ?IBM PC-8

- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Press  $\triangle$  or  $\nabla$  until the desired character code set appears.
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

# Print Quality (Setting print quality)

In Print Quality menus, you can set the KIR mode, EcoPrint mode, and other settings.

The options available in Print Quality are as follows:

- KIR Mode (Selecting the KIR mode)
- EcoPrint Mode (Selecting the EcoPrint mode)
- Resolution (Selecting the Print Resolution)
- Print Density (Selecting the Print Density)
- **1** Press ▷ while Print Settings > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Print Quality > appears.

#### KIR Mode (Selecting the KIR mode)

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







**Note** Set the print density to 03 when setting the KIR mode. For details on the print density, refer to **Print Density (Selecting the print density)** on page **2-43**.

- **1** Press ▷ while >Print Quality > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>KIR Mode appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.



>Print Quality >

#### EcoPrint Mode (Selecting the EcoPrint mode)

By enabling EcoPrint mode, you can minimize the amount of toner used during printing. Because images printed in this mode may be slightly coarser than those printed in standard resolution, you should use EcoPrint for test prints or other situations where high-quality prints are not required.



Use the procedure below to select  $\mathsf{EcoPrint}$  mode. The default setting is  $\mathtt{Off}.$ 

- **1** Press ▷ while >Print Quality > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>EcoPrint Mode appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.



- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- **5** Press **[OK]**.
- 6 Press [MENU]. The display returns to Ready.

#### **Resolution (Selecting the print resolution)**

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

- **1** Press ▷ while >Print Quality > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Resolution appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.

>>Resolution
? Fast 1200 mode

>>EcoPrint Mode

Off

- 4 Select Fine 1200 mode, Fast 1200 mode, 600 dpi or 300 dpi using the  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### Print Density (Selecting the print density)

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

- **1** Press ▷ while >Print Quality > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Print Density appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.





- 4 Select the print density from five steps from 01 (light) to 05 (dark) using the  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### Page Set (Setting pagination)

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

The options available in Page Set are as follows:

- Copies (Number of copies)
- Orientation (Print orientation)
- LF Action (Linefeed)
- CR Action (Carriage-Return)
- Wide A4 (Wide A4 pitch)

**1** Press ▷ while Print Settings > is displayed.

**2** Press  $\triangle$  or  $\nabla$  repeatedly until >Page Set > appears.

#### **Copies (Number of copies)**

You can set the number of copies of each page to be printed for the current interface.

- **1** Press ▷ while >Page Set > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Copies appears.
- **3** Press **[OK]**. A blinking cursor (\_) appears.
- 4 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. The number of copies can be set between 1 and 999. Use ⊲ and ▷ to move the cursor right and left.
- **5** When the desired size is displayed, press **[OK]**.
- 6 Press [MENU]. The display returns to Ready.

#### **Orientation (Print orientation)**

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

Portrait Orientation

Landscape Orientation



Α			
	-		



>Page Set

>

Using	the	Operation	Panel
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# >>Orientation ? Portrait

- **1** Press ▷ while >Page Set > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Orientation appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- 4 Select Portrait or Landscape using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

# LF Action (Linefeed)

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

- LF only: Linefeed is performed (Default).
- CR and LF: A linefeed and carriage return are performed.
- Ignore LF: The linefeed is ignored.
- **1** Press  $\triangleright$  while >Page Set > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>LF Action appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.

**4** Press  $\triangle$  or  $\nabla$  repeatedly until the desired linefeed action appears.

- **5** When the desired action is displayed, press **[OK]**.
- 6 Press [MENU]. The display returns to Ready.

# CR Action (Carriage-Return)

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

- CR only: A carriage-return is performed (Default).
- CR and LF: A linefeed and carriage return are performed.
- Ignore CR: The carriage-return is ignored.
- **1** Press  $\triangleright$  while >Page Set > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>CR Action appears.
- **3** Press **[OK]**. A question mark (?) appears.
- **4** Press  $\triangle$  or  $\nabla$  repeatedly until the desired carriage-return appears.
- **5** When the desired action is displayed, press **[OK]**.
- 6 Press [MENU]. The display returns to Ready.

# Wide A4 (Wide A4 pitch)

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

- **1** Press ▷ while >Page Set > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Wide A4 appears.

>>LF Action ? LF only





- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

# Network (Network settings)

This printer supports TCP/IP and TCP/IP (IPv6) protocols.

IP is an abbreviation for Internet Protocol. This printer routinely uses the TCP/IP (IPv4) protocol, but provides a separate setting for the next-generation IP, IPv6.

TCP/IP (IPv4) uses 32-bit IP addresses, but the rapid growth in the number of Internet users has resulted in a shortage of IP addresses. IPv6 was developed to expand the range of available IP addresses by using 128-bit IP addresses.

The options available in the Network settings are as follows:

- TCP/IP (IPv4 settings)
- TCP/IP (IPv6) (IPv6 settings)

I

>

**Note** Check with your network administrator when selecting the network setting

network setting.

After all network related settings have been done, turn the machine OFF and ON again. This is mandatory to make the settings effective.

- 1 Press [MENU].
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until Network > appears.

#### TCP/IP (IPv4 settings)

This selects the settings for TCP/IP (IPv4).

The TCP/IP system refers to the Internet system, which has a 5-layer structure consisting of the interface layer, link layer, network (IP) layer, transport (TCP/UDP) layer and application layer.

The interface layer is a key layer in the TCP/IP system that provides an abstracted interface that is not dependent on the link (communication line: frame relay or Ethernet, etc.) to the IP module (IP layer). This means that the IP module can use this abstracted interface (which is not dependent on the link type) to exchange IP packets back and forth with the link layer.

The options available in the TCP/IP (IPv4) settings are as follows:

- DHCP (DHCP setting)
- IP Address (IP address setting)
- Subnet Mask (Subnet mask setting)
- Gateway (Gateway setting)
- Bonjour (Bonjour setting)

**IMPORTANT** The DHCP, IP address, subnet mask, gateway and Bonjour menu options for TCP/IP are displayed when TCP/IP is enabled.

- **1** Press ▷ while Network > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >TCP/IP > appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.



Using the Operation Panel

Network

- **4** Select on or off using  $\triangle$  or  $\nabla$ .
- **5** Select On and press **[OK]**. The display changes to the settings shown below.

#### DHCP (DHCP setting)

DHCP (Dynamic Host Configuration Protocol) is the protocol that assigns the information required to establish a network connection when a host attempts to connect to the network (Internet). This information includes the IP address of the local node and the default router (the router in the host's own network system) and the DNS (Domain Name System) server. DHCP is an extension of the BOOTP (Bootstrap) startup protocol.

- **1** Press ▷ while >TCP/IP On > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>DHCP appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select on or off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### IP Address (IP address setting)

An IP address is the address of a network device such as a computer and is included in IP packets as needed for the sending and receiving of Internet data (IP packets). (IP addresses can be either destination addresses or source addresses.)

Specifically, an IP address is a bit string consisting of a host address (or host section) that identifies a computer (host) connected to the Internet and a network address (or network section) that identifies the network to which that computer belongs (or more specifically, the computer's network interface). Bit strings (IP addresses) that are unique throughout the entire Internet system are allocated to each computer or interface.

The IP addresses currently used on the Internet (IPv4) have a fixed length of 32 bits.

**Note** When you enter the IP address, be sure to set the DHCP setting to Off.

- **1** Press ▷ while >TCP/IP On > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>IP Address appears.
- **3** Press **[OK]**. A blinking cursor () appears.
- 4 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. You can set any value between 000 and 255. Use ⊲ and ▷ to move the cursor right and left.
- **5** Display the desired IP address and press **[OK]**.
- 6 Press [MENU]. The display returns to Ready.





#### Subnet Mask (Subnet mask setting)

The subnet mask is a way of augmenting the network address section of an IP address.

A subnet mask represents all network address sections as 1 and all host address sections as 0. The number of bits in the prefix indicates the length of the network address. The term "prefix" refers to something added to the beginning and, in this context, indicates the first section of the IP address.

When an IP address is written, the length of the network address can indicated by the prefix length after a forward slash (/). For example, "24" in the address "133.210.2.0/24". In this way, "133.210.2.0/24" denotes the IP address "133.210.2.0" with a 24-bit prefix (network section).

This new network address section (originally part of the host address) made possible by the subnet mask is referred to as the subnet address.

Note When you enter the subnet mask, be sure to set the DHCP setting to Off.

- **1** Press ▷ while >TCP/IP On > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Subnet Mask appears.
- **3** Press **[OK]**. A blinking cursor () appears.
- 4 Press  $\triangle$  or  $\nabla$  to increase or decrease, respectively, the value at the blinking cursor. You can set any value between 000 and 255. Use and  $\triangleright$  to move the cursor right and left.
- 5 Display the desired subnet mask and press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### Gateway (Gateway setting)

Gateway generally refers to a protocol conversion device used to allow networks with differing protocol systems to interconnect.

For example, a "Gateway" device is required to connect a different closed network (using its own protocols) to the open Internet (using TCP/IP).

By installing a gateway, the communications protocols and data display modes on different networks can be made compatible.

On TCP/IP networks, the term gateway is used to refer to routers.



Note Before you input the gateway, be sure to set the DHCP setting to Off.

- **1** Press ▷ while >TCP/IP On > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Gateway appears.
- **3** Press **[OK]**. A blinking cursor () appears.
- 4 Press  $\triangle$  or  $\nabla$  to increase or decrease, respectively, the value at the blinking cursor. You can set any value between 000 and 255. Use and  $\triangleright$  to move the cursor right and left.
- 5 Display the desired gateway and press [OK].

>>Subnet Mask 000.000.000.000

>>Gateway

000.000.000.000

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

#### Bonjour (Bonjour setting)

Bonjour, also known as zero-configuration networking, is a service that automatically detects computers, devices and services on an IP network.

Bonjour, because an industry-standard IP protocol is used, allows devices to automatically recognize each other without an IP address being specified or DNS server being set.

Bonjour also sends and receives network packets by UDP port 5353. If a firewall is enabled, the user must check that UDP port 5353 is left open so that Bonjour will run correctly. Some firewalls are set up so as to reject only certain Bonjour packets. If Bonjour does not run stably, check the firewall settings and ensure that Bonjour is registered on the exceptions list and that Bonjour packets are accepted. If you install Bonjour on Windows XP Service Pack 2 or later, the Windows firewall will be set up correctly for Bonjour.

- **1** Press ▷ while >TCP/IP On > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Bonjour appears.
- **3** Press **[OK]**. A blinking cursor (\_) appears.
- **4** Select on or off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

# TCP/IP (IPv6) (IPv6 settings)

This selects the settings for TCP/IP (IPv6).

TCP/IP (IPv6) is based on the current Internet protocol, TCP/IP (IPv4). IPv6 is the next-generation Internet protocol and expands the available address space, which resolves the problem of the lack of addresses under IPv4, while also introducing other improvements such as additional security functionality and the capacity to prioritize data transmission.

The options available in the TCP/IP (IPv6) settings are as follows:

- RA(Stateless) (RA (Stateless) setting)
- DHCPv6 (DHCPv6 setting)

**IMPORTANT** The RA (Stateless) and DHCPv6 menu options for TCP/IP (IPv6) are displayed when TCP/IP (IPv6) is enabled.

- **1** Press ▷ while Network > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >TCP/IP (IPv6) > appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.

Off

>TCP/IP (IPv6)

- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- **5** Select On and press **[OK]**. The display changes to the settings shown below.



#### RA(Stateless) (RA (Stateless) setting)

The IPv6 router communicates (transmits) information such as the global address prefix using ICMPv6. This information is the Router Advertisement (RA).

ICMPv6 stands for Internet Control Message Protocol, and is a IPv6 standard defined in the RFC 2463 "Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification".

- **1** Press ▷ while >TCP/IP (IPv6) On > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>RA(Stateless) appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### DHCPv6 (DHCPv6 setting)

DHCPv6 is the next-generation of the Internet's Dynamic Host Configuration Protocol and supports IPv6. It extends the BOOTP startup protocol that defines the protocols used for transferring configuration information to hosts on the network.

DHCPv6 permits the DHCP server to use its expanded functionality to send configuration parameters to an IPv6 node. Because the network addresses that can be used are allocated automatically, the IPv6 node management workload is reduced in systems where the administrator has to exercise close control over IP address allocation.

- **1** Press ▷ while >TCP/IP (IPv6) On > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>DHCPv6 appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.

**4** Select On or Off using  $\triangle$  or  $\nabla$ .

- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.





>>DHCPv6 ? Off

# Device Common (Selecting/Setting the common device)

Selects/sets all the functions in this printer.

The options available in Device Common are as follows:

- MSG Language (Selecting the message language)
- Buzzer (Alarm (Buzzer) setting)
- RAM Disk Mode (Using the RAM disk)
- Hard Disk (Using the optional hard disk)
- Memory Card (Using the memory card)
- Error Handling (Error detection setting)
- Timer (Timer setting)
- 1 Press [MENU].
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until Device Common > appears.

# MSG Language (Selecting the message language)

You can select the language of the message display by following the procedure given below. You can optionally download messages in other languages. Contact your service technician for information.

- **1** Press  $\triangleright$  while Device Common > is displayed.
- 2 Press △ or ▽ repeatedly until >MSG Language appears. The default message language is English.
- **3** To change the language, press **[OK]**. A blinking question mark (?) appears.

- English Français Deutsch Italiano Nederlands Español Русский Português
- **5** Press **[OK]**.
- 6 Press [MENU]. The display returns to Ready.



Device Common

>

#### Buzzer (Alarm (Buzzer) setting)

This function uses tones to notify the user of printer operations and the printer status. This setting is useful, for example, when the printer is located some distance from the user.

The options available in Buzzer are as follows:

- Key Confirm. (Key confirmation tone setting)
- Job End (Job completed tone setting)
- Ready (Preparation completed tone setting)
- Error (Error tone setting)
- **1** Press ▷ while Device Common > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Buzzer > appears.

#### Key Confirm. (Key confirmation tone setting)

When On is selected in this setting, a tone sounds each time a key is used. The default setting is On.

- **1** Press ▷ while >Buzzer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Key Confirm. appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select on or off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### Job End (Job completed tone setting)

When  ${\tt On}$  is selected in this setting, a tone sounds when printing ends. The default setting is <code>Off</code>.

- **1** Press ▷ while >Buzzer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Job End appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

>

>Buzzer



>>Job End ? Off

#### Ready (Preparation completed tone setting)

When On is selected in this setting, a tone sounds when print preparation has been completed. The default setting is <code>Off</code>.

- **1** Press ▷ while >Buzzer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Ready appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.



- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### Error (Error tone setting)

When on is selected in this setting, a tone sounds when a problem such as running out of paper or a paper jam occurs during printing. The default setting is on.

- **1** Press ▷ while >Buzzer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >> Error appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

>>	>Error	
?	On	
<b>/</b> 1`	•	
## RAM Disk Mode (Using the RAM disk)

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

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:

When the RAM disk is activated = The maximum RAM disk size is 4MB (when no options are attached)

When the optional memory is installed = The maximum RAM disk size is 1/2 of the total optional memory installed

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



**Note** The printer supports three types of storage device; CF card, optional hard disk, and RAM disk. The CF card and optional hard disk are installed into the dedicated slots of the printer. The RAM disk is an allocated part of the printer's memory.

**IMPORTANT** The RAM disk can not be used when an optional hard disk is installed.

The RAM disk stores data only temporarily. When the printer is reset or turned off, the stored data will be erased.

The RAM disk allows some Job Box functions to be used.

The RAM disk is allocated from the printer memory available to users. If the size of the RAM disk is set too large, the printing speed may decrease or the memory may become insufficient.

- **1** Press ▷ while Device Common > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >RAM Disk Mode > appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

>RAM Disk Mode ? Off

#### RAM Disk Size (Setting the RAM disk size)

Use this procedure to set the amount of memory used for the RAM disk.

**IMPORTANT** The RAM Disk Size menu option only appears when RAM Disk Mode is set to On.

**1** Press ▷ while >RAM Disk Mode On > is displayed.



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

- 3 When the desired RAM disk size is displayed, press [OK].
- **4** Press [MENU]. The display returns to Ready. Turn the printer off and then on again. The selected RAM disk size is activated after the printer is restarted.

## Hard Disk (Using the optional hard disk)

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

• Format (Formatting hard disk)

When an optional hard disk is inserted into the printer for the first time, it must be formatted before use.

This menu is displayed only when the optional hard disk is installed on the printer.



**Note** Note If the optional hard disk is installed in the printer, the Job Box will be available.

- **1** Press ▷ while Device Common > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Hard Disk > appears.

>Hard Disk >

Using the Operation Panel



#### Format (Formatting hard disk)

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

This menu is displayed only when the optional hard disk is installed on the printer.

**Note** Formatting will destroy any existing data on a storage device including a used CF card.

Formatting of the hard disk must be executed from the printer.

- **1** Press ▷ while >Hard Disk > is displayed.
- 2 >>Format appears.
- **3** Press **[OK]**. A question mark (?) appears.

#### 4 Press [OK].

Processing appears and formatting of the hard disk starts. When the formatting is successfully completed, the display returns to Ready.

## Memory Card (Using the CF card)

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

• Format (Formatting CF card)

For details about the handling of the CF card, refer to **CompactFlash** (CF) Card on page 3-6.



Note The Memory Card menu options are only displayed when a CF card is installed in the printer.

**1** Press ▷ while Device Common > is displayed.

>Memory Card >

**2** Press  $\triangle$  or  $\nabla$  repeatedly until >Memory Card > appears.

>>Format ?

#### Format (Formatting CF card)

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



**Note** Format is only displayed when a CF card is installed in the printer and protection is disabled.

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

When a new CF card is inserted in the printer's slot, Format error Memory card will appear on the message display.

- **1** Press ▷ while >Memory Card > is displayed.
- **2** >>Format appears.
- **3** Press **[OK]**. A question mark (?) appears.

### 4 Press [OK].

Processing appears and formatting of the CF card starts. When the formatting is successfully completed, the display returns to Ready.

## Error Handling (Error detection setting)

This specifies the settings for the detection methods used for duplex printing errors and for paper size and paper type errors when the paper source is fixed.

The options available in Error Handling are as follows:

- Duplex (Duplex printing error detection setting)
- Paper Mismatch (Detection settings for paper size/type errors when the paper source is fixed)
- **1** Press ▷ while Device Common > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Error Handling > appears.

>>Format ?

>Error Handling>

### Duplex (Duplex printing error detection setting)

If the error detection setting for duplex printing has been turned On, and you attempt to print onto a paper size and paper type that cannot be used for duplex printing, the Duplex disabled Press GO error message will be displayed and printing will stop.

On	<ul> <li>To print onto one-side of the paper only when this message is displayed, press [GO].</li> <li>Press [Cancel] to cancel the printing itself.</li> </ul>
Off	To print onto one-side of the paper.

- **1** Press > while > Error Handling > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Duplex appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.



>>Paper Mismatch

On

- **4** Select On or Off using  $\triangle$  or  $\nabla$ .
- **5** Press **[OK]**.
- 6 Press [MENU]. The display returns to Ready.

# Paper Mismatch (Detection settings for paper size/type errors when the paper source is fixed)

Turn this setting to Off if you want to continue printing even if the paper size or type you specified is different from the fixed paper source, or turn it to On to have the paper feed error displayed.

- **1** Press ▷ while >Error Handling > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Paper Mismatch appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.



- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

## Timer (Timer setting)

This specifies timer-related settings such as the automatic form-feed timeout and the timeout settings for Auto Sleep.

The options available in Timer are as follows:

- Form Feed Time Out (Automatic form feed timeout setting)
- Sleep Timer (Sleep timer timeout time)
- Auto Error Clear (Auto error clear setting)
- Error Clear Timer (Setting the error clear time)
- Auto Panel Reset (Auto panel reset settings)
- Panel Reset Timer (Setting the panel reset timer)
- Auto Sleep (Setting the sleep timer)
- **1** Press ▷ while Device Common > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Timer > appears.

#### Form Feed Time Out (Automatic form feed timeout setting)

If the printer receives no data for a certain period, it will time out and release the current interface. It prints whatever data it has in its buffer and feeds out the page. The default form feed timeout time is 30 seconds.

- **1** Press ▷ while >Timer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Form Feed Time Out appears.
- **3** Press **[OK]**. A blinking cursor (\_) appears.
- 4 Press △ or ▽ to increase or decrease the value at the blinking cursor and set the desired time. The timeout time can be between 5 and 495 seconds, in 5-second increments. Use ⊲ and ▷ to move the cursor right and left.
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.



>Timer

>

#### Sleep Timer (Sleep timer timeout time)

You can adjust the length of time the printer waits before entering Auto Sleep in the absence of data.

The printer reverts to normal operation mode when the printer receives a print job, the operation panel is operated, or one of the exterior covers is opened. The default time is 30 minutes.



Note Calibration is automatically executed before the printer reverts to normal operation mode.

- **1** Press ▷ while >Timer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Sleep Timer appears.
- **3** To change the timeout time, press **[OK]**. A blinking cursor () appears.
- **4** Press  $\triangle$  or  $\nabla$  to increase or decrease the value at the blinking cursor and set the desired time. The timer can be set between  $\ensuremath{\mathtt{1}}$  and 240 minutes. Use  $\triangleleft$  and  $\triangleright$  to move the cursor right and left.
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.



#### Auto Error Clear (Auto error clear setting)

If an error that still allows you to continue printing occurs, the next received data is automatically printed after a set period of time elapses. For example, if the printer is shared over a network as a network printer and one person causes one of the above errors, after the set period of time elapses, the data sent from the next person is printed. The default setting is <code>Off</code> (Auto Error Clear disabled).

#### The auto clear errors are:

- Memory overflow Press GO
- Print overrun Press GO
- KPDL error ## Press GO
- File not found Press GO
- Hard disk err ## Press GO
- RAM disk error## Press GO
- MemoryCard err## Press GO
- Illegal Account Press GO
- Exceeded Max.out Press GO
- Job restricted Press GO
- Account error ## Press GO
- Duplex disabled Press GO
- Job not stored Press GO
- No multi copies Press GO
- USB memory err## Press GO

For setting the auto error clear recovery time, refer to the next section *Error Clear Timer (Setting the error clear time)*.

- 1 Press ▷ while >Timer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Auto Error Clear appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.



- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

#### Error Clear Timer (Setting the error clear time)

If Auto Error Clear is set to On and a non-fatal error (an error that allows printing to continue) occurs, this setting specifies the time until the error is recovered and printing resumes. The default time is 30 seconds.

- **1** Press ▷ while >Timer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Error Clear Timer appears.
- **3** Press **[OK]**. A blinking cursor () appears.

4 Press △ or ▽ to increase or decrease the value at the blinking cursor and set the desired time. The time must be set between 5 and 495 seconds, in 5-second increments. You can use ⊲ and ▷ to move the cursor right and left.

5 Press [OK].



>>Error Clear

Timer

030sec.

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

## Auto Panel Reset (Auto panel reset settings)

The Auto Panel Reset function automatically restores the default settings if the panel is not used for a set time. The default setting is on.

For setting the time until the panel is reset, refer to the next section *Panel Reset Timer (Setting the panel reset timer)*.

- **1** Press  $\triangleright$  while >Timer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Auto Panel Reset appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Select on or off using  $\triangle$  or  $\nabla$ .
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

## Panel Reset Timer (Setting the panel reset timer)

When Auto Panel Reset is set to on, this sets the time until the panel is automatically reset after the user stops using the panel. The default time is 90 seconds.

- **1** Press  $\triangleright$  while >Timer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Panel Reset Timer appears.
- **3** Press **[OK]**. The message display shows a blinking cursor (\_).
- 4 Press △ or ▽ to increase or decrease the value at the blinking cursor and set the desired time. The time must be set between 005 and 495 seconds, in 5-second increments. Use ⊲ and ▷ to move the cursor right and left.
- 5 Press [OK].
- 6 Press [MENU]. The display returns to Ready.

## Auto Sleep (Setting the sleep timer)

The printer has a sleep timer that is used to conserve power when the printer is not printing, processing, or receiving data. The default setting is On.

- **1** Press ▷ while >Timer > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Auto Sleep appears.
- **3** To turn off the sleep timer, press **[OK]**. A blinking question mark (?) appears.
- **4** Select on or off using  $\triangle$  or  $\nabla$ .
- **5** Press **[OK]**. The sleep timer is turned off.
- 6 Press [MENU]. The display returns to Ready.







## Security

The security functions can be set up to protect printer operation and the print data.

The options available in Security are as follows:

- ID (Administrator ID input)
- Password (Administrator password input)
- I/F Block (Interface (external device) block setting)
- NetWare (NetWare setting)
- AppleTalk (AppleTalk setting)
- IPP (IPP setting)
- SSL Server (SSL Server setting)
- IPSec (IPSec setting)
- Security Level (Security level setting)
- 1 Press [MENU].

>

**2** Press  $\triangle$  or  $\nabla$  repeatedly until Security > appears.

## ID (Administrator ID input)

To use the Security function, you must enter an administrator ID. For information on how to set the administrator ID, refer to *Admin (Administrator settings)* on page **2-78**.

- **1** Press ▷ while Security > is displayed.
- **2** The message display shows ID and a blinking cursor ( ).
- 3 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified ID. Use ⊲ and ▷ to move the cursor right and left. Enter an ID consisting of between 1 and 16 numbers.
- **4** Press **[OK]**. Proceed to the next step *Password* (*Administrator Password input*).



Security

## Password (Administrator Password input)

To set up the Security functions, you must enter an administrator ID and administrator password. For information on how to set the administrator password, refer to *Admin (Administrator settings)* on page **2-78**.

- 1 When you entered the ID in the previous step (ID (Administrator ID input)), the message display shows Password (Administrator password input) and a blinking cursor ().
- 2 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified password. Use ⊲ and ▷ to move the cursor right and left. Enter a password consisting of between 0 (no settings) and 16 numbers.



**3** Press **[OK]**. The Security screen appears.

## I/F Block (Interface (external device) block setting)

You can use this to lock and thereby protect the interface. The options available in Interface Block are as follows:

- USB Host (USB memory slot setting)
- USB Device (USB interface setting)
- Parallel I/F (Parallel interface)
- Option I/F (Network interface card setting)
- 1 After entering the administrator ID and password, press △ or ▽ repeatedly until >I/F Block > appears.

#### USB Host (USB memory slot setting)

This locks and protects the USB memory slot (USB host). The default setting is Unblock.

- **1** Press ▷ while >I/F Block > is displayed. >>USB Host appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Select Block or Unblock using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- 5 Press [MENU]. The display returns to Ready.

Password



>>USB Host ? Unblock

#### USB Device (USB interface setting)

This locks and protects the USB interface. The default setting is Unblock.

- 1 Press ▷ while >I/F Block > is displayed. >>USB Device appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.



>>Parallel I/F ? Unblock

- **3** Select Block or Unblock using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- 5 Press [MENU]. The display returns to Ready.

#### Parallel I/F (Parallel interface setting)

This locks and protects the parallel interface. The default setting is  ${\tt Unblock}.$ 

- 1 Press ▷ while >I/F Block > is displayed. >>Parallel I/F appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.



- 4 Press [OK].
- **5** Press [MENU]. The display returns to Ready.

#### **Option I/F (Network interface card setting)**

This locks and protects the network interface card (NIC). The default setting is Unblock.



**Note** Option I/F is displayed only when the optional network interface is installed on the printer.

- 1 Press ▷ while >I/F Block > is displayed. >>Option I/F appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.

>>Option I/F ? Unblock

- **3** Select Block or Unblock using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- 5 Press [MENU]. The display returns to Ready.

## NetWare (NetWare setting)

NetWare is a PC-based network operating system specifically for servers.

NetWare is a client-server system that operates by installing the NetWare OS on the server and dedicated client modules (NetWare clients) on the client machines (running MS-DOS, OS/2, Windows, etc.). The basic network layer protocol used is NetWare's own IPX (Internetwork Packet eXchange)/SPX (Sequenced Packet eXchange), but the system also supports TCP/IP.

The feature of the NetWare OS is that it is specifically for servers, unlike general-purpose operating systems such as Windows NT and UNIX. Only the minimum required for server operation can be performed from the NetWare OS console on the server. Server and file management is basically carried out using management tools from the clients. Also, all drivers and protocol stacks are in the form of modules called NetWare Loadable Modules (NLMs), and the ability of NLMs to load and unload flexibly and dynamically is a major advantage of this system.

The default setting is On.



**Note** Check with your network administrator when selecting network settings.

- After entering the administrator ID and password, press △ or ▽ repeatedly until >NetWare > appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Select On or Off using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- **5** Press [MENU]. The display returns to Ready.

#### Frame Type (Frame type setting)

Sets the NetWare frame type. Frame is a term referring to a set of data that flows through the network. The default setting is Auto.

- Press ▷ while >NetWare On > is displayed. >>Frame Type appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.

3 Press △ or ▽ until the desired frame type appears and then press [OK]. The message display toggles through the following types:

- Auto
- 802.3
- Ethernet-II
- 802.2
- SNAP
- **4** Press **[OK]**.
- 5 Press [MENU]. The display returns to Ready.

>NetWare	>
>NetWare ? On	>

>Frame Type

Auto

## AppleTalk (AppleTalk setting)

AppleTalk is a communications protocol used primarily on Macintosh computers and also refers to the Mac OS network functions.

AppleTalk assigns 24-bit network addresses (a 16-bit network section and an 8-bit node address) that are used to identify devices (computers, printers. etc.) on the network.

When the power is turned on, a broadcast signal is sent out onto the network and the addresses and machine names are automatically assigned.

The default setting is On.



1

Note Check with your network administrator when selecting network settings.

- After entering the administrator ID and password, press  $\triangle$  or  $\nabla$ repeatedly until >AppleTalk appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Select On or Off using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- **5** Press [MENU]. The display returns to Ready.

## IPP (IPP setting)

IPP (Internet Printing Protocol) is a standard that uses TCP/IP networks such as the Internet to enable print jobs to be sent between remote computers and printers.

IPP is an extension of the HTTP protocol used to view websites and enables printing to be carried out via routers on printers in remote locations. It also supports the HTTP authentication mechanisms along with SSL server and client authentication as well as encryption.

The default setting is Off.

Note Check with your network administrator when selecting network settings.

- 1 After entering the administrator ID and password, press  $\triangle$  or  $\nabla$ repeatedly until >IPP appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Select On or Off using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- **5** Press [MENU]. The display returns to Ready.



>IPP

>IPP Off

## SSL Server (SSL Server setting)

SSL (Secure Sockets Layer) refers to a protocol used to encrypt information sent and received over a network. SSL can currently be used to encrypt data such as the WWW or FTP files widely used on the Internet so that privacy-related information, credit card numbers, corporate secrets and other confidential information can be sent and received safely.

SSL servers use this protocol to authenticate servers and clients.

The default setting is Off.

**Note** Check with your network administrator when selecting network settings.

- 1 After entering the administrator ID and password, press △ or ▽ repeatedly until >SSL Server appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Select on or off using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- 5 Press [MENU]. The display returns to Ready.

#### DES (SSL Server DES setting)

DES (Data Encryption Standard) is a typical symmetric-key cryptographic algorithm that divides data in to 64-bit blocks and then encrypts each block using a 56-bit key.



**Note** Symmetric-key cryptography, because it uses the same key for both encryption and decryption, uses the same key in both directions when encrypted data is exchanged. Accordingly, to prevent the key from being divulged, key transfer and storage must be very strictly managed.

The default setting is Off.

- **1** Press ▷ while >SSL Server On > is displayed. >>DES appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Select On or Off using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- 5 Press [MENU]. The display returns to Ready.





#### 3DES (SSL Server 3DES setting)

3DES (Triple Data Encryption Standard) is a high level of encryption in which DES encryption is repeated threefold.

The default setting is Off.

- **1** Press ▷ while >SSL Server On > is displayed. >>3DES appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.



- 4 Press [OK].
- 5 Press [MENU]. The display returns to Ready.

### AES (SSL Server AES setting)

AES (Advanced Encryption Standard) was developed to replace DES as the standard encryption as the safety of DES has declined. AES is a block encryption system that uses 128-bit blocks and an SPN structure (a typical structure for repeated encryption) with three selectable key lengths of 128, 192 and 256 bits.

The default setting is Off.

- **1** Press ▷ while >SSL Server On > is displayed. >>AES appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Select On or Off using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- 5 Press [MENU]. The display returns to Ready.

#### IPP over SSL (SSL Server IPP over SSL setting)

IPP over SSL is an encryption function that uses SSL for communications between users and servers in network printing. To use IPP over SSL, both server and client must support the protocol.

The default setting is Off.

- 1 Press ▷ while >SSL Server On > is displayed. >>IPP over SSL appears.
- 2 Press [OK]. A blinking question mark (?) appears.
- **3** Select on or off using  $\triangle$  or  $\nabla$ .
- **4** Press **[OK]**.
- 5 Press [MENU]. The display returns to Ready.



>>IPP over SSL

Off

>>3DES ? Off

#### HTTPS (SSL Server HTTPS setting)

HTTPS (Hyper Text Transfer Protocol Secure) is a protocol that adds SSL data encryption, message authentication and a digital signature function to the HTTP protocol used for data transfer between WWW servers and clients.

S-HTTP is a similar protocol, but HTTPS differs in that it uses SSL.

The default setting is Off.

- 1 Press ▷ while >SSL Server On > is displayed. >>HTTPS appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Select On or Off using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- 5 Press [MENU]. The display returns to Ready.

## **IPSec (IPSec setting)**

IPSec (IP Security Protocol) is a security protocol adopted as the standard by the IETF for authentication and encryption in the third network layer (IP layer).

It can be used with both IPv4 and IPv6.



The default setting is Off.



**Note** Check with your network administrator when selecting network settings.

- After entering the administrator ID and password, press △ or ▽ repeatedly until >IPSec appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Select on or off using  $\triangle$  or  $\nabla$ .
- 4 Press [OK].
- 5 Press [Menu]. The display returns to Ready.

## Security Level (Security level setting)

Security Level is primarily a menu used by service personnel for maintenance work. There is no need for customers to use this menu.



>IPSec

>IPSec ? Off

# Job Accounting (Job Accounting selection/setting)

Job Accounting is a function that allows the number of pages used to be managed by each department to be managed through the use of entered account IDs.

Job accounting on this machine offers the following features:

- Support for up to 100 departments
- Department codes up to 8 digits long from 1 to 99999999
- · Collective print management for the same department code
- Totaling of the number of pages used for each department
- Specifiable limits (1 to 9,999,999) on the number of pages used
- · Resetting of the number of pages used for individual departments

The options available in Job Accounting are as follows:

- ID (Administrator ID input)
- Password (Administrator Password input)
- Job Accounting (Job Accounting selection/setting)
- Select Account (Department-specific settings)
- Add Account (Department Registration)
- Delete Account (Department Removal)
- Print Job Accounting List (Job Accounting list output)

**IMPORTANT** Select Account and Delete Account are only displayed if one or more department codes have been registered. Also, Add Account is not displayed if the number of registered accounts has already reached the permitted maximum.

- 1 Press [MENU].
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until Job Accounting > appears.

## **ID (Administrator ID input)**

To set up Job Accounting, you must enter an administrator ID. For information on how to set the administrator ID, refer to *Admin* (*Administrator settings*) on page -78.

- **1** Press ▷ while Job Accounting > is displayed.
- **2** The message display shows ID and a blinking cursor (\_).
- 3 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified ID. Use ⊲ and ▷ to move the cursor right and left. Enter an ID consisting of between 1 and 16 numbers.



**Note** If you enter an incorrect administrator ID, the Wrong ID message appears and the input screen then reappears. Reenter the ID correctly.

**4** Press **[OK]**. Proceed to the next step *Password* (Administrator *Password input*).

Job Accounting >

ID

## Password (Administrator Password input)

To set up Job Accounting, you must enter an administrator ID and administrator password. For information on how to set the administrator password, refer to *Admin (Administrator settings) on page -78*.

- 1 After entering the ID in the previous step (ID (Administrator ID input)), the message display shows Password (Administrator password input) and a blinking cursor (\_).
- 2 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified password. Use ⊲ and ▷ to move the cursor right and left. Enter a password consisting of between 0 and 16 numbers.

**Note** If you enter an incorrect administrator ID or password, the message Wrong ID or Wrong Password appears and the input screen then reappears. Re-enter the ID or password correctly.

**3** Press **[OK]**. The Job Accounting selection/setting screen reappears.

## Job Accounting (Job Accounting selection/setting)

This allows you to turn the Job Accounting function On and <code>Off</code>. The default setting is <code>Off</code>.

- After entering the administrator ID and password, press △ or ∇ repeatedly until >Job Accounting appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Select On or Off using  $\triangle$  or  $\nabla$ .
- **4** Press **[OK]**.
- 5 Press [MENU]. The display returns to Ready.

#### Job Accounting enabled

If department administration is enabled, an account ID entry screen appears each time you retrieve a status page or list.

- **1** A blinking cursor (\_) appears in the account ID entry screen.
- 2 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified account ID. Use ⊲ and ▷ to move the cursor right and left. Enter an account ID consisting of between 1 and 8 numbers.



**Note** If you enter an incorrect account ID, the input screen reappears. Re-enter the account ID correctly.

**3** Press **[OK]**. The account is confirmed and printing begins.





Enter Account

Usina	the Or	peratio	n Pan	iel

## Select Account (Department-specific settings)

This specifies the functions used for managing individual account IDs.

The options available in Select Account are as follows:

- Counter (Account-specific counter management)
- Restriction (Print restriction selection)
- Maximum Output (Maximum print output setting)
- Reset Counter (Counter reset)
- **1** Press ▷ while Job Accounting > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Select Account> appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- **4** Each time you press  $\triangle$  or  $\nabla$ , the next registered account ID in the sequence appears.
- **5** Display the desired account ID and press **[OK]**. Press ▷, the display changes to the individual department setting screen.

### Counter (Account-specific counter management)

Displays the total number of pages printed for the currently selected account.

**IMPORTANT** You can only view the counter. You cannot change it.

- 1 Set the account ID and then press △ or ▽ repeatedly until >>Counter appears. (E.g.: 100)
  - The counter shows a number between 0000000 and 9999999.
- 2 Press [MENU]. The display returns to Ready.

#### **Restriction (Print restriction selection)**

Sets restricted functionality for all printing on the currently selected account. You can use the restrictions to prohibit printing by individual departments or to limit the number of pages they can print.

- 1 Set the account ID and then press △ or ▽ repeatedly until >>Restriction appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- **3** Press  $\triangle$  or  $\nabla$  repeatedly to select the desired restriction. The displayed restrictions are as follows:
  - Off (no restrictions)
  - Counter Limit (to limit the number of pages)
  - Reject Usage (to prohibit printing)
- **4** Press **[OK]**. The restriction is set.
- **5** Press [MENU]. The display returns to Ready.



>Select Account> ?00000000

>>Counter 0000100

### Maximum Output (Maximum print output setting)

Limits the number of pages for all printing on the currently selected account.

1 Set the account ID and then press △ or ▽ repeatedly until >>Maximum Output appears.



- 3 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Set the desired number of pages. You can set a number between 0000001 and 9999999 as the number of pages. Use ⊲ and ▷ to move the cursor right and left.
- 4 Press [OK].
- 5 Press [MENU]. The display returns to Ready.

#### **Reset Counter (Counter reset)**

Resets the counter (pages used) for the currently selected account.

- **1** Set the account ID and then press △ or  $\nabla$  repeatedly until >>Reset Counter appears.
- **2** Press **[OK]**. A blinking question mark (?) appears.
- 3 Press [OK] again. The counter is reset.
- 4 Press [MENU]. The display returns to Ready.





# >Delete Account ?001

>Add Account

## Add Account (Department registration)

This allows you to add a new account for which printing is permitted.

**IMPORTANT** Because account IDs are managed as numeric strings, "1" and "001" are handled as different accounts. Also, once Job Accounting is enabled, no jobs are printed unless information is attached showing the accounts from which the jobs are being printed.

- **1** Press  $\triangleright$  while Job Accounting > is displayed.
- $\label{eq:rescaled} \textbf{2} \quad \text{Press} \bigtriangleup \text{ or } \nabla \text{ repeatedly until >Add Account appears.}$
- **3** Press **[OK]**. The message display shows a blinking cursor ( ).

4 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Set the desired account ID. You can set a number between 1 and 8 digits. Use ⊲ and ▷ to move the cursor right and left.



**Note** If you enter an existing account ID, Wrong Account is displayed and the input screen reappears. Re-enter the new account ID.

- **5** Press **[OK]**. Account registration ends.
- 6 Press [MENU]. The display returns to Ready.

## Delete Account (Department removal)

You can use this to delete a registered account.

**IMPORTANT** Because account IDs are managed as numeric strings, "1" and "001" are handled as different accounts. Also, once Job Accounting is enabled, no jobs are printed unless information is attached showing the accounts from which the jobs are being printed.

- **1** Press ▷ while Job Accounting > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Delete Account appears.
- **3** Press **[OK]**. A blinking question mark (?) appears. (E.g.: 001)
- **4** Each time you press  $\triangle$  or  $\nabla$ , the next registered account ID in the sequence appears.
- **5** Display the desired account ID and press **[OK]**. The account ID is deleted.
- 6 Press [MENU]. The display returns to Ready.

# Print Job Accounting List (Job Accounting list output)

This enables you to print the total number of pages for all accounts as a Job Accounting list.

- **1** Press ▷ while Job Accounting > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Print Job Accounting List appears.
- **3** Press **[OK]**. A blinking question mark (?) appears.
- 4 When you press [OK] again, Processing appears and printing begins.
- 5 Press [MENU]. The display returns to Ready.



## Admin (Administrator settings)

The administrator setting is a function that identifies the user who can use the printer and can be used to manage users. The administrator is authenticated by the entered administrator ID and password and can then use the printer's security functions and Job Accounting functions.

The options available in Admin are as follows:

- ID (Administrator ID input)
- Password (Administrator password input)
- Change ID (Administrator ID change)
- Change Password (Administrator password change)

## 1 Press [MENU].

>

**2** Press  $\triangle$  or  $\nabla$  repeatedly until Admin > appears.

### ID (Administrator ID input)

You can use this to set the administrator ID. The default setting is the numeric part of your printer's model name. If you use FS-2020D, enter "2020".

- **1** Press ▷ while Admin > is displayed.
- **2** The message display shows ID and a blinking cursor ( ).
- 3 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified ID. Use ⊲ and ▷ to move the cursor right and left. Enter an ID consisting of between 1 and 16 numbers.
- **4** Press **[OK]**. Proceed to the next step *Password* (*Administrator Password input*).

### Password (Administrator Password input)

You can use this to set the administrator password. The default setting is the numeric part of your printer's model name. If you use FS-2020D, enter "2020".

- 1 When you entered the ID in the previous step (ID (Administrator ID input)), the message display shows Password (Administrator password input) and a blinking cursor (\_).
- 2 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified password. Use ⊲ and ▷ to move the cursor right and left. Enter a password consisting of between 0 and 16 numbers.



**Note** If you enter the incorrect administrator ID or password, the Wrong ID or Wrong Password message appears and the input screen then reappears. Re-enter the ID or password correctly.



Admin



>Change ID 00000001	<b>3</b> Once you enter the correct ID and password, the <i>Admin (change)</i> screen appears. (E.g.: Where the administrator ID is 0000001)		
0000001	Each time you press $ riangle$ or $ riangle$ , the following settings to be changed appear in succession.		
	Change ID		
	Change Password		
	Note If a change is required, refer to the procedures in Change ID (Administrator ID change) and Change Password (Administrator Password change) below.		
	4 Press [OK] again. The administrator ID and password are confirmed.		
	5 Press [MENU]. The display returns to Ready.		
	Change ID (Administrator ID change)		
	You can use this to change the administrator ID.		
>Change ID 001	1 In step 3 in <i>Password (Administrator Password input)</i> above, press △ or ▽ while the <i>Admin (Change)</i> screen is displayed until >Change ID appears. (E.g.: Where the administrator ID is 001)		
>Change ID	<b>2</b> When you press <b>[OK]</b> , a blinking cursor (_) appears.		
	3 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Enter the ID to be changed. Use ⊲ and ▷ to move the cursor right and left. Enter an ID consisting of between 1 and 16 numbers.		
OK? 002	<b>4</b> Press <b>[OK]</b> . A confirmation screen appears. (E.g.: Where the administrator ID is changed to 002)		
	<b>5</b> Press <b>[OK]</b> . The new administrator ID is confirmed.		
	6 Press [MENU]. The display returns to Ready.		
	Change Password (Administrator Password change)		
	You can use this to change the administrator password.		
>Change Password	1 In step 3 in <i>Password (Administrator Password input)</i> above, press △ or ▽ while the Admin (Change) screen is displayed until >Change Password appears.		
	<b>IMPORTANT</b> The administrator password is not displayed.		
>Change Password	<b>2</b> Press <b>[OK]</b> . A blinking cursor (_) appears.		
T			
	3 Press △ or ▽ to increase or decrease, respectively, the value at the blinking cursor. Enter the password to be changed. Use ⊲ and ▷ to move the cursor right and left. Enter a password consisting of between 0 and 16 numbers.		
OK? 010	<b>4</b> Press <b>[OK]</b> . A confirmation screen appears. (E.g.: Where the administrator password is changed to 010)		

- **5** Press **[OK]**. The new administrator password is confirmed.
- 6 Press [MENU]. The display returns to Ready.

# Adjust/Maintenance (Adjust/Maintenance selection/setting)

Adjust/Maintenance is used to adjust the print quality and to carry out printer maintenance.

The options available in Adjust/Maintenance are as follows:

- Restart Printer
- Service (for maintenance)

**IMPORTANT** Service is primarily a menu used by service personnel for maintenance work. There is no need for customers to use this menu.

1 Press [MENU].

**2** Press  $\triangle$  or  $\nabla$  repeatedly until Adjust/Maintenance > appears.

Maintenance

Adjust/

>

## **Restart Printer**

The procedure described below resets the printer's temporary conditions, such as the current page orientation, font, etc., set by commands to their default values. Downloaded fonts and macros are deleted from the printer's memory.

- **1** Press ▷ while Adjust/Maintenance > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Restart Printer appears.
- **3** Press **[OK]**. A question mark (?) appears.
- 4 Press [OK] again. Self test appears while the printer is resetting itself, followed by Ready.

>Restart Printer ?

## Service (for maintenance)

The options available in Service are as follows:

- Print Status Page (Printing the service status page)
- Print Network Status Page (Printing the network status page)
- Print Test Page (Printing the test page)
- Developer (Initializing the developer unit)
- DRUM-CTRL (Setting the automatic drum surface refreshing)
- Drum (Setting the drum refleshing mode)

**IMPORTANT** Service is primarily a menu used by service personnel for maintenance work. There is no need for customers to use this menu.

- **1** Press ▷ while Adjust/Maintenance > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >Service > appears.

#### Print Status Page (Printing the service status page)

The service status page contains printer settings information that is more detailed than the standard status page and is therefore mostly for service purposes. However, there is a great deal of information on the service status page that may be useful to you.

- **1** Press ▷ while >Service > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Print Status Page appears.
- **3** Press **[OK]**. A question mark (?) appears.
- 4 Press [OK] again. Processing appears and a service status page is printed out.
- **5** When printing ends, the display returns to Ready.

#### Print Network Status Page (Printing the network status page)

The network status page contains detailed information on the network settings. This is primarily used for maintenance by service personnel, but it contains information that may also be useful to you.

- **1** Press ▷ while >Service > is displayed.
- 2 Press △ or ▽ repeatedly until >>Print Network Status Page appears.
- **3** Press **[OK]**. A question mark (?) appears.
- **4** Press **[OK]** again. Processing appears and a network status page is printed out.
- **5** When printing ends, the display returns to Ready.

#### Print Test Page (Printing the test page)

The test page is printed to check the effectiveness of printer adjustments. This is primarily used for maintenance by service personnel, but it contains information that may also be useful to you.

>Service

>

>>Print Status Page ?

>>Print Network
Status Page ?

## >>Print Test Page ?

- **1** Press ▷ while >Service > is displayed.
- **2** Press  $\triangle$  or  $\nabla$  repeatedly until >>Print Test Page appears.
- **3** Press **[OK]**. A question mark (?) appears.
- 4 Press [OK] again. Processing appears and a test page is printed out.
- **5** When printing ends, the display returns to Ready.

#### Developer (Initializing the developer unit)

The replaced developer can be automatically fill up the toner using this menu when a toner container is installed and the printer is turned on. This is primarily used for maintenance by service personnel.

#### DRUM-CTRL (Setting the automatic drum surface refreshing)

The drum surface can be refreshed automatically at a predetermined period of time using this menu, regardless of the status detected by the temperature/humidity sensor. This is primarily used for maintenance by service personnel.

#### Drum (Setting the drum refleshing mode)

This sets the refresh mode for the drum. When the printing quality declines, refreshing the drum can restore the printing quality. This is primarily used for maintenance by service personnel.

# **3 Option**

This chapter explains the options for this printer.

General Information	3-2
Expansion Memory Modules	3-3
Paper Feeder (PF-310)	3-5
CompactFlash (CF) Card	3-6
Other Options	3-8

## **General Information**

The printers have the following options available to satisfy your printing requirements. For instructions on installing individual options, refer to the documentation included with the option. Some options are explained in the following sections.



## **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 128, 256 or 512MB. The maximum memory size is 544MB.



**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.



Incorrect

## Installing the Memory Module



- **1** Turn off the printer and disconnect the power cord and printer cable.
- **2** Remove the right cover.

**3** Remove the screw and open the inner cover.



remove the serew and open the inner cover



- **4** Remove the memory module from its package.
  - Aligning the cutouts of the memory module with the matching keys of the socket, carefully plug the memory module into the memory socket until it clicks in place. Then, push down the memory module to secure.

6 After you finish installing the memory module, secure the inner cover with screws removed in step 3, and close the right cover.

## **Removing a Memory Module**

To remove a memory module, remove the right cover and the memory slot cover from the printer. Then, carefully push out the two socket clamps. Ease the memory module out of the socket to remove.

## Verifying the expanded memory

To verify that the memory module is working properly, test it by printing a status page.

## Paper Feeder (PF-310)

The PF-310 paper feeder allows you to add three (FS-2020D: one) more paper cassettes to the bottom of the printer for continuous feeding of a large volume of paper. Each paper cassette can hold up to approximately 500 sheets of ISO A4, ISO A5, JIS B5, letter, and legal size  $(80g/m^2)$  paper. This feeder is attached at the bottom of the printer as shown on below.



# CompactFlash (CF) Card

The printer is equipped with a slot for a CF card with the maximum size of 256MB. A CF card is useful for storing fonts, macros, and overlays.

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



**CAUTION** Before inserting a CF card in the printer, make sure that the printer is switched off.

**2** Remove the screws and the option interface slot cover.



**3** Install the CompactFlash card into the slot.



**4** Secure the option interface slot cover with screws removed in step 2.
# PT-310 Faceup Output Tray (for FS-3920DN/FS-4020DN)

Use the faceup output tray when you wish paper to be stacked with the printed side facing up (reverse order).

To install the faceup output tray, perform the following procedures:

**1** Install the paper stopper according to the size of paper to be used.





**2** Install the faceup output tray on the rear of the printer.



#### IB-31 Network Interface Cards (For FS-2020D)

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. The network interface card must be installed in the option interface slot. For details, refer to *IB-31 Installation Guide*.

# **Other Options**

#### PF-315 Bulk Paper Feeder (for FS-3920DN/FS-4020DN)

Holds approximately 2,000 sheets of 76 to 216 mm x 148 to 305 mm size paper. This bulk paper feeder can be attached to the front of the printer after the MP tray has been removed.

### EF-310 Envelope Feeder (for FS-3920DN/FS-4020DN)

Holds more envelopes at a time than the MP tray. This envelope feeder can be attached to the front of the printer after the MP tray has been removed.

### HD-5A Hard Disk

If a hard disk is installed in the printer, received data can be rasterized and stored on this hard disk. This enables to use the Job Box functions. For details, refer to *Job Box* on page 2-19.

### **USB Flash Memory**

See your dealer for purchasing information of this optional device that are best suited for use with this printer.

# **4** Computer Interface

This chapter contains explanations on the following topics:

General Information	4-2
Parallel Interface	4-2
USB Interface	4-2
Network Interface	4-3

# **General Information**

This chapter explains the connector specifications of parallel, USB, and network interfaces.

# **Parallel Interface**

The printer provides high-speed data transmission on a parallel interface.



**Note** Use a parallel interface cable that complies with the IEEE 1284 standard.

# **USB** Interface

This printer supports the Hi-Speed USB. USB (Universal Serial Bus) interface specifications are as follows.

### **Specifications**

#### **Basic specification**

Complies with the Universal Serial Bus Specification Revision 2.0.

#### Connectors

Printer: B-type receptacle (female) with upstream port

Cable: B-type plug (male)

#### Cable

Use a shielded cable that complies with USB 2.0 (Hi-Speed USB) and not longer than 5 meters (16 feet).

#### **Transfer Mode**

High speed (480 Mbps maximum) Full-Speed (12 Mbps maximum)

#### **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

### **Network Interface**

#### Features

#### Automatic IP address resolution

This feature is compatible with the DHCP/DHCPv6 protocol and allows the printer to automatically receive IP addresses from the DHCP/DHCPv6 server.

#### Management using Web browsers

HTTP pages are incorporated in to the interface, so that a web browser can be used to monitor and change a range of settings. The settings can be password-protected.

#### Support for a range of protocols

The SMTP, POP3, SSL, SNMP, IPv6 and Notables over TCP/IP protocols are supported for easier printer management and more robust security.

#### Support for IEEE 802.1x

The interface supports EAP-TLS and PEAP authentication.

#### Supports IPv6

Supports IPv6, which is based on IPv4 with improvements, such as increased manageable address space, additional security functions and priority based data transmission.

#### Supports IPSec

Supports IPSec, the security protocol that authenticates and encrypts in the network layer (IP layer).

### Specifications

#### Connector

10 Base-T/100 Base-TX

#### **Operating Systems**

Windows 2000/XP/Vista/Server2003, MacOS 10.x

#### **Network protocols**

- IPv6: HTTP, LPD, FTP, IPP, RawPort, ICMPv6, LLTD, SNTP, DHCPv6, SMTP, POP3, DNS, SNMPv1/v2c/v3, WSD
- IPv4: HTTP, HTTPS, LPD, FTP, IPP, RawPort, ICMP, DHCP, SMTP, POP3, SNTP, DNS, WINS, NetBIOS over TCP/IP, SNMPv1/v2c/v3, Apple Bonjour Compatible, IPPS, LLTD, WSD
- Etc.: IPX/SPX, NetWare (NDS/Bindery), AppleTalk, NetBEUI

#### **Security Protocols**

SSL/TLS (HTTPS, IPPS), SNMPv3, EAP-TLS, PEAP, AH, ESP

#### **Operation Environment**

10 to 35 °C (50 to 95 °F), 20-80% RH (condensation-free)

#### **EMI** Countermeasures

VCCI Class B, FCC Class B (U.S.), CE (Europe)

**IMPORTANT** When IPv6 functions are used, the devices used on the network (routers, PCs, etc) must support IPv6.

# Glossary

#### Additional memory

An additional memory (optional) is used for increasing the memory capacity of this machine. For DIMM that can be used in this machine, contact your service technician.

#### 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.

#### dpi (dots per inch)

This indicates the number of dots printed per inch (25.4mm) as a unit for expressing resolution.

#### EcoPrint

This is a printing mode that reduces toner consumption. Pages printed in the EcoPrint mode are lighter than pages printed in the normal mode.

#### Emulation

This refers to emulation of other manufacturers' printers. The printer emulates operation of the following printers: PCL 6, KPDL, KPDL (AUTO), Line Printer, IBM Proprinter, DIABLO 630 and EPSON LQ-850.

#### 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.

#### KPDL

KPDL is Kyocera's implementation of the PostScript page description language Level3.

#### MP tray

This 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.

#### **Outline font**

With outline fonts, character outlines are represented with numerical expressions and fonts can be enlarged or reduced in different ways by changing the numeric values of those expressions. Printing remains clear even if you enlarge fonts, since the characters are defined with outlines represented with numerical expressions. You can specify the font size in steps of 0.25 points up to 999.75 points.

#### **Parallel interface**

With this interface, data transfer between the printer and the computer takes place in 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.

#### **PPM** (prints per minute)

This indicates the number of printouts made in one minute.

#### **Printer driver**

The printer driver makes it possible for you to print data created using application software. The printer driver for the printer is contained on the CD-ROM supplied with the printer. Install the printer driver on the computer connected to the printer.

#### Sleep mode

This mode is provided to save power. It is activated when the machine is not used for a preset period of time. In this mode, power is reduced to the minimum. The default setting can be changed.

#### Status page

This lists machine conditions, such as the machine's memory, the total number of prints and paper source settings. You can print the status page from the operation panel.

#### 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).

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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.



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