

OPERATION GUIDE

FS-2020D/FS-3920DN/FS-4020DN/ FS-6970DN



This Operation Guide is for models FS-2020D, FS-3920DN, FS-4020DN and FS-6970DN.



Note This Operation Guide contains information that corresponds to using both the inch and metric versions of these machines.

The inch versions of these machines are shown in the screens in this guide. If you are using the metric version, use the messages provided for the inch version as reference only. In the body text, only the inch messages are given if these versions differ only in capitalization. When there is even a slight difference in the message, we have listed the information for the inch version followed, in brackets, by the corresponding information for the metric version.

Included Guides

The following guides are included with this machine. Refer to the proper guide based on your requirements.

Operation Guide (This Guide)

Describes how to load paper, print, replace toner, clean the printer, and troubleshooting.

Advanced Operation Guide

Explains paper guidelines, how to use the operation panel and possible connections between the printer and the computer.

Installation Guide

Explains how to install this printer, as well as connecting cables and loading paper.

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Legal and Safety Information

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Legal Information



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

Notice on Software

SOFTWARE USED WITH THIS PRINTER MUST SUPPORT THE PRINTER'S EMULATION MODE. The printer is factory-set to emulate the PCL. The emulation mode can be changed.

Notice

The information in this guide is subject to change without notification. Additional pages may be inserted in future editions.

The user is asked to excuse any technical inaccuracies or typographical errors in the present edition. No responsibility is assumed if accidents occur while the user is following the instructions in this guide. No responsibility is assumed for defects in the printer's firmware (contents of its read-only memory).

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Compliance and Conformity

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- The use of a non-shielded interface cable with the referenced device is prohibited.

CAUTION — The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of FCC Rules and RSS-Gen of IC Rules.

Operation is subject to the following two conditions; (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

* The above warning is valid only in the United States of America.

Interface Connectors

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



Note Use shielded interface cables.

Safety Information

Laser Safety

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

Laser Notice

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



DANGER CLASS 3B LASER RADIATION WHEN OPEN.
AVOID DIRECT EXPOSURE TO BEAM.



CAUTION Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Radio Frequency Transmitter

This machine contains a transmitter module. We, the manufacturer (Kyocera Mita Corporation) hereby declare that this equipment (page printer), models mentioned on the cover page are in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

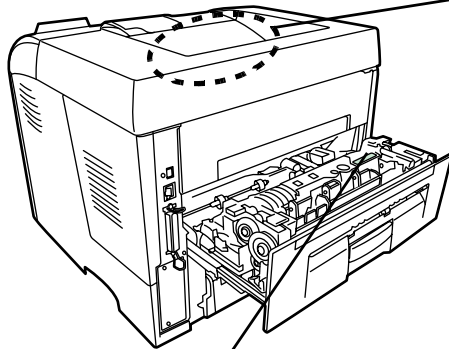
Radio Tag Technology

In some countries, the radio tag technology used in this equipment to identify the toner container may be subject to authorization, and the use of this equipment may consequently be restricted.

Caution Labels

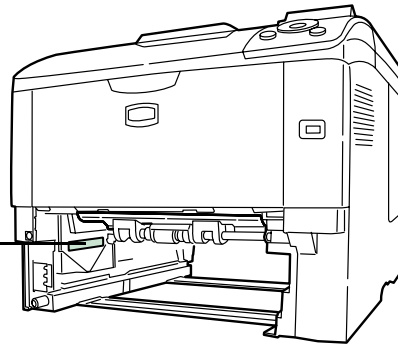
The printer bears any of the following labels.

Laser inside the printer
(Laser radiation warning)



DANGER	• CLASS 3B LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
ATTENTION	• CLASSE 3B RAYONNEMENT LASER EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FASCICUL.
VORSICHT	• KLASSE 3B LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ATTENZIONE	• CLASSE 3B RADIAZIONE LASER IN CASO DI APERTURA. EVITARE L'ESPOSIZIONE AL FASCIO.
PRECAUCION	• CLASSE 3B RADIAZIONE LASER CUANDO SE ABRE. EVITAR EXPONERSE AL RAYO.
VARO!	• AVATTAESSA OLET ALTTIINA LUOKAN 3B LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
	警告・开蓋時、可能有3B类可见激光外泄。应避开激光直接照射。 警告・内部3B类可见激光辐射中。请勿随意打开盖子。 위험・CLASS 3B 가시 레이저 광선을 직접 보지 마세요. 警告・このカバーの内部ではクラス3Bレーザー光が放射されています。レーザー光にさらされないようにしてください。

CAUTION HOT SURFACE 	ACHTUNG HEISSE OBERFLÄCHE	ATTENTION TEMPÉRATURE ÉLEVÉE
ATTENTION EXTERIOR CALIENTE 	ATTENZIONE SUPERFICIE CHIE SCOTIA 	高温注意
고온주의		



For Europe, Asia, and other countries

For U.S.A. and Canada

Modelname AC 220-240V
50/60Hz 4.3A
KYOCERA MITA Corporation

ACN00382444 (3D.1)
*****:***

- Apparatet må tilkoples jorder stikkontakt.
- Apparatet skall anslutas till jordat uttag.
- Laite on liitettävä suojamaadoitukseen-ettimillä varustettuun pistorasiaan.

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT

- REMOVE POWER CORD BEFORE SERVICE.
- VOR WARTUNG BITTE NETZSTECKER ZIEHEN.
- POUR PRÉVENIR LES CHOCES ELECTRIQUES, COUPER L'ALIMENTATION AVANT DE MANIPULER.
- DESENCHUFE EL CORDÓN DE ALIMENTACIÓN ANTES DEL SERVICIO.
- PRIMA DI ESEGUIRE RIPARAZIONI, STACCARE IL CAVO DI ALIMENTAZIONE.

>ASSEMBLED IN JAPAN / ASSEMBLED IN CHINA

Modelname AC 120V
60Hz 7.7A
KYOCERA MITA Corporation
TAMAOKI PLANT
704-19 NCUJINO, TAMAOKI-TOWN
WATARIBI-COUNTY, IBE-PREF. JAPAN
MANUFACTURED: C11

Complies with FDA radiation performance standards,
21 CFR Subchapter J.

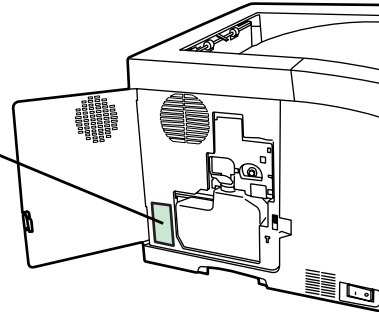
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC ID: E522J00117
This Class B digital apparatus complies with Canadian ICES-005.
Cet appareil numérique de la classe B est conforme à la norme NMB-305 du Canada.

IC: 1059B-2J00117

- REMOVE POWER CORD BEFORE SERVICE AND FUSE REPLACEMENT.
- POUR PRÉVENIR LES CHOCES ELECTRIQUES, COUPER L'ALIMENTATION AVANT DE REMPLACER LE FUSIBLE.

>ASSEMBLED IN JAPAN / ASSEMBLED IN CHINA



CDRH Regulations

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

Ozone Concentration

These printers generate ozone gas (O₃), which may concentrate in the place of installation and cause an unpleasant smell. To minimize the concentration of ozone gas to less than 0.1ppm, we recommend you not to install the printer in a confined area where ventilation is blocked.

Safety Instructions Regarding the Disconnection of Power

Caution: The power plug is the main isolation device! Other switches on the equipment are only functional switches and are not suitable for isolating the equipment from the power source.

VORSICHT: Der Netzstecker ist die Hauptisoliervorrichtung! Die anderen Schalter auf dem Gerät sind nur Funktionsschalter und können nicht verwendet werden, um den Stromfluß im Gerät zu unterbrechen.



DECLARATION OF CONFORMITY TO

2004/108/EC, 2006/95/EEC, 93/68/EEC and 1999/5/EC

We declare under our sole responsibility that the product to which this declaration relates is in conformity with the following specifications.

EN55024
EN55022 Class B
EN61000-3-2
EN61000-3-3
EN60950-1
EN60825-1
EN300 330-1
EN300 330-2

Declaration of Conformity (Australia)

Manufacturer: Kyocera Mita Corporation (Head Office)
Manufacturer's address: 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka
540-8585, Japan

declares that the product

Product name: Page Printer
Model name: FS-2020D/FS-3920DN/FS-4020DN

Description of devices: This Page Printer Model FS-4020DN is 28ppm (FS-2020D is the 30ppm, FS-3920DN is the 35ppm); A4 size and utilizes plain paper; dry toner; etc. The printer can be equipped with several optional enhancement units, such as a PF-310 paper feeder.

conforms to the following product specifications:

AS/NZS 3548: 1995 (EN 55 022: 1998 Class B)

AS/NZS 4268: 2003

IEC60950-1:2001 (EN 60 950-1: 2001+A11)

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

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

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

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

Canadian Department of Communications Compliance Statement

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

Avis de conformité aux normes du ministère des Communications du Canada

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

EN ISO 7779

Maschinenlärminformations-Verordnung 3. GPSGV, 06.01.2004: Der höchste Schalldruckpegel beträgt 70 dB (A) oder weniger gemäß EN ISO 7779.

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Energy Saving Function

This printer comes equipped with a Sleep Mode where printer function remains in a waiting state but power consumption is still reduced to a minimum when there is no activity with the printer within a set amount of time.

Sleep Mode

This printer automatically enters Sleep Mode when approximately 30 minutes (FS-2020D/3920DN/4020DN)/5 minutes (FS-6970DN) have passed since the printer was last used. The amount of time of no activity that must pass before Sleep Mode is activated may be lengthened.

Duplex Printing

This printer includes duplex printing as a standard function. For example, by printing two single-sided originals onto a single sheet of paper as a duplex printing, it is possible to lower the amount of paper used.

Recycled Paper

This printer supports recycled paper which reduces the load on the environment. Your sales or service representative can provide information about recommended paper types.

Energy Star (ENERGY STAR®) Program



We have determined as a participating company in the International Energy Star Program that this product is compliant with the standards laid out in the International Energy Star Program.

Symbols

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



DANGER: Indicates that serious injury or even death will very possibly result from insufficient attention to or incorrect compliance with the related points.



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



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

The following symbols indicate that the related section includes safety warnings. Specific points of attention are indicated inside the symbol.



.... [General warning]



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



.... [Warning of high temperature]

The following symbols indicate that the related section includes information on prohibited actions. Specifics of the prohibited action are indicated inside the symbol.



.... [Warning of prohibited action]



.... [Disassembly prohibited]

The following symbols indicate that the related section includes information on actions which must be performed. Specifics of the required action are indicated inside the symbol.



.... [Alert of required action]



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



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

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

Installation Precautions

Environment

Caution

Avoid placing the machine on or in locations which are unstable or not level. Such locations may cause the machine to fall down or fall over. This type of situation presents a danger of personal injury or damage to the machine.



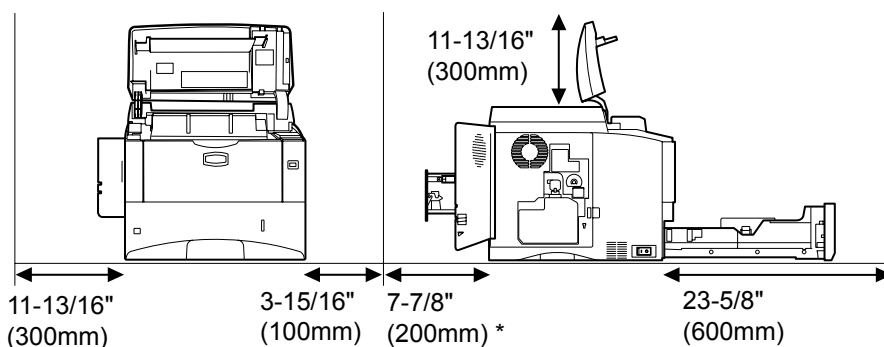
Avoid locations with humidity or dust and dirt. If dust or dirt become attached to the power plug, clean the plug to avoid the danger of fire or electrical shock.



Avoid locations near radiators, heaters, or other heat sources, or locations near flammable items, to avoid the danger of fire.



To keep the machine cool and facilitate changing of parts and maintenance, allow access space as shown below. Leave adequate space, especially around the rear cover, to allow air to be properly ventilated out of the printer.



* 15-3/4" (400mm) FS-3920DN/FS-4020DN: PT-310
FS-6970DN: PT-430.

Other Precautions

Adverse environmental conditions may affect the safe operation and performance of the machine. Install in an air-conditioned room (recommended room temperature: around 23°C (73.4°F), humidity: around 60% RH), and avoid the following locations when selecting a site for the machine.

- Avoid locations near a window or with exposure to direct sunlight.
- Avoid locations with vibrations.
- Avoid locations with drastic temperature fluctuations.
- Avoid locations with direct exposure to hot or cold air.
- Avoid poorly ventilated locations.

During printing, some ozone is released, but the amount does not cause any ill effect to one's health. If, however, the printer is used over a long period of time in a poorly ventilated room or when printing an extremely large number of copies, the smell may become unpleasant. To maintain the appropriate environment for print work, it is suggested that the room be properly ventilated.

Power Supply/Grounding the Machine

Warning

Do not use a power supply with a voltage other than that specified. Avoid multiple connections in the same outlet. These types of situations present a danger of fire or electrical shock.



Plug the power cord securely into the outlet. If metallic objects come in contact with the prongs on the plug, it may cause a fire or electric shock.



Always connect the machine to an outlet with a ground connection to avoid the danger of fire or electrical shock in case of an electric short. If an earth connection is not possible, contact your service representative.



Other precautions

Connect the power plug to the closest outlet possible to the machine.

The power supply cord is used as the main disconnect device. Ensure that the socket/outlet is located/installed near the equipment and is easily accessible.

Handling of plastic bags

Warning

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



Precautions for Use

Cautions when using the machine

Warning

Do not place metallic objects or containers with water (flower vases, flower pots, cups, etc.) on or near the machine. This situation presents a danger of fire or electrical shock should they fall inside.



Do not remove any of the covers from the machine as there is a danger of electrical shock from high voltage parts inside the machine.



Do not damage, break or attempt to repair the power cord. Do not place heavy objects on the cord, pull it, bend it unnecessarily or cause any other type of damage. These types of situations present a danger of fire or electrical shock.



Never attempt to repair or disassemble the machine or its parts as there is a danger of fire, electrical shock or damage to the laser. If the laser beam escapes, there is a danger of it causing blindness.



If the machine becomes excessively hot, smoke appears from the machine, there is an odd smell, or any other abnormal situation occurs, there is a danger of fire or electrical shock. Turn the main power switch off (O) immediately, be absolutely certain to remove the power plug from the outlet and then contact your service representative.



If anything harmful (paper clips, water, other fluids, etc.) falls into the machine, turn the main power switch off (O) immediately. Next, be absolutely certain to remove the power plug from the outlet to avoid the danger of fire or electrical shock. Then contact your service representative.



Do not remove or connect the power plug with wet hands, as there is a danger of electrical shock.



Always contact your service representative for maintenance or repair of internal parts.



Caution

Do not pull the power cord when removing it from the outlet. If the power cord is pulled, the wires may become broken and there is a danger of fire or electrical shock. (Always grasp the power plug when removing the power cord from the outlet.)



Always remove the power plug from the outlet when moving the machine. If the power cord is damaged, there is a danger of fire or electrical shock.



If the machine will not be used for a short period of time (overnight, etc.), turn the power switch off (O). If it will not be used for an extended period of time (vacations, etc.), remove the power plug from the outlet for safety purposes during the time the machine is not in use.



Always hold the designated parts only when lifting or moving the machine.



For safety purposes, always remove the power plug from the outlet when performing cleaning operations.



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



Other precautions

Do not place heavy objects on the machine or cause other damage to the machine.

Do not open the upper front cover, turn off the main power switch, or pull out the power plug during printing.

When lifting or moving the machine, contact your service representative.

Do not touch electrical parts, such as connectors or printed circuit boards. They could be damaged by static electricity.

Do not attempt to perform any operations not explained in this handbook.

Use shielded interface cables.



Caution

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Cautions when Handling Consumables



Caution

Do not attempt to incinerate the Toner Container. Dangerous sparks may cause burns.



Keep the Toner Container out of the reach of children.



If toner happens to spill from the Toner Container, avoid inhalation and ingestion, as well as contact with your eyes and skin.



- If you do happen to inhale toner, move to a place with fresh air and gargle thoroughly with a large amount of water. If coughing develops, contact a physician.
- If you do happen to ingest toner, rinse your mouth out with water and drink 1 or 2 cups of water to dilute the contents of your stomach. If necessary, contact a physician.
- If you do happen to get toner in your eyes, flush them thoroughly with water. If there is any remaining tenderness, contact a physician.
- If toner does happen to get on your skin, wash with soap and water.

Do not attempt to force open or destroy the Toner Container.



Other precautions

After use, always dispose of the Toner Container in accordance with Federal, State and Local rules and regulations.

Store all consumables in a cool, dark location.

If the machine will not be used for an extended period of time, remove the paper from the cassette, return it to its original package and reseal it.

About the Operation Guide

This Operation Guide contains the following chapters:

1 Machine Parts

This chapter explains the names of parts.

2 Paper Handling

Explains how choose, handle and load paper.

3 Loading Paper

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

4 Connecting and Printing

This chapter explains how to start up the printer, print from your PC, and use the application software included in the CD-ROM.

5 Maintenance

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

6 Using the Operation Panel

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

7 Options

Shows the available options.

8 Computer Interface

Describes the possible connections between the printer and your computer.

9 Troubleshooting

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

10 Appendix


This chapter lists the specifications of this printer and explains environmental standard requirements.

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.	Refer to <i>Replacing the Toner Container</i> on page 4-3.
Bold	Used to denote buttons on the software.	Select the printer you want to install, and click Next .
Bracket Bold	Used to denote operation panel keys.	If TCP/IP is set to Off, use Δ or ∇ to select On and press [OK] .
Note	Used to provide additional or useful information about a function or feature.	 Note Do not remove the toner container from the carton until you are ready to install it in the printer.
Important	Used to provide important information.	IMPORTANT During toner container replacement, temporarily move storage media and computer supplies (such as floppy disks) away from the toner container. This is to avoid damaging media by the magnetism of toner.
Caution	Cautions are statements that suggest mechanical damage as a result of an action.	CAUTION When pulling the paper, pull it gently so as not to tear it. Torn pieces of paper are difficult to remove and may be easily overlooked, deterring the paper jam recovery.
Warning	Used to alert users to the possibility of personal injury.	WARNING If you ship the printer, remove and pack the developer unit in a plastic bag and ship them separately from the printer.



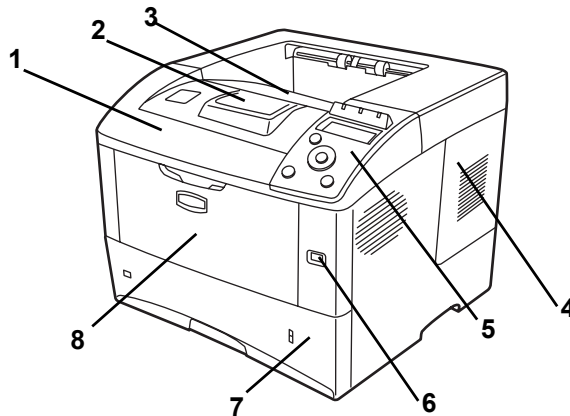
Note The illustrations shown in the user manual are just examples. Depending on the content either 2020D/3920DN/4020DN or FS-6970DN drawings are used.

1 Machine Parts

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

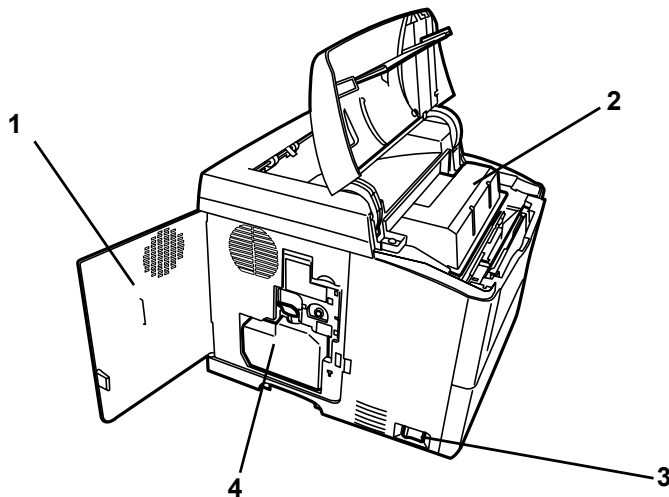
Components at the Front of the Printer	1-2
Components at the Rear of the Printer	1-3
Operation Panel	1-4

Components at the Front of the Printer



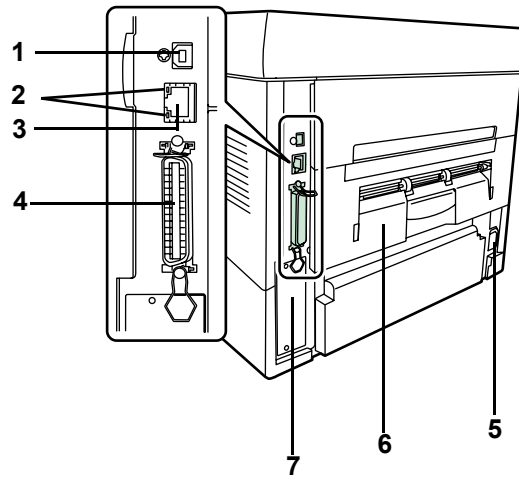
- 1 Top Cover
- 2 Paper Stopper
- 3 Top Tray
- 4 Right Cover
- 5 Operation Panel
- 6 USB Memory Slot
- 7 Paper Cassette
- 8 MP (Multi-Purpose) Tray

Components at the Left of the Printer and Internal Components



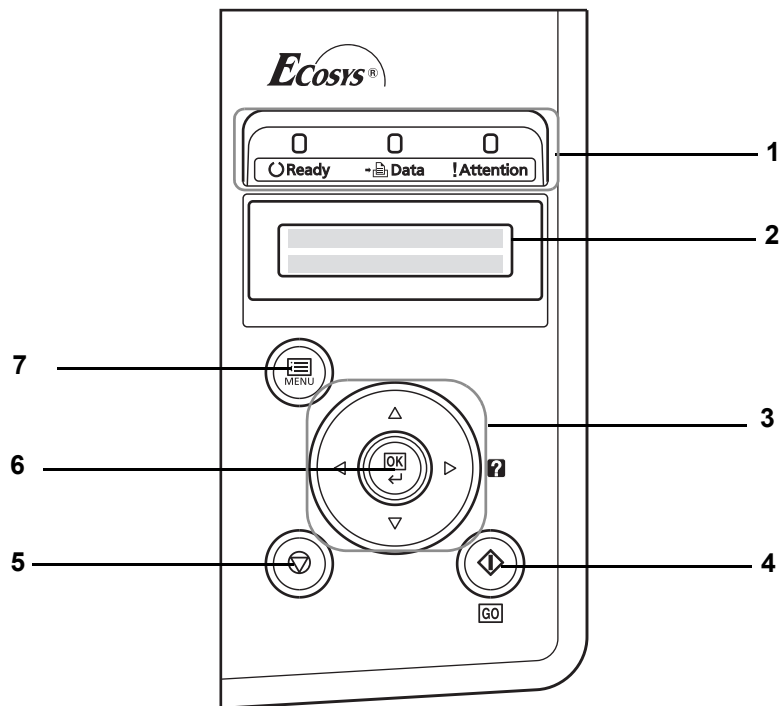
- 1 Left Cover
- 2 Toner Container
- 3 Power Switch
- 4 Waste Toner Box

Components at the Rear of the Printer



- 1 USB Interface Connector
- 2 Network Indicators (FS-3920DN/FS-4020DN/FS-6970DN only)
- 3 Network Interface Connector (FS-3920DN/FS-4020DN/FS-6970DN only)
- 4 Parallel Interface Connector
- 5 Power Cord Connector
- 6 Rear Unit
- 7 Option Interface Slot (Network/CF card/Hard disk) (FS-2020D/FS-3920DN/FS-4020DN only)

Operation Panel



- 1 Indicators
- 2 Message Display
- 3 Cursor Keys
- 4 [GO] Key
- 5 [Cancel] Key
- 6 [OK] Key
- 7 [MENU] Key

2 Paper Handling

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

General Guidelines	2-2
Selecting the Right Paper	2-4
Paper Type	2-12

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, trouble-free 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 high-quality results when the wrong paper is used. Low-priced paper is not economical in the long run if it causes printing problems.

Paper in each grade is available in a range of basis weights (defined later). The traditional standard weights are 60 to 120 g/m² (16 to 31.9 lb).

Paper Specifications

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

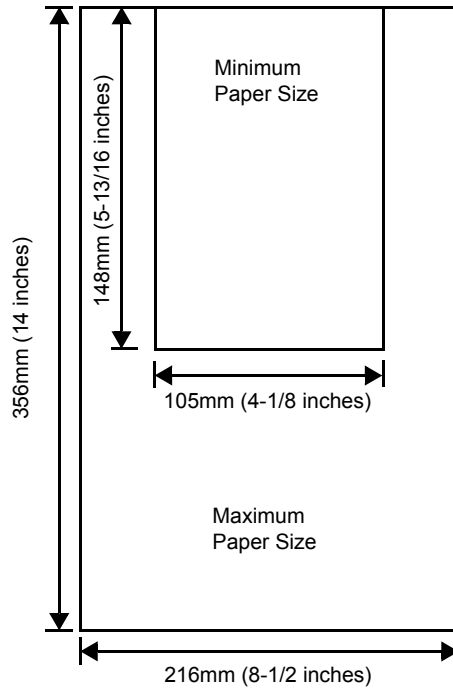
Item	Specifications
Weight	Cassette: 60 to 120 g/m ² (16 to 31.9 lb/ream) MP tray: 60 to 220 g/m ² (16 to 58.5 lb/ream)
Thickness	0.086 to 0.110mm (3.4 to 4.3 mils)
Dimensional Accuracy	±0.7 mm (±0.0276 inches)
Squareness of Corners	90±0.2°
Moisture Content	4 to 6%
Direction of Grain	Long grain
Pulp Content	80% or more

Minimum and Maximum Paper Sizes

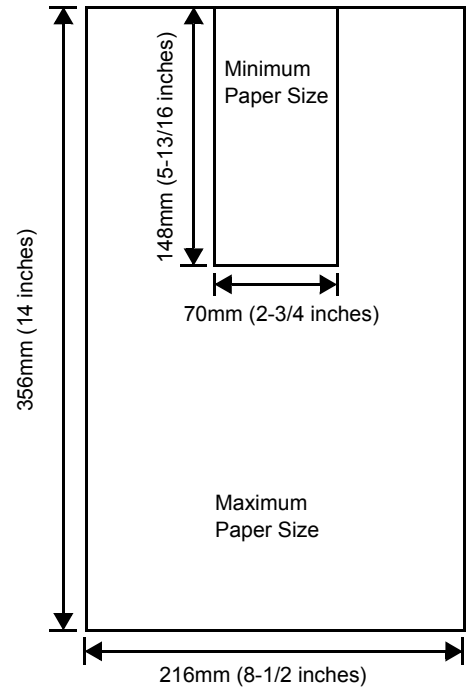
The minimum and maximum paper sizes are as follows. For non standard paper, the MP tray must be used.

For FS-2020D/3920DN/4020DN:

Paper cassette



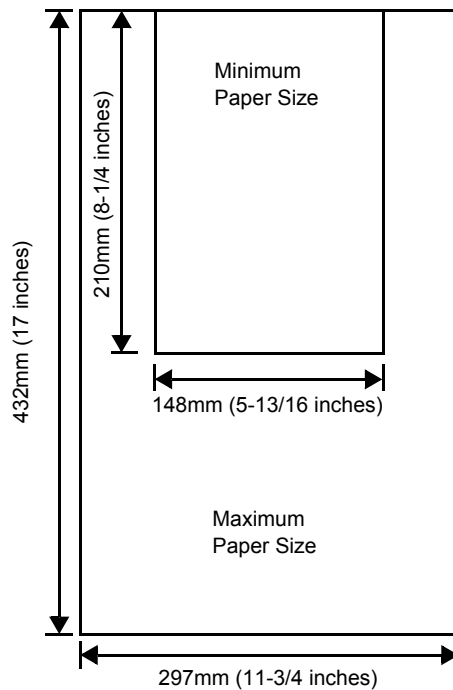
MP tray



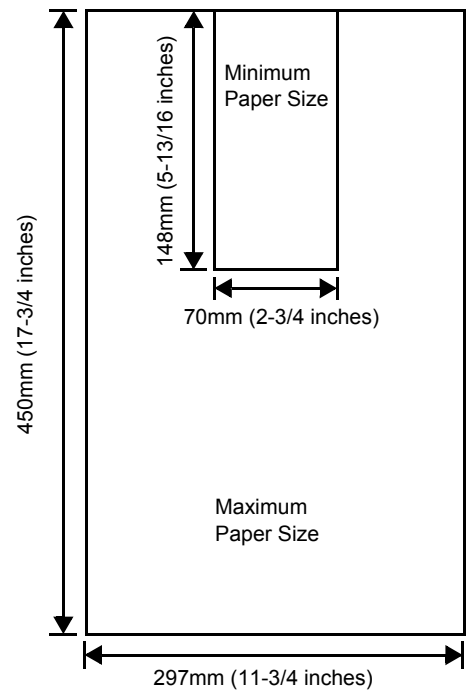
Note The minimum paper sizes of the paper cassette for FS-2020D is 140mm (5-1/2 inches) x 210mm (8-1/4 inches).

For FS-6970DN:

Paper cassette



MP tray



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 ± 0.7 mm for the length and width. The angle at the corners must be $90^\circ \pm 0.2^\circ$.

For FS-2020D/3920DN/4020DN:

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	148 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 (FS-2020D); 105 x 148 mm to 216 x 356 mm (FS-3920DN and FS-4020DN)MP Tray: 70 x 148 mm to 216 x 356 mm		

For FS-6970DN:

MP Tray	Size	Cassette or MP Tray	Size
Envelope Monarch	3-7/8 x 7-1/2 inches	Ledger	11 x 17 inches
Envelope #10	4-1/8 x 9-1/2 inches	Legal	8-1/2 x 14 inches
Envelope DL	110 x 220 mm	Letter	8-1/2 x 11 inches
Envelope #9	3-7/8 x 8-7/8 inches	ISO A3	297 x 420 mm
Envelope #6	3-5/8 x 6-1/2 inches	ISO A4	210 x 297 mm
JIS B6	128 x 182 mm	ISO A5	148 x 210 mm
Hagaki	100 x 148 mm	ISO A6	105 x 148 mm
Ofuku-Hagaki	148 x 200 mm	Envelope C4	229 x 324 mm
Youkei 2	114 x 162 mm	Envelope C5	162 x 229 mm
Youkei 4	105 x 235 mm	ISO B5	176 x 250 mm
		JIS B4	257 x 364 mm
		JIS B5	182 x 257 mm
		Executive	7-1/4 x 10-1/2 inches
		Oficio II	8-1/2 x 13 inches
		Folio	210 x 330 mm
		Statement	5-1/2 x 8-1/2 inches
		8 kai	273 x 394 mm
		16 kai	197 x 273 mm
Custom	Cassette: 148 x 210 mm to 297 x 432 mm MP Tray: 70 x 148 mm to 297 x 450 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/m²). 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:

- Cassette: 60 to 120 g/m²
- MP tray: 60 to 220/g/m²
- PF-310: 60 to 120 g/m²
- PF-315: 60 to 200 g/m²
- PF 430: 60 to 120g/m²

Paper Weight Equivalence Table

The paper weight is listed in pounds (lb) and metric grams per square meter (g/m²). The shaded part indicates the standard weight.

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

Thickness

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

The following types of special paper can be used:

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

Use paper that is sold specifically for use with copiers or printers (heat-fusing type). When using transparencies, labels, envelopes, cardstock, 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.



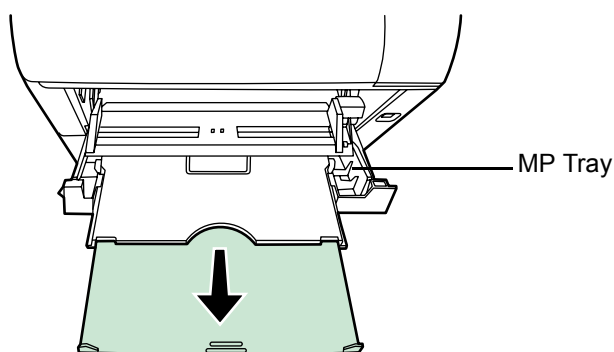
Note Before purchasing any type of special paper, test a sample on the machine and check that printing quality is satisfactory.

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.



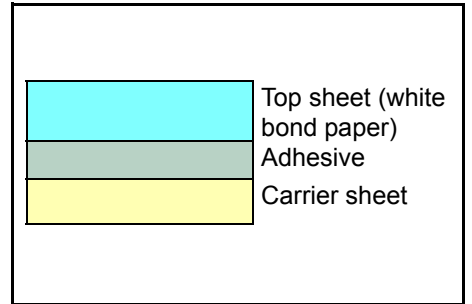
When unloading transparencies (e.g., for clearing jams), hold them carefully by the edges to avoid leaving fingerprints on them.

Labels

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

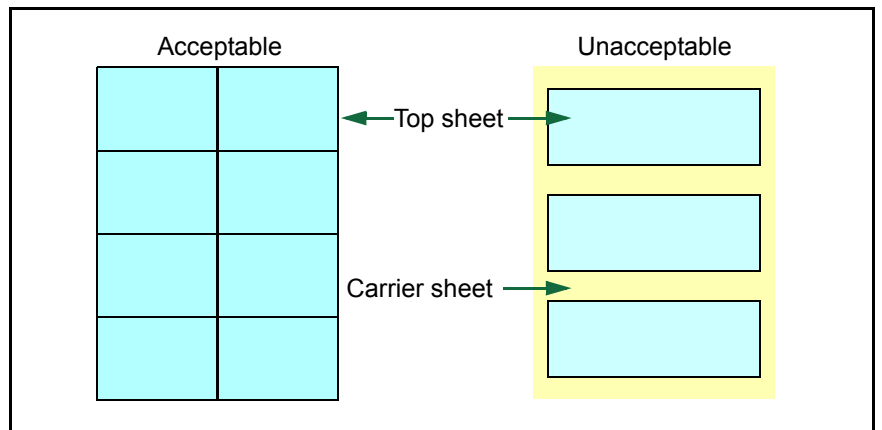
The basic rule for printing on adhesive labels is that the adhesive must never come into contact with any part of the machine. Adhesive paper sticking to the drum or rollers will damage the machine.

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.

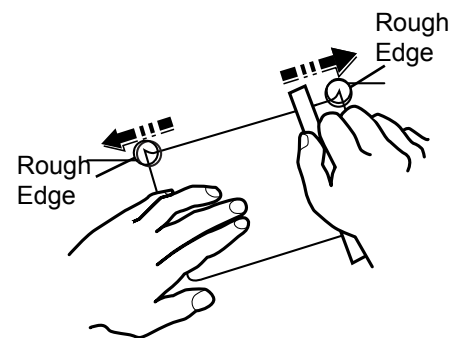


The table below lists the specifications for adhesive label paper.

Item	Specification
Weight of top sheet	44 to 74g/m ² (12 to 20 lb/ream)
Composite weight	104 to 151g/m ² (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

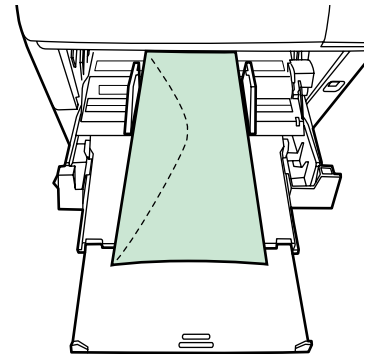


Note If you use envelopes quite often, we recommend to use optional paper feeder EF-310. (FS-3920DN/4020DN only).

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 2-7. 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.

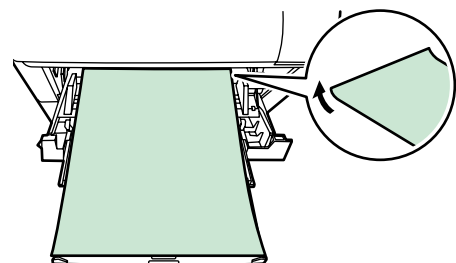
Thick Paper

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 raised up a few millimeters as shown in the illustration.



Colored Paper

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

Preprinted Paper

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

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

Recycled paper

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



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 Type	Paper source				
	MP tray	Paper Cassette	Paper Weight		Duplex path
			Range	Display in Operation Panel	
Plain	Yes	Yes	75 to 90g/m ²	Normal2	Yes
Transparency	Yes	No	Transparency	Extra Heavy	No
Preprinted	Yes	Yes	75 to 90g/m ²	Normal2	Yes
Labels	Yes	No	105 to 135g/m ²	Heavy1	No
Bond	Yes	Yes	90 to 105g/m ²	Normal3	Yes
Recycled	Yes	Yes	75 to 90g/m ²	Normal2	Yes
Vellum	Yes	No	60 to 64g/m ²	Light	No
Rough	Yes	Yes	90 to 105g/m ²	Normal3	Yes
Letterhead	Yes	Yes	90 to 105g/m ²	Normal3	Yes
Color	Yes	Yes	90 to 105g/m ²	Normal3	Yes
Prepunched	Yes	Yes	75 to 90g/m ²	Normal2	Yes
Envelope	Yes	No	170 to 220g/m ²	Heavy3	No
Cardstock	Yes	No	170 to 220g/m ²	Heavy3	No
Thick	Yes	No	170 to 220g/m ²	Heavy3	No
High quality	Yes	Yes	75 to 90g/m ²	Normal2	Yes
Custom 1 (to 8) ^a	Yes	Yes	75 to 90g/m ²	Normal2	Yes

Yes: Can be stored No: Cannot be stored

- a. 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 7-33.

Select the paper thickness. For details, refer to *Paper Weight (Setting the paper weight)* on page 7-33

Paper thickness	Range of paper weight
Light	60 to 64g/m ²
Normal 1	64 to 75g/m ²
Normal 2	75 to 90g/m ²
Normal 3	90 to 105g/m ²
Heavy 1	105 to 135g/m ²
Heavy 2	135 to 170g/m ²
Heavy 3	170 to 220g/m ²
Extra Heavy	Transparencies

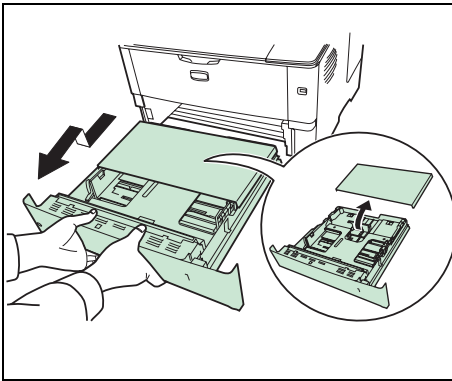
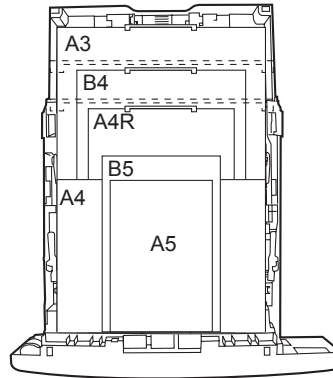
3 Loading Paper

This chapter explains the procedure for loading paper in the cassette and the MP tray.

Loading Paper into the Cassette	3-2
Loading Paper into MP (Multi-Purpose) Tray	3-6
Loading Envelopes into the MP Tray (FS-2020D/3920DN/4020DN only)	3-8

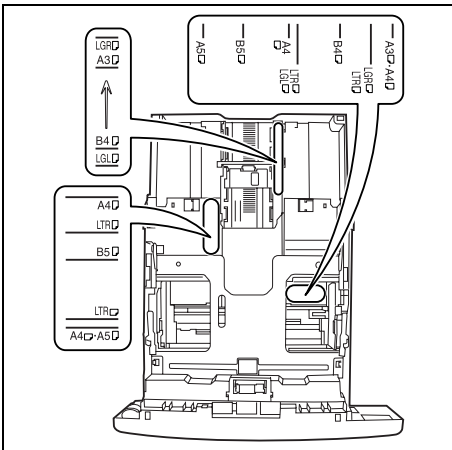
Loading Paper into the Cassette

The paper cassette can accommodate A6 (FS-2020D: A5) to A4/Letter and Legal size paper and can hold approximately 500 sheets. For FS-6970DN: The paper cassette can accommodate A5 to A3/Letter and Legal size paper and can hold approximately 250 sheets.

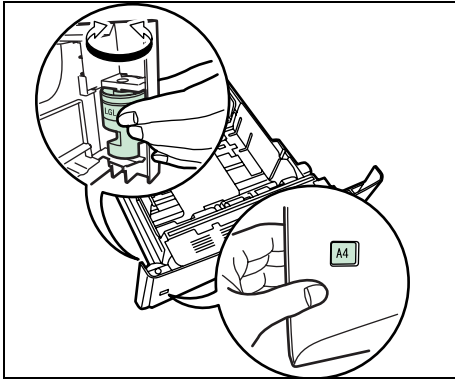


- 1 Pull the paper cassette all the way out of the printer.
For FS-6970DN : Remove the cassette cover.

IMPORTANT When pulling the cassette out of the printer, ensure it is supported and does not fall out.



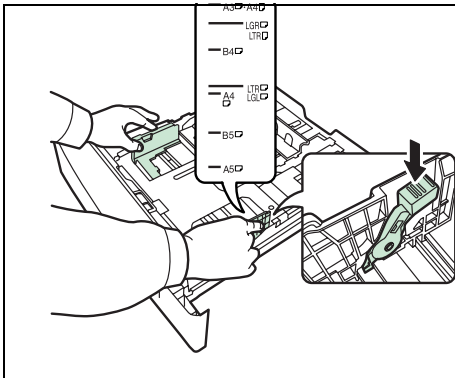
Standard paper sizes are marked on the inside of the paper cassette.



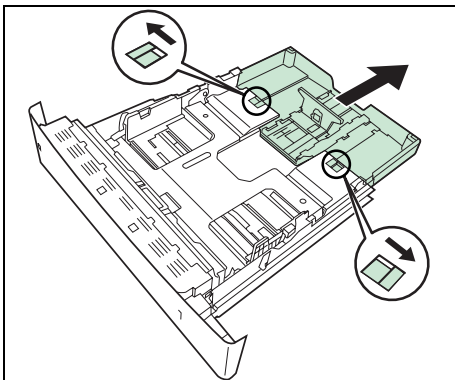
- 2** Turn the paper size dial so that the size of the paper you are going to use appears in the paper size window.



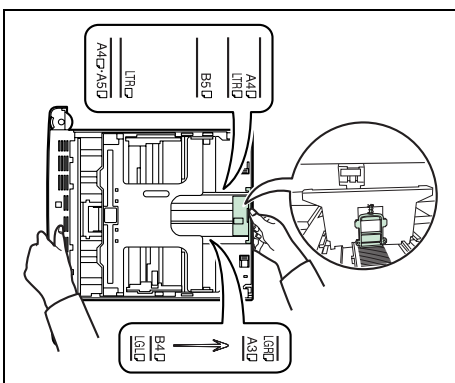
Note When the paper size dial is set to OTHER the paper size must be set into the printer on the operation panel. Refer to the *Custom Paper Size* section in the *Advanced Operation Guide*.



- 3** Pull the release lever on the left side guide and slide to the desired paper size.

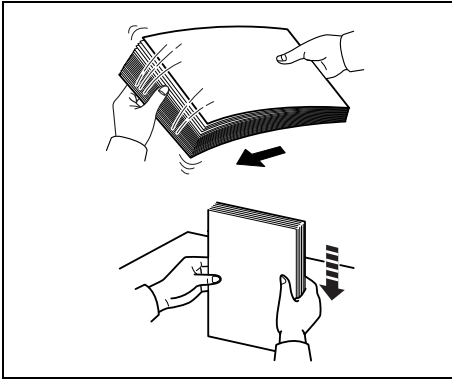


- 4** If you are going to set paper that is longer than A4, pull out the extension paper cassettes pushing the lock lever one by one and adjust them to the desired paper size.

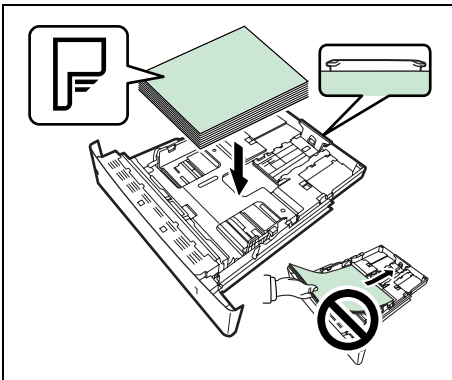


- 5** Pull the release lever and slide the paper stopper to the desired paper size.

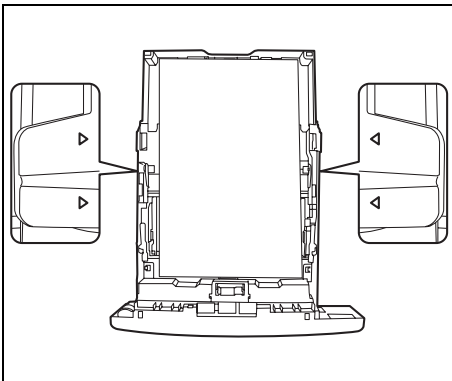
When using non-standard size paper, move the paper guides and paper stopper all the way out, insert the paper, then adjust the paper guides and paper stopper to the size of the paper. Adjust them so that they are in light contact with the paper.



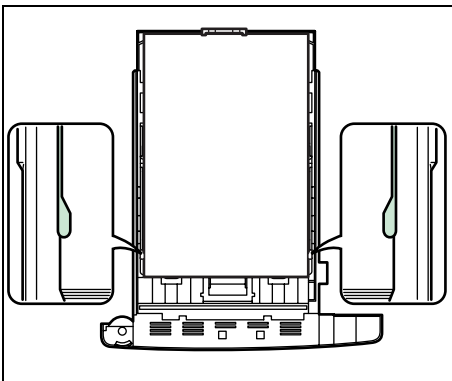
6 Fan the paper, then tap it on a level surface to avoid media jams or skewed printing.



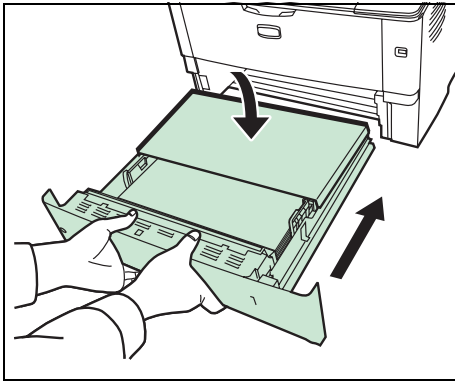
7 Place the paper in the paper cassette. Ensure the side to be printed is facing down and the paper is not folded, curled, or damaged.



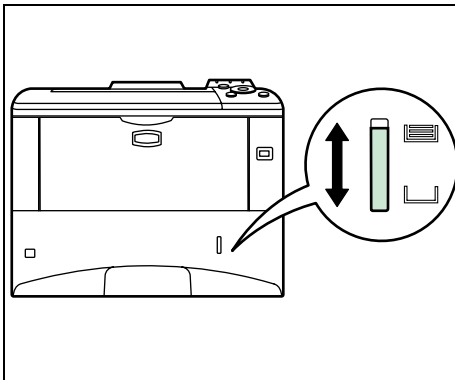
Note Do not load more paper than will fit under the load limits on the paper guides.



8 Set the stack of paper so that it is under the clips as shown.



- 9 Insert the paper cassette into the slot in the printer. Push it straight in as far as it will go.

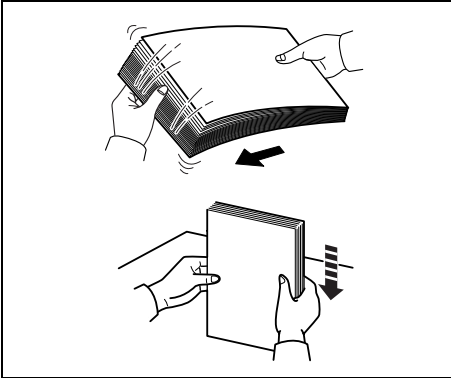


There is a paper gauge on the right side of the front of the paper cassette to indicate the remaining paper supply. When paper is exhausted, the pointer will go down to the level of (empty).

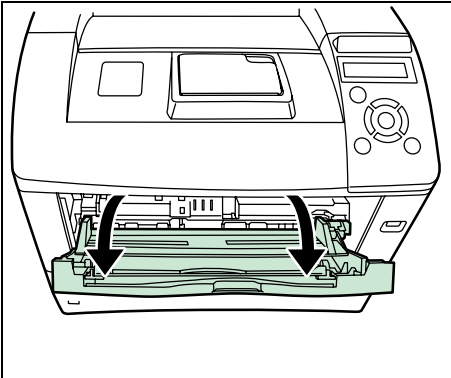
Loading Paper into MP (Multi-Purpose) Tray

The MP tray can accommodate the various paper sizes and can hold approximately 100 sheets of paper.

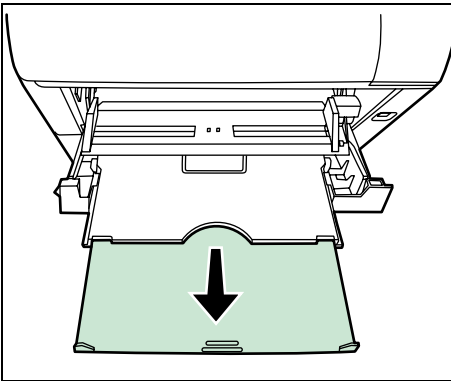
- 1 Fan the media (paper/transparencys), then tap it on a level surface to avoid media jams or skewed printing.



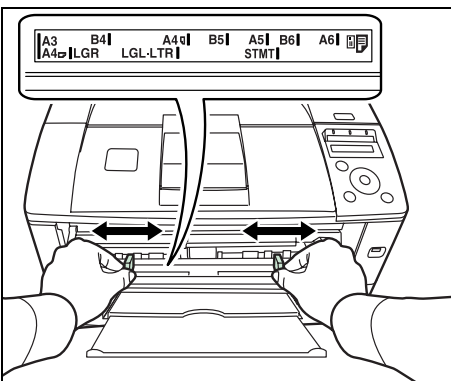
- 2 Pull the MP tray towards you until it stops.

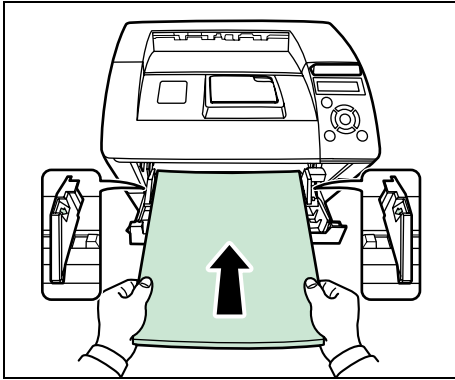


- 3 Pull out the subtray.



- 4 Adjust the position of the paper guides on the MP tray. Standard paper sizes are marked on the MP tray. For standard paper sizes, slide the paper guides to the position marked correspondingly.


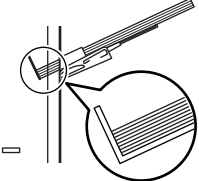
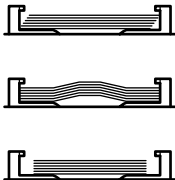
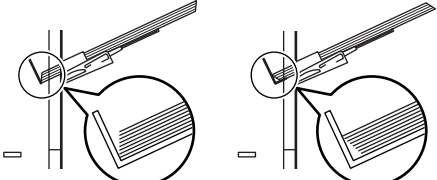




- 5** Align the paper with the paper guides and insert as far as it will go.



Note If the paper is considerably curled in one direction, for example, if the paper is already printed on one side, try to roll the paper in the opposite direction to counteract the curl. Printed sheets will then come out flat.

Correct		
Incorrect		

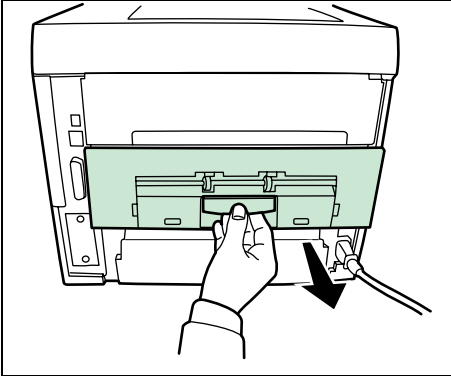
When loading envelope, place with the envelope flap closed and keep the printing side face-up. Insert envelope against the guide with the flap on the front or left side until they stop.

- 6** Set the MP tray paper size on the printer's operation panel. Refer to the *Setting MP Tray Paper Size* section in the *Advanced Operation Guide*.

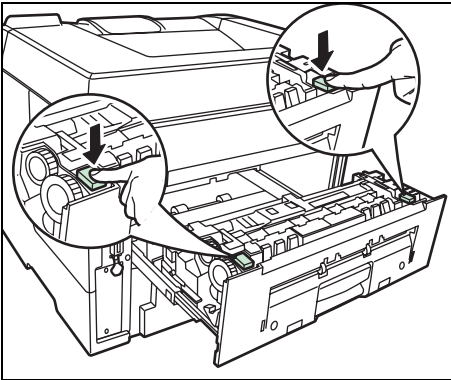
Loading Envelopes into the MP Tray (FS-2020D/3920DN/4020DN only)

To print on the envelopes, follow the instructions below. If you use envelopes quite often, we recommend to use optional paper feeder EF-310. (FS-3920DN/4020DN only)

- 1 Open the rear unit.



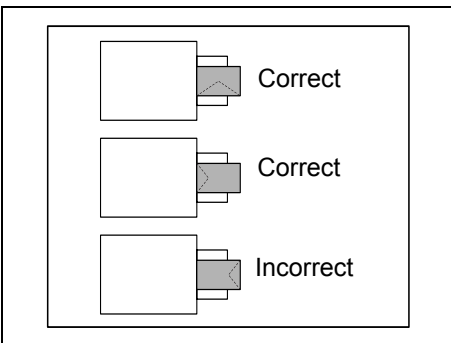
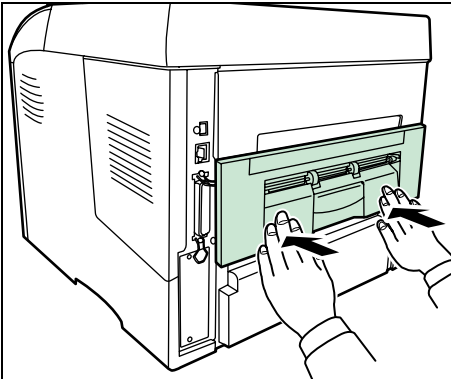
- 2 Press the green buttons to change the thickness of paper.



CAUTION The fuser unit inside the printer is hot. Do not touch it with your hands as it may result in burn injury.

- 3 Close the rear unit.

- 4 Follow the steps of Loading Paper into MP (Multi-Purpose) Tray on page 2-6.



When loading envelope, place with the envelope flap closed and keep the printing side face-up. Insert envelope against the guide with the flap on the front or left side until they stop.

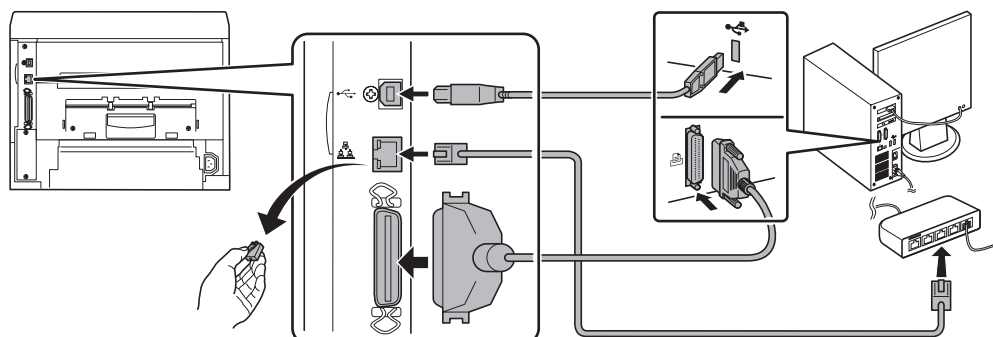
4 Connecting and Printing

This chapter explains how to start up the printer, print from your PC, and use the application software included in the CD-ROM.

Connections	4-2
Changing Network Interface Parameters	4-4
Printing a Network Interface Status Page	4-12
Installing the Printer Driver	4-13
Printing from Application Software	4-19
Status Monitor	4-20
Uninstalling Software (Windows PC)	4-24

Connections

This section explains how to start up the printer. The figure shown below is the overviews of connections between the printer and the computer.



Connecting the USB Cable

Follow the steps as below for connecting the USB cable.

- 1 Connect the USB cable (not included) to the USB interface connector at the rear of this machine.



Note Use a USB cable with a rectangular Type A plug and a square Type B plug. The USB cable should be shielded and no longer than 5 meters (16 feet) long.

- 2 Connect the other end of the USB cable to the computer's USB interface connector.

Connecting the Network Cable

Follow the steps as below for connecting the network cable.

- 1 Connect the shielded network cable (not included) to the computer and the hub (concentrator).
- 2 Remove the cap at the rear of this machine and connect the other side of the network cable to the network interface connector of the machine and the hub.

Connecting the Parallel Cable

Follow the steps as below for connecting the parallel cable.

- 1 Connect the parallel cable to the parallel interface connector at the rear of this machine.



Note Use a parallel printer cable that complies with IEEE 1284 standards. For optimum performance, install the printer close to the PC. The connection cable should be shielded and no longer than 3 meters (10 feet) long. The cable is sold separately.

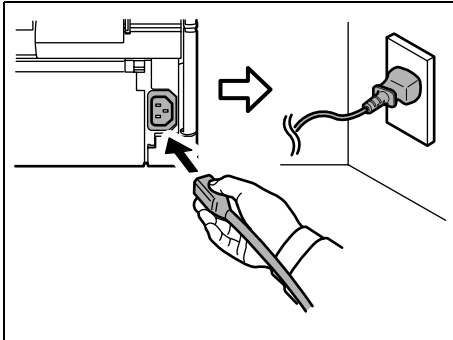
- 2 Connect the other side of the parallel cable to the computer's interface connector at the rear of this machine.

Connecting the Power Cord

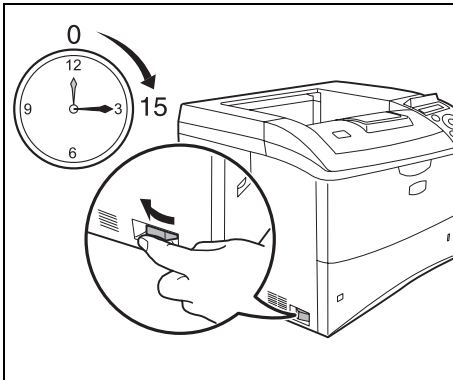
Install the printer close to an AC wall outlet. If an extension cord is used, the total length of the power cord plus extension should be 5 meters (16 feet) or less.



Note Ensure the printer's power switch is off. Only use the power cord supplied with the printer.



- 1** Connect the power cord to the Power Cord Connector at the rear of the printer.



- 2** Connect the other end of the power cord to a power outlet.
- 3** Press the Power Switch to On (|). The printer begins to warm up.

IMPORTANT If you install the starter toner container and switch on the power, after a moment the message `Please wait(Adding toner)` is displayed. When the printer is first switched on after toner installation, there will be a delay of approximately 15 minutes before the printer gets ready to print. Once the **[Ready]** indicator lights, printer installation is complete.

Changing Network Interface Parameters

This printer supports TCP/IP, TCP/IP (IPv6), NetWare, AppleTalk, IPP, SSL Server, IPSec protocols, and Security Level. For more information, refer to the *Advanced Operation Guide*.



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

TCP/IP, TCP/IP (IPv6) settings

- 1 Press [MENU].
- 2 Press Δ or ∇ repeatedly until Network > appears.

```
Network >
```

- 3 Press \triangleright . Each time you press Δ or ∇ , the selection changes. Refer to the explanations below when specifying the settings.

```
>TCP/IP  
Off
```

Set this item to On when you connect to a network using TCP/IP. Submenu has items including DHCP, IP Address, Subnet Mask, Gateway and Bonjour.

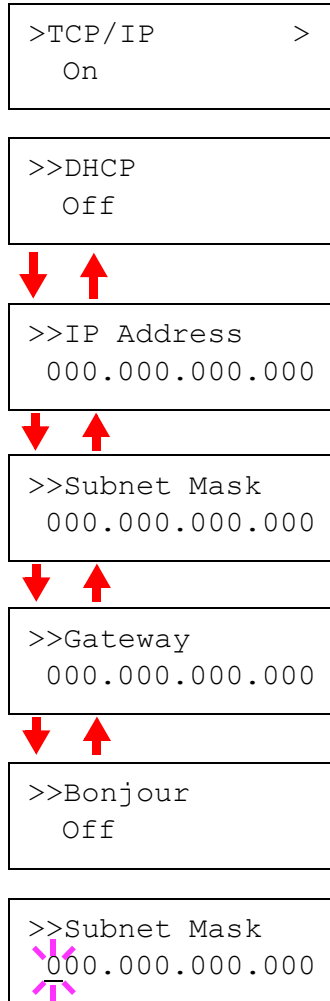


```
>TCP/IP (IPv6)  
Off
```

Set this item to On when you connect to a network using TCP/IP (IPv6). Submenu has items including RA (Stateless) and DHCPv6.

TCP/IP

This section describes how to enable the TCP/IP protocol.



1 If `TCP/IP` is set to `Off`, use Δ or ∇ to select `On` and press **[OK]**.

2 Press \triangleright . Each time you press Δ or ∇ , the selection changes.

3 Display the item you want to set and press **[OK]**. A blinking question mark (?) appears while you are setting `DHCP` and `Bonjour`. A blinking cursor () appears while you are setting `IP Address`, `Subnet Mask` and `Gateway`.

4 Press Δ or ∇ to select `On` or `Off` as the setting for `DHCP` and `Bonjour`.

For the `IP Address`, `Subnet Mask` and `Gateway` settings, press Δ or ∇ to move the blinking cursor to the number you want to change (000 to 255). Use \triangleleft and \triangleright to move the cursor right and left.



Note Check with your network administrator for the network address settings.

5 Press **[OK]**.

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

TCP/IP (IPv6)

This section describes how to enable the TCP/IP (IPv6) protocol.

```
>TCP/IP (IPv6) >  
  On
```

1 If `TCP/IP (IPv6)` is set to `Off`, use Δ or ∇ to select `On` and press **[OK]**.

```
>>RA (Stateless)  
  Off
```

2 Press \triangleright . Each time you press Δ or ∇ , the selection changes.



```
>>DHCPv6  
  Off
```

3 Display the item you want to set and press **[OK]**. A blinking question mark (?) appears while you are setting `RA (Stateless)` and `DHCPv6`.

```
>>RA (Stateless)  
 ?Off
```



```
>>DHCPv6  
 ?Off
```

4 Press Δ or ∇ to select `On` or `Off` as the setting for `RA (Stateless)` and `DHCPv6`.



Note Check with your network administrator for the network address settings.

5 Press **[OK]**.

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

NetWare, AppleTalk, IPP, SSL Server, IPSec and Security Level settings

1 Press **[MENU]**.

2 Press Δ or ∇ repeatedly until `Security >` appears.

```
Security >
```


-
- 3** Press \triangleright . Each time you press \triangle or ∇ , the selection changes. Refer to the explanations below when specifying the settings.

ID
—



Password
—



If you are using NetWare, AppleTalk, IPP, SSL Server or IPSec to connect to a network, you must enter an administrator ID and press **[OK]**. The default setting is the numeric part of your printer's model name. If you use FS-2020D, enter "2020".

If you are using NetWare, AppleTalk, IPP, SSL Server or IPSec to connect to a network, you must enter an administrator password and press **[OK]**. The default setting is the numeric part of your printer's model name. If you use FS-2020D, enter "2020".

>NetWare >
On



>AppleTalk
On



>IPP
Off



>SSL Server
Off



>IPSec
Off

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

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

Set this item to On when you connect to a network using IPP.

Set this item to On when you connect to a network using SSL Server. Submenu has items including DES, 3DES, AES, IPP over SSL and HTTPS.

Set this item to On when you connect to a network using IPSec.

Continued on next page.



```
>Security Level
  High
```

Set the Security Level to High.

NetWare

This section explains the procedure for enabling NetWare.

```
>NetWare      >
  On
```

1 Enter the administrator ID and password. Then, if NetWare is set to Off, use Δ or ∇ to select On and press **[OK]**.

```
>>Frame Type
  Auto
```

2 Press \triangleright .

```
>>Frame Type
?Auto
```

3 Press **[OK]**. A blinking question mark (?) appears. Each time you press Δ or ∇ , the selection changes.



```
>>Frame Type
?802.3
```



```
>>Frame Type
?Ethernet-II
```



```
>>Frame Type
?802.2
```



```
>>Frame Type
?SNAP
```

4 Display the item you want to set and press **[OK]**.

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

AppleTalk

This section explains the procedure for enabling AppleTalk.

```
>AppleTalk
  On
```

1 Enter the administrator ID and password. Then, if `AppleTalk` is set to `Off`, use Δ or ∇ to select `On`.

```
>AppleTalk
?On
```

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

3 Press **[OK]** again.

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

IPP

This section explains the procedure for enabling IPP.

```
>IPP
  On
```

1 Enter the administrator ID and password. Then, if `IPP` is set to `Off`, use Δ or ∇ to select `On`.

```
>IPP
?On
```

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

3 Press **[OK]** again.

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

SSL Server

This section explains the procedure for enabling SSL Server.

```
>SSL Server
  On
```

- 1 Enter the administrator ID and password. Then, if `SSL Server` is set to `Off`, use Δ or ∇ to select `On` and press **[OK]**.

```
>>DES
  Off
```

- 2 Press \triangleright . Each time you press Δ or ∇ , the selection changes.



```
>>3DES
  Off
```



```
>>AES
  Off
```



```
>>IPP over SSL
  Off
```



```
>>HTTPS
  Off
```

```
>>DES
  ?Off
```

- 3 Display the item you want to set and press **[OK]**. A blinking question mark (?) appears.

- 4 Select `On` or `Off` using Δ or ∇ .

- 5 Press **[OK]**.

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

IPSec

This section explains the procedure for enabling IPSec.

```
>IPSec
  On
```

- 1 Enter the administrator ID and password. Then, if `IPSec` is set to `Off`, use Δ or ∇ to select `On`.

```
>IPSec
  ?On
```

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

- 3 Press **[OK]** again.

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

Security Level

```
>Security Level  
High
```

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

Printing a Network Interface Status Page

You can print out a status page for the network interface. The network status page shows the network addresses, and other information under various network protocols about the network interface.

Adjust/Maintenance

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

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 Δ or ∇ repeatedly until `Adjust/Maintenance >` appears.

```
Adjust/
Maintenance >
```

3 Press \triangleright while `Adjust/Maintenance >` is displayed.

4 Press Δ or ∇ repeatedly until `>Service >` appears.

5 Press \triangleright .

6 Press Δ or ∇ repeatedly until `>>Print Network Status Page` appears.

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

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

8 Press **[OK]**. `Processing` appears and a status page is printed out.

9 When printing ends, the display returns to `Ready`.

Installing the Printer Driver

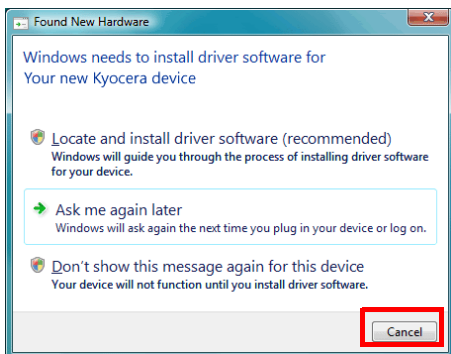
According to the instructions of the Installation Guide, connect the PC to the printer and turn on them to install the printer driver. For more information on printer driver, refer to the *KX Driver User Guide* in the CD-ROM.

Installing the Printer Driver on Windows PC

This section explains how to install the printer driver in Windows Vista.



Note To install the printer driver, you must log on with administrator privilege.



- 1 Ensure the printer is plugged in and connected to the computer's USB or Network port before installing software from the CD-ROM.



Note If a Plug and Play window like that shown at left appears, click **Cancel**.

- 2 Insert the CD-ROM (Product Library) into the CD-ROM drive. If **AutoPlay** screen appears, click **Run Setup.exe**. The Notice screen appears.



Note If the installation program fails to launch, use Windows Explorer to access the CD-ROM and select Setup.exe.



- 3 Select **View License Agreement** to read the information and select **Accept** to proceed.



- 4 Click **Install Software**. Installation Method screen appears.



Note In Windows XP, click **Install Software** to start the Installation wizard. Click **Next** to display the Installation Method screen.

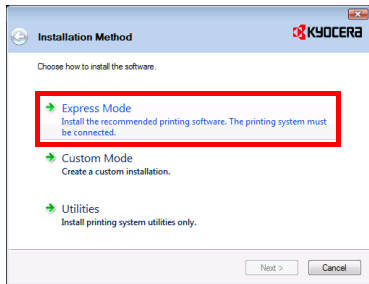
- 5 Select Express Mode or Custom Mode as the installation method.
 - Express Mode: If the printer is connected via USB or a network and is turned on, the installer detects the printer. Select Express Mode to perform a standard installation.

- Custom Mode: This option allows you to select items to be installed as required and to specify the port.

Proceed the section below according to the installation method.

Express Mode

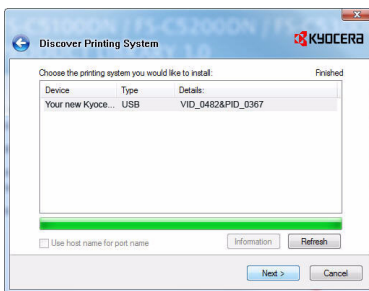
When selecting **Express Mode**, printer driver and fonts are installed. After installing with this mode, the other utilities can be added using **Custom Mode**.



- 1 On Installation Method screen, click **Express Mode**. The installer searches the connected printers on Discover Printing System screen. If no printer is discovered, ensure the printer is plugged in and connected to the computer's USB or Network port, then check **Refresh** to search printers again.



Note If **Found New Hardware** window appears, click **Cancel**.



- 2 Select the printer you want to install, and click **Next**.

- 3 Confirm the settings and click **Install**. Printer driver installation starts.



Note During any point in the installation process, if the Windows Security warning dialog box appears, click **Install this driver software anyway**.

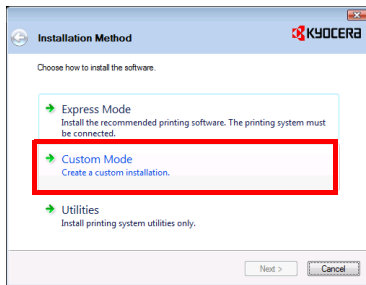
If the Hardware Installation screen appears in Windows XP, click **Continue Anyway**.

- 4 Installation Completed screen appears. Click **Finish** to return to the main menu.

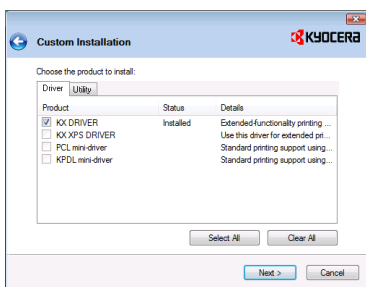
Custom Mode

When selecting **Custom Mode**, printer port and utilities are changed as necessary.

- 1 On Installation Method screen, click **Custom Mode**.



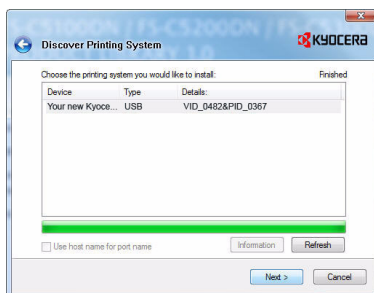
- 2 On Driver tab and Utility tab of the Custom Installation screen, select the printer driver and utilities you want to install, and click **Next**.



- 3 Select the printer you want to install, and click **Next**.



Note When you want to add or edit the port connected to the printer, select the printer and **Custom Select**, then click **Next**. **Add Standard TCP/IP Printer Port Wizard** appears. Follow the steps in the wizard to add or edit the port.



- 4 Confirm the settings and click **Install**. Printer driver installation starts.



Note During any point in the installation process, if the Windows Security warning dialog box appears, click **Install this driver software anyway**.

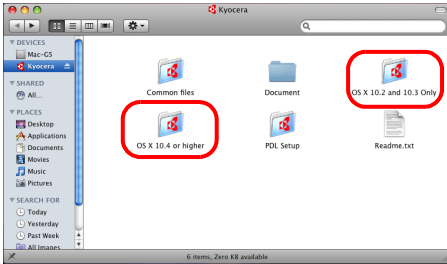
If the Hardware Installation screen appears in Windows XP, click **Continue Anyway**.

- 5 Installation Completed screen appears. Click **Finish** to return to the main menu.

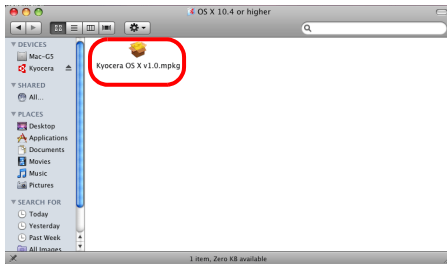
Installing the Printer Driver on Mac OS

This section explains how to install the printer driver in Mac OS.

- 1 Turn on the printer and the Macintosh.
- 2 Insert the included CD-ROM (**Product Library**) into the CD-ROM drive.
- 3 Double-click the CD-ROM icon.
- 4 Double-click either **OS X 10.2 and 10.3 Only** or **OS X 10.4 or higher** depending on your Mac OS version.



- 5 Double-click **Kyocera OS X x.x.**



- 6 The printer driver installation program starts up.



- 7 Choose **Select Destination**, **Installation Type** and then install the printer driver as directed by the instructions in the installation software.

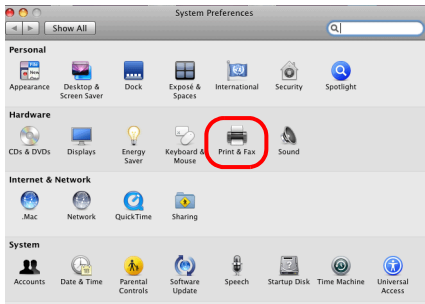


Note In addition to **Easy Install**, the **Installation Type** options include **Custom Install**, which allows you to specify the components to be installed.

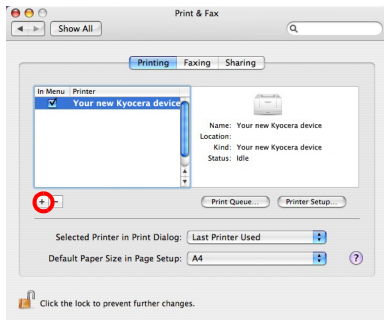
IMPORTANT In the Authenticate screen, enter the name and password used to log in to the operating system.

This completes the printer driver installation. Next, specify the print settings.

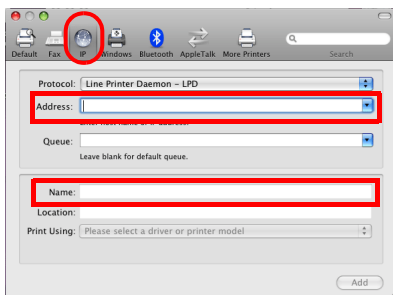
If an IP or AppleTalk connection is used, the settings below are required. If a USB connection is used, the printer is automatically recognized and connected.



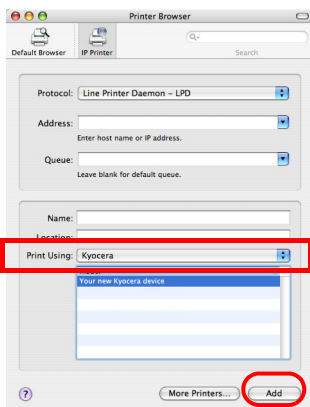
8 Open **System Preferences** and click **Print & Fax**.



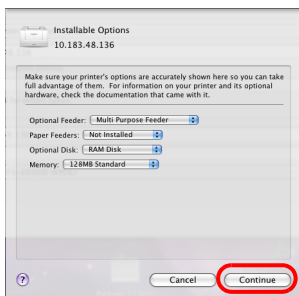
9 Click the plus symbol (+) to add the installed printer driver.



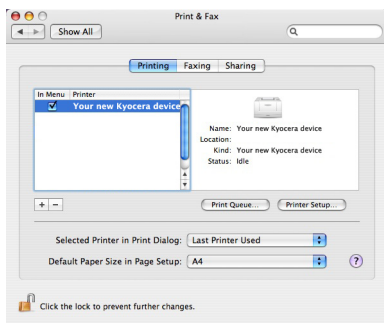
10 Click the IP icon for an IP connection and then enter the IP address and printer name. When you click the AppleTalk icon for an AppleTalk connection, enter the printer name.



11 Select the installed printer driver and click **Add**.



12 Select the options available for the printer and click **Continue**.



13 The selected printer is added. This completes the printer setup procedure.

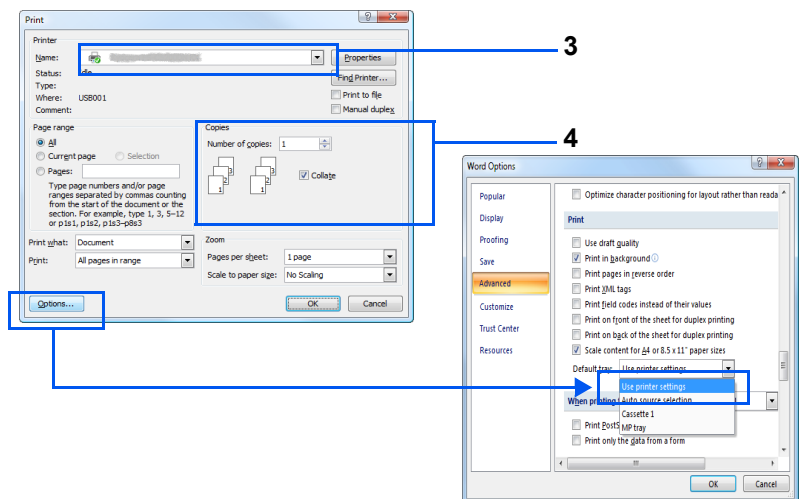
Printing from Application Software

The steps required to print a document created with an application are explained below. You can select the printing paper size and output destination.



Note You can also select the various settings by clicking **Properties** to open the Properties dialog box.

- 1 Load the paper required into the paper cassette.
- 2 From the application **File** menu, select **Print**. The Print dialog box appears.
- 3 Click the drop-down list of printer names. All the installed printers are listed. Click the name of the printer.
- 4 Use Number of copies to enter the number of copies required. Up to 999 copies can be printed. For Microsoft Word, we recommend that you click **Options and specify Use printer settings** for the Default tray.



- 5 To start printing, click **OK**.

Status Monitor

The *Status Monitor* monitors the printer status and provides an ongoing reporting function. It also allows you to specify and modify settings for printers not included in the KX Driver.

The *Status Monitor* is installed automatically during KX Driver installation.

Accessing the Status Monitor

Use either of the methods listed below to launch the Status Monitor.

- Launch when printing starts:
When you specify a printer and start a print job, one Status Monitor is launched for each printer name. If Status Monitor startup is requested from multiple printers, Status Monitors are launched for each printer that issues the request.
- Launch from the KX Driver properties:
Click **Print Settings** in Properties dialog box. Select Advanced tab and click **Status Monitor** to launch the Status Monitor.

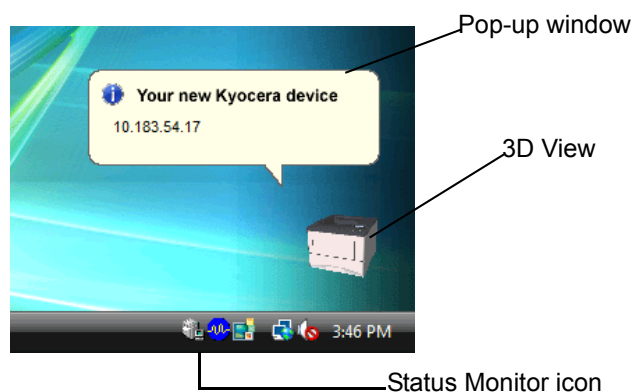
Exiting the Status Monitor

Use either of the methods listed below to exit the Status Monitor.

- Exit manually:
Right-click the Status Monitor icon in the taskbar and select **Exit** in the menu to exit the Status Monitor.
- Exit automatically:
The Status Monitor automatically shuts down after 5 minutes if it is not being used.

Screen Overview

The screen overview of the Status Monitor is as follows.



Pop-up window

If an information notification event occurs, a pop-up window appears. This window only appears when the 3D View is open on the desktop.

3D View

This shows the status of the monitored printer as a 3D image. You can choose whether to show or hide the 3D view from the menu displayed when you right-click the Status Monitor icon.

If an information notification event occurs, the 3D view and an alert sound are used to notify you. For information on the sound notification settings, refer to *Status Monitor Settings* on page 4-22.

Status Monitor icon

The Status Monitor icon is displayed in the taskbar notification area when the Status Monitor is running. When you position the cursor over the icon, the printer name appears.

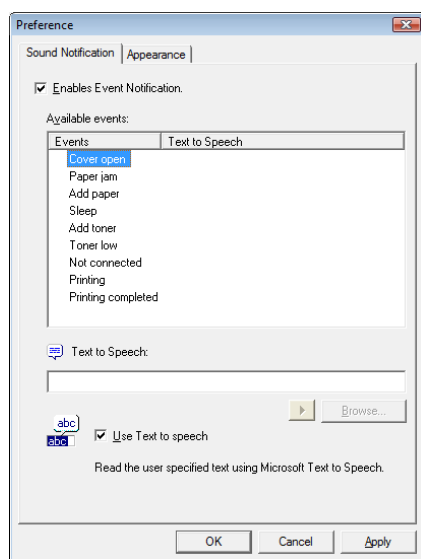
Status Monitor Settings

The Status Monitor has two tabs to configure its settings. Use the **Preference** option to set up the Status Monitor.

Sound Notification Tab

The Event Notification tab contains the following items.

IMPORTANT To confirm the settings on Sound Notification tab, the computer requires the sound capabilities such as sound card and speaker.



Enable Event Notification

Select to enable or disable monitoring the events in Available events.

Sound file

A sound file can be selected if you require an audible notification. Click **Browse** to search for the sound file.

Use Text to speech

Select this check box to enter text you would like to hear played for events. Although a sound file is unnecessary, this function is applicable for Windows XP and Windows Vista.

To use this function, follow these steps.

- 1 Select **Enable Event Notification**.
- 2 Select an event or sound file to use with the text to speech function in *Available events*.
- 3 Click Browse to notify the event by sound file.



Note The available file format is WAV.

Select **Use Text to speech** to speech the text entered in *Text to speech* box when an event occurred.

- 4 Click to confirm the sound or text is played correctly.

Appearance Tab

The Appearance tab contains the following items.

Enlarge window

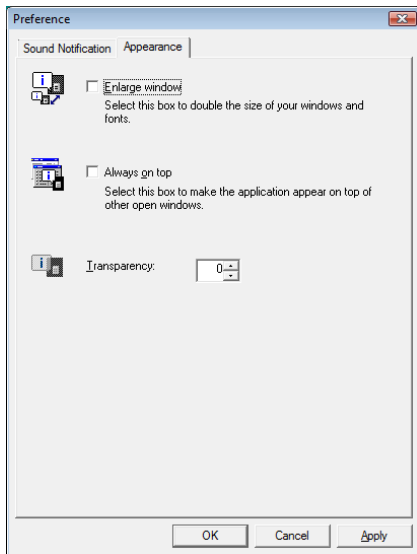
Doubles the size of the Status Monitor window.

Always on top

Positions the Status Monitor in front of other active windows.

Transparency

Displays the Status Monitor as a transparent window.



Uninstalling Software (Windows PC)

The software can be uninstalled (removed) using the CD-ROM (Product Library) supplied with the printer.

IMPORTANT On Macintosh computers, because the printer settings are specified using a PPD (PostScript Printer Description) file, the software cannot be uninstalled using the CD-ROM (Product Library).

- 1** Exit all active software applications.
- 2** Insert the enclosed CD-ROM (Product Library) into the CD-ROM drive.
- 3** Following the procedure used to install the printer driver, click **Remove Software**. The Kyocera Uninstaller wizard appears.
- 4** Select the software package to remove.
- 5** Click Uninstall.



Note In Windows Vista, Remove Driver and Package screen appears. Select **Remove driver and driver package**, and click **OK**.

The uninstaller starts.

- 6** When Uninstall complete screen appears, click **Next**.
- 7** Select whether you restart your computer or not, click **Finish**.

5 Maintenance

This chapter explains how to replace the toner container and clean the printer.

General Information	5-2
Toner Container Replacement	5-2
Cleaning the Printer	5-7
Prolonged Non-Use and Moving of the Printer	5-8

General Information

This chapter describes basic maintenance tasks you can perform for the printer. You can replace the following component according to the printer's display:

- Toner Kits
- Waste Toner Box

Also, the internal parts need periodic cleaning.



Note Information Collection on Memory Chips - The memory chip attached to the toner container is designed to improve convenience for the end user; to support the recycling operation of empty toner containers; and to gather information to support new product planning and development. The information gathered is anonymous - it cannot be associated to any specific individual and the data is intended to be used anonymously.

Toner Container Replacement

Frequency of toner container replacement

The life of the toner containers depends on the amount of toner required to accomplish your printing jobs. According to ISO/IEC 19798 and EcoPrint switched off the toner container can print as follows (A4/Letter paper is assumed): 20,000 pages (FS-4020DN); 15,000 pages (FS-3920DN/FS-6970DN); 12,000 pages (FS-2020D).

You can print a status page to check how much toner remains in the toner container. The Toner Gauge in the consumables status section on the status page shows a progress bar, which roughly represents how much toner is left in the toner container.

First Toner Container

The toner container packed with the new printer has to fill up the system when operating the first time. Therefore only 50% of the first toner kits can be used for printing. The toner container supplied with the printer will print approximately:

FS-2020D: 6.000 pages

FS-3920DN/FS-6970DN: 7.500 pages

FS-4020DN : 10.000 pages.

Toner Kits

For best results, we recommend that you only use genuine Kyocera Parts and Supplies. Should any damage be caused by the application of a toner other than the original. Kyocera Mita toner, then this damage is excluded from the guarantee.

A new toner kit contains the following items:

- Toner Container
- Plastic waste bag for old toner container and waste toner box
- Waste toner box
- Installation Guide



Note Do not remove the toner container from the carton until you are ready to install it in the printer.

Understanding Messages Requesting Toner Container Replacement

The printer displays messages at two stages of toner usage. This message is automatically alternated with the other printer message (such as *Ready*):

- When the printer becomes low on toner, the printer displays the message *Toner low* as the first caution. Note the replacement is not always necessary at this stage.
- If you ignore the above message and continue printing, the printer displays the message *Replace toner* - just before the toner is used up. The toner container must be replaced immediately. After the cleaning is finished, however, the message does not automatically change to *Ready*. To restart printing, you must press [GO] and make the printer ready.

In either case, replace the toner container, refer to *Replacing the Toner Container* on page 5-3.

Replacing the Toner Container

This section explains how to replace the toner container. When replacing the toner container, always replace the waste toner box at the same time. If this box is full, the printer may be damaged or contaminated by the waste toner that may spill over the box.



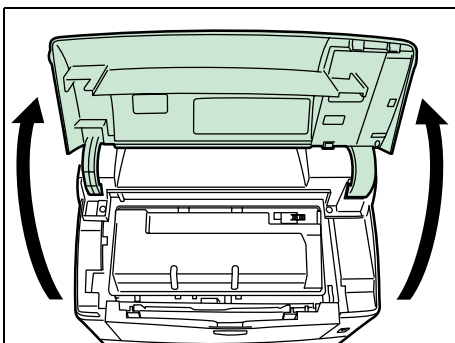
CAUTION Do not attempt to incinerate the Toner Container. Dangerous sparks may cause burns.

IMPORTANT During toner container replacement, temporarily move storage media and computer supplies (such as floppy disks) away from the toner container. This is to avoid damaging media by the magnetism of toner.

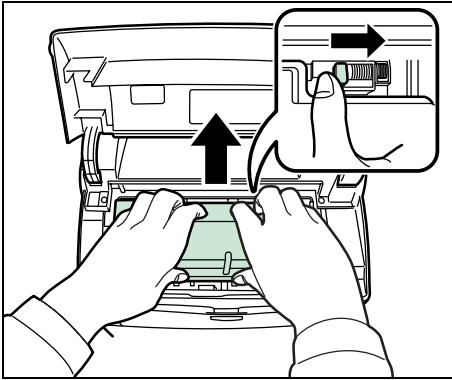
IMPORTANT Kyocera Mita Corporation is not liable against any damages or problems arising from the use of toner containers other than those designated as original Kyocera toner containers. For optimum performance, it is also recommended to use only the Kyocera toner containers which are specifically intended for use in your country or region. If the toner container for another destinations is installed, the printer will stop printing.



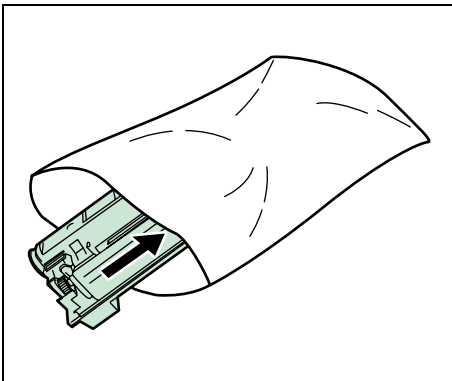
Note You do not have to turn printer power off before starting the replacement. Any data that may be processing in the printer will be deleted if you turn the printer power off.



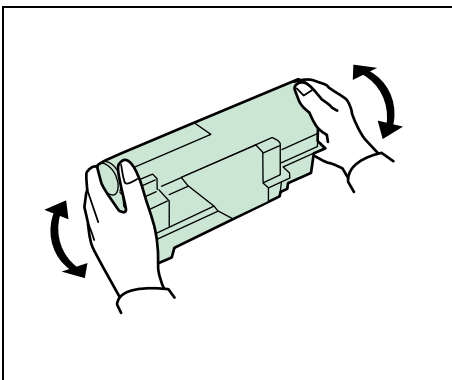
- 1 Open the top cover.



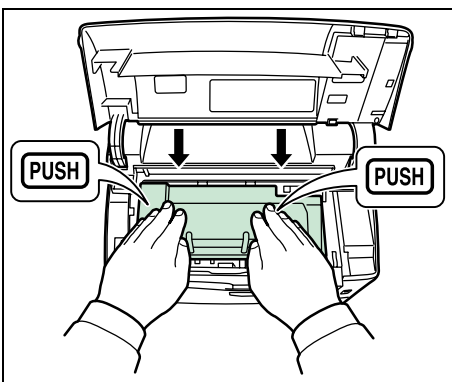
- 2** Push lock lever to the right and pull out the toner container.



- 3** Put the old toner container in the plastic bag (contained in the toner kit) and discard it later according to the local code or regulations for waste disposal.



- 4** Take the new toner container out of the toner kit.
5 Shake the new toner container at least 10 times as shown in the figure in order to distribute the toner evenly inside the container.
6 Remove the label from the toner container.

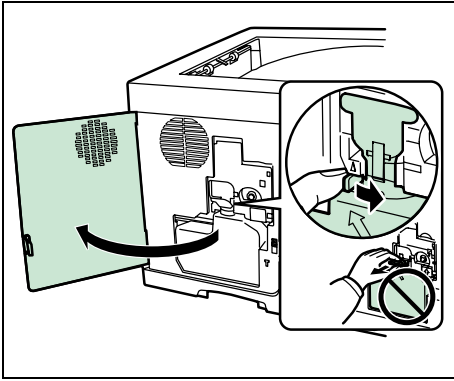


- 7** Set the new toner container in the printer and push down on the top of the toner container to install it firmly in place as shown at the left.
8 Close the top cover.

Proceed to the next section.

Replacing the Waste Toner Box

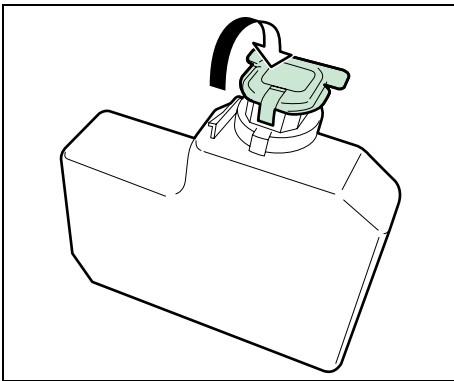
When replacing the toner container, the used waste toner box in the printer should also be replaced with the new one from the new toner kit. A new waste toner box is included with the toner kit. The printer will not operate without replacing the waste toner box.



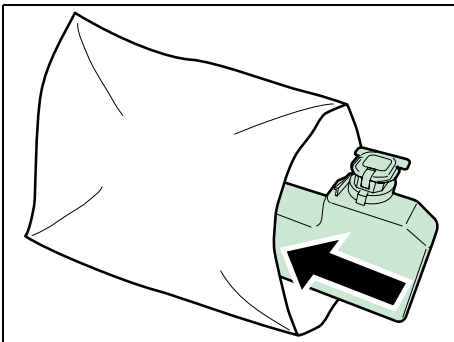
- 1 Open the left cover. While holding the waste toner box, press the lock lever and then gently remove the waste toner box.



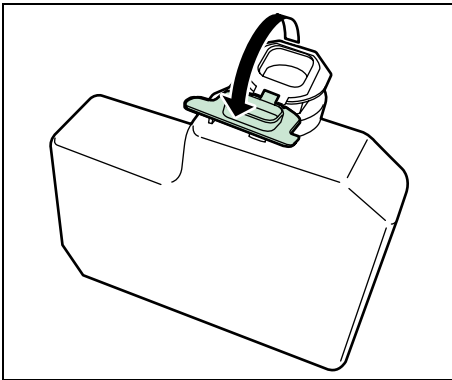
Note Remove the waste toner box as gently as possible so as not to scatter the toner inside. Do not let the opening of the waste toner box face downward.



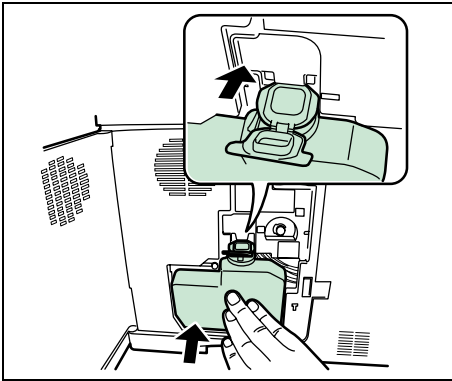
- 2 Close the cap to the old waste toner box after removing the box from the printer.



- 3 To prevent toner from spilling, put the old waste toner box in the plastic bag (contained in the toner kit) and discard it later according to the local code or regulations for waste disposal.



4 Open the cap of the new waste toner box.



5 Insert the new waste toner box as shown at the left. When the box is set correctly, it will snap into place.

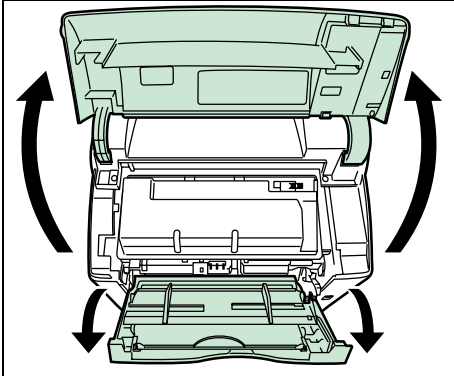
6 Make sure that the waste toner box is correctly inserted and close the left cover.

After replacing the toner containers and the waste toner box, clean the internal parts. For instructions, refer to *Cleaning the Printer* on page 5-7.

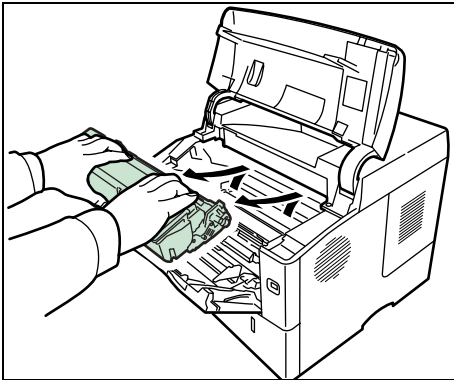
Cleaning the Printer

To avoid print quality problems, the interior of the printer must be cleaned with every toner container replacement.

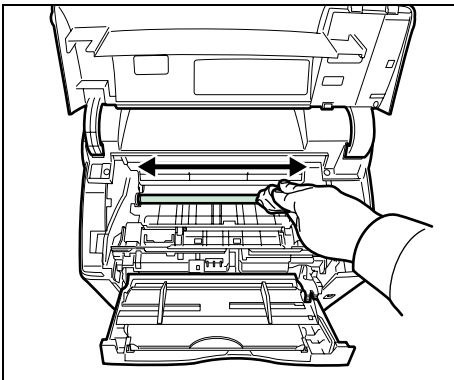
- 1 Open the top cover and MP tray.



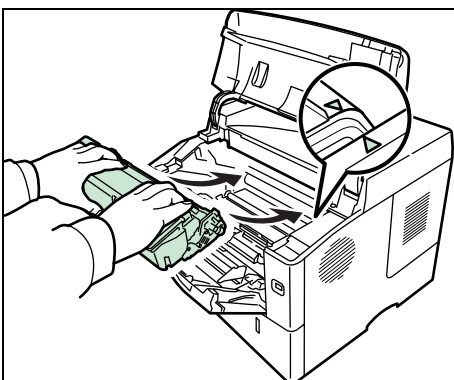
- 2 Lift the developer unit together with the toner container out of the printer.



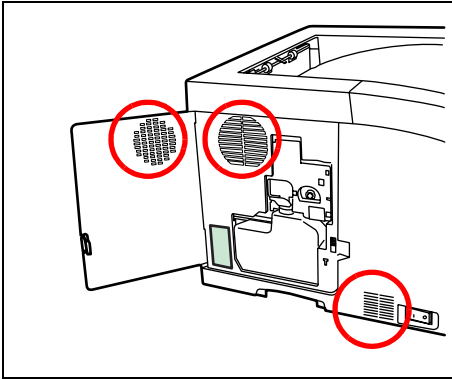
- 3 Use a lint free cloth to clean dust and dirt away from the registration roller (metal).



- 4 Insert the developer unit together with the toner container, back into the machine.

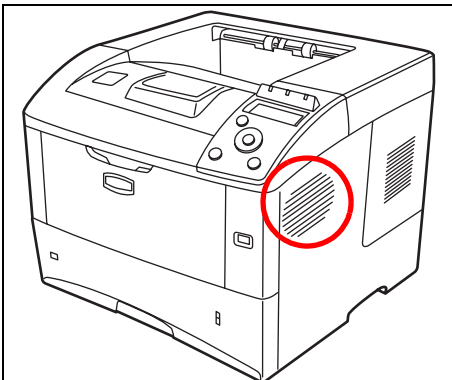


- 5 Close the top cover and MP tray.



6 Open the left cover. Use a lint free cloth to clean dust and dirt away from the vents.

7 Close the left cover.



8 Use a lint free cloth to clean dust and dirt away from the vent on the right side of the machine.

Prolonged Non-Use and Moving of the Printer

Prolonged Non-use

If you ever leave the printer unused for a long period of time, remove the power cord from the wall outlet.

We recommend you consult with your dealer about the additional actions you should take to avoid possible damage that may occur when the printer is used next time.

Moving the Printer

When you move the printer:

- Move it gently.
- Keep it as level as possible to avoid spilling toner inside the printer.
- Be sure to consult a service technician before attempting long distance transportation of the printer.



WARNING If you ship the printer, remove and pack the developer unit in a plastic bag and ship them separately from the printer.

6 Troubleshooting

This chapter explains how to handle printer problems, understand messages, and clean paper jams.

General Guidelines	6-2
Print Quality Problems	6-3
Error Messages	6-5
Ready, Data, and Attention Indicators	6-11
Clearing Paper Jams	6-12

If a problem cannot be corrected, contact your service technician.

General Guidelines

The table below provides basic solutions for problems you may encounter with the printer. We suggest you consult this table to troubleshoot the problems before calling for service repairs.

Symptom	Check Items	Corrective Actions
Print quality is poor.	–	Refer to <i>Print Quality Problems</i> on page 6-3.
Text is missing on the Windows test page.	–	This is a problem specific to the Windows OS. It is not a printer problem. It does not affect print quality.
Paper is jammed.	–	Refer to <i>Clearing Paper Jams</i> on page 6-12.
Nothing lights on the operation panel even when power is turned on and the fan makes no noise.	Check the power cord is property plugged into power outlet.	Connect both ends of the power cord securely. Try replacing the power cord. Refer to <i>Installation Guide</i> for more information.
	Check the power switch is in the On () position.	Refer to the <i>Installation Guide</i> for more information.
The printer prints a status page but data from the computer is not being printed.	Check program files and application software.	Try printing another file or using another print command. If the problem occurs with a specific file or application, check the printer settings for that application.
	Check the interface cable.	Connect both ends of the interface cable securely. Try replacing the printer cable. Refer to the <i>Installation Guide</i> for more information.
Vapor is emitted at the rear of the printer.	Check if the temperature is low near the location of the printer, or if the paper that is being used has been exposed to humidity.	Depending on the operating environment of the printer and the condition of the paper, heat generated during printing can evaporate water moisture in the printed paper, emitting vapor from the printer. In this case, printing can be continued without any problem. To correct this, increase the temperature in the room, and use paper that has been stored in a dry place.

Tips

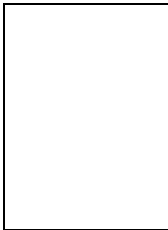
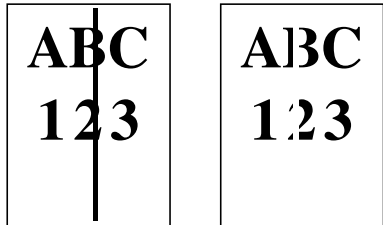
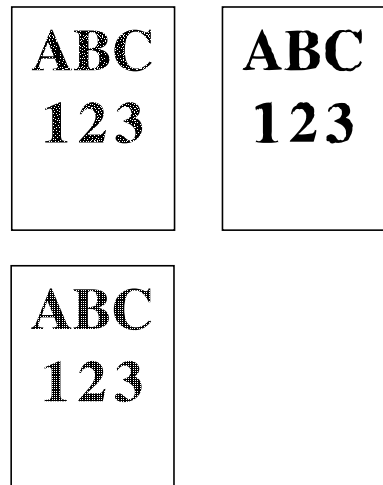
Printer problems may be solved easily by following the tips below. When you have encountered a problem that following the above guidelines will not solve, try the following:

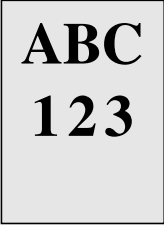
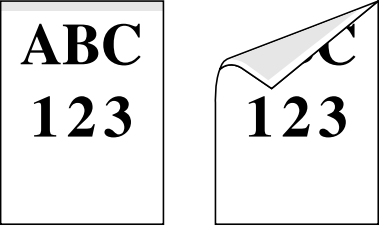
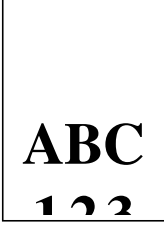
- Turn the printer power off and wait for several seconds. Then, turn on the printer.
- Restart the computer you are using to send print jobs to the printer.
- Obtain and use the latest version of the printer driver. The latest versions of printer drivers and utilities are available at: <http://www.kyoceramita.com/download/>.
- Make sure that the procedures for printing are correctly followed in the application software. Consult the documentation supplied with the application software.

Print Quality Problems

The tables and diagrams in the following sections define print quality problems and the corrective action you can conduct to solve the problems. Some solutions may require cleaning or replacing parts of the printer.

If the suggested corrective action will not solve the problem, call for service.

Printed Results	Corrective Action
<p>Completely blank printout</p> 	<p>Check the toner container. Open the top cover and check that the toner container is correctly installed in the printer. For more information on installing the toner container, Refer to <i>Toner Container Replacement</i> on page 5-2.</p> <hr/> <p>Check that the application software is correctly operated.</p>
<p>Black or white vertical streaks</p> 	<p>Check the operation panel for toner. If the Toner low message is displayed, install a new toner kit. To replace the toner container, refer to <i>Toner Container Replacement</i> on page 5-2.</p>
<p>Faint or blurred printing</p> 	<p>Check the EcoPrint settings. When this setting is On, switch it to off on the operation panel.</p> <hr/> <p>Make sure the paper type setting is correct the paper being used.</p> <hr/> <p>Check the operation panel for toner. If the Toner low message is displayed, install a new toner kit. To replace the toner container, refer to <i>Toner Container Replacement</i> on page 5-2.</p>

Printed Results	Corrective Action
<p data-bbox="150 297 363 327">Gray background</p> 	<p data-bbox="641 297 948 327">Check the operation panel.</p> <p data-bbox="641 333 1410 425">If the <i>Toner low</i> message is displayed and [Attention] indicator is flashing, install a new toner kit. To replace toner, refer to <i>Toner Container Replacement</i> on page 5-2</p> <hr/> <p data-bbox="641 448 906 477">Check the print density.</p> <p data-bbox="641 483 1401 544">Display the print menu from the operation panel and select a lighter density setting.</p>
<p data-bbox="150 618 568 678">Dirt on the top edge or back of the paper</p> 	<p data-bbox="641 618 1394 647">Clean the parts in the paper paths-such as the paper cassette, etc.</p>
<p data-bbox="150 985 608 1014">Printing incomplete or out of position</p> 	<p data-bbox="641 985 1283 1014">Check that the application software is correctly operated.</p> <hr/> <p data-bbox="641 1037 938 1066">Refer to <i>Tips</i> on page 6-2.</p>

Error Messages

The following table lists errors and maintenance messages that you can be dealt with by yourself.

If `Call service` or `Error.Power off.` is displayed, turn off the printer then turn it back on to see if the printer has recovered. If the printer has not recovered, turn off the printer, disconnect the power cord, and contact your service representative or authorized service center.

Some errors cause the alarm to sound. To stop the alarm, press **[Cancel]**.

Message	Corrective Action
Account error ## Press GO	This message is displayed when the Job Accounting function is enabled and an attempt to specify job accounting settings or to register or delete an account fails. To return the printer to the print-ready status, press [GO] .
Add paper MPTray	The paper has run out in the paper source displayed. Supply paper according to the paper source displayed (paper cassettes, MP tray, or optional paper feeders). This message is displayed alternately with messages indicating the printer status, such as <code>Ready</code> , <code>Please wait</code> , and <code>Processing</code> .
Call service E###:	E### represents a controller error (#=0, 1, 2, ...). Call for service. The printer does not operate when this message is displayed.
Call service ####:0123456	#### represents a mechanical error (#=0, 1, 2, ...). Call for service. The printer does not operate when this message is displayed. The total number of pages printed is also indicated, e.g. 0123456.
Canceling data	Displayed when data is being canceled.
Cassette # not loaded	The corresponding paper cassette is not installed. Install the cassette. The cassette number can be 1 (topmost) to 4 (bottom).
Change envelope switch position	Displayed when the paper type does not match the envelope switch setting. (FS-2020D/3920DN/4020DN only)
Check cassette #	This message is displayed when a paper lift error has occurred in the paper source's cassette. Pull out the cassette for the paper source displayed (either the paper cassettes or optional paper feeders) and check if the paper is loaded correctly. (FS-2020D/3920DN/4020DN only) The message <code>Call service</code> is displayed when this error occurs repeatedly.
Check waste toner box	This message warns following two cases. Install the new waste toner box. The waste toner box is not installed. The waste toner box is full.
Clean printer Press GO	Please clean the inside of the printer. Refer to <i>Cleaning the Printer</i> on page 5-7. This message will be displayed when replacing the toner container after the message <code>Replace toner Clean printer</code> is displayed. After cleaning the inside of the printer, press [GO] and the printer will be ready for printing.
Close left cover	The left cover of the printer is open. Close the printer left cover.

Message	Corrective Action
Close rear unit	The rear unit of the printer is open. Close the printer rear unit.
Close top cover	The top cover of the printer is open. Close the printer top cover.
Device busy	This message is displayed when Remove Device was selected while a USB memory was being used. The previous screen is displayed again 1 or 2 seconds.
Duplex disabled Press GO	You attempted to print with a paper size and paper type that cannot be used for duplex printing. Press [GO] to print onto one-side of the paper only. You can select an alternative paper size and type by pressing the Δ or ∇ . You can also press [MENU] and change the tray setting inside the menu, which will automatically cancel the error and output resumes. At the same time [ATTENTION] indicator will light up and [READY] indicator will start flashing.
Enter Account	An account code must be entered. This message is displayed if you try to print from the operation panel (e.g. printing a status page or using the Job Retention function) when the Job Accounting function is enabled. For more information, refer to <i>Job Accounting (Job Accounting selection/setting)</i> section in the <i>Advanced Operation Guide</i> .
Envelope mode	Displayed when the envelope switches are set to envelope mode. (FS-2020D/3920DN/4020DN only)
Error.Power off. F###	Turn the power switch off and then back on again. If this message still remains, turn the power switch off, and contact your service representative or authorized service center.
Error.Power off. F000	The printer controller and operation panel cannot exchange data. Turn the printer off and unplug it from the mains power supply. Then contact your service representative or authorized service center. See the back page of this manual for the relevant phone numbers.
Exceeded Max.out Press GO	This message is displayed when the Job Accounting function is enabled and an attempt has been made to exceed the print limit set for each account. To return the printer to the print-ready status, press [GO] . For more information, refer to <i>Job Accounting (Job Accounting selection/setting)</i> section in the <i>Advanced Operation Guide</i> .
Format error Hard disk	The hard disk installed in the printer is not formatted, and therefore cannot be read or written.
Format error Memory card	The CF card inserted in the printer is not formatted, and therefore cannot be read or written. To format a CF card, follow the procedure in <i>Memory Card (Using the memory card)</i> section in the <i>Advanced Operation Guide</i> .
Hard disk err ## Press GO	A hard disk error has occurred. Look at the error code given in place of ## and refer to <i>Storage Error Codes</i> on page 6-10. To ignore the hard disk error, press [GO] .
ID error	The user ID entered for a private job is not correct. Check the user ID that you specified on the printer driver. For more information, refer to <i>Job Box</i> section in the <i>Advanced Operation Guide</i> .

Message	Corrective Action
Illegal Account Press GO	This message is displayed when the Job Accounting function is enabled and no account is set for a transmitted print job or the specified account is not registered (the incorrect account is set). To return the printer to the print-ready status, press [GO] . For more information, refer to <i>Job Accounting (Job Accounting selection/setting)</i> section in the <i>Advanced Operation Guide</i> .
Install MK	Replace Maintenance Kit which is displayed on the message display. Replacement of the maintenance kit is necessary at every 300,000 pages of printing and requires professional servicing. Contact your service technician.
Job not stored Press GO	Printing using the Job Box function failed because there was insufficient space available on the hard disk or RAM disk, or because the RAM disk was disabled when demounting the hard disk. To print an error report and return the printer to the print-ready status, press [GO] .
Job restricted Press GO	This message is displayed when printing was attempted, despite the Job Account function being on with Restriction applied as the job limit for each job account. To return the printer to the print-ready status, press [GO] . For more information, refer to <i>Job Accounting (Job Accounting selection/setting)</i> section in the <i>Advanced Operation Guide</i> .
KPDL error ## Press GO	Current print processing cannot continue because of occurrence of KPDL error which is categorized by ##. To print out an error report, display >>Error Report from the menu system, and select On. Press [GO] to resume printing. You can abandon printing by pressing [Cancel] . If Auto Error Clear is set to On, printing will be automatically resumed after a preset period of time.
Load Cassette # (A4) / (PLAIN)	The paper cassette matching the paper size and paper type of the print job is empty. Load paper into the paper cassette as displayed in place of #. Printing resumes automatically. If you want to print from a different paper source, press Δ or ∇ to select the alternative paper source, and then press [OK] . When you press [MENU] , Paper Settings > appears. Press Δ or ∇ to select the paper size and type of the paper source. Press [OK] to display Use alternative? and then press [OK] . Printing starts using the specified the paper source.
Load MP Tray (A4) / (PLAIN)	There is no paper cassette installed in the printer that matches the paper size and paper type of the print job. Set paper in the MP tray. Printing resumes automatically. (Note that feeding the paper having a paper size which does not match the current paper size from the MP tray can cause paper jam.) If you want to print from a different paper source, press Δ or ∇ to select the alternative paper source, and then press [OK] . When you press [MENU] , Paper Settings > appears. Press Δ or ∇ to select the paper size and type of the paper source. Press [OK] to display Use alternative? and then press [OK] . Printing starts using the specified the paper source.
Low security	This message is displayed when Low was selected in Security Level.
Match envelope switches	Displayed when either of the envelope switches is not pressed. To print on the envelope, press the both switches. (FS-2020D/3920DN/4020DN only)
Memory overflow Press GO	The total amount of data received by the printer exceeds the printer's internal memory. Try adding more memory. Press [GO] to resume printing. You can abandon printing by pressing [Cancel] . If Auto Error Clear is set to On, printing will be automatically resumed after a preset period of time.

Message	Corrective Action
MemoryCard err## Press GO	A CompactFlash card error has occurred. Look at the error code given in place of ## and refer to <i>CompactFlash (CF) Card and USB Flash Memory Errors</i> on page 6-10. To ignore the CompactFlash card error, press [GO] .
MemoryCard err20	The CompactFlash card is accidentally inserted and removed from the printer's slot during the printer is on. Turn the power switch off, insert the CompactFlash card, and then turn on the printer again.
Missing developer unit	The developer unit is either not installed or incorrectly inserted. Insert the developer unit securely.
No multi copies Press GO	Multiple copies cannot be printed because the RAM disk is disabled or the hard disk is not installed. There is no available RAM disk or hard disk space. Delete unnecessary files. Press [GO] to print error report.
Original toner installed	Displayed when the installed toner is the original Kyocera product.
Paper jam #####	A paper jam has occurred. The location of the paper jam is indicated in place of the #'s. For details, refer to <i>Clearing Paper Jams</i> on page 6-12.
Paper loading	The selected cassette is being prepared. (FS-2020D/3920DN/4020DN only)
Paper path error	When one or more optional feeders are installed, this message will appear if any of the paper feeders or the printer cassette upper than the selected one is not properly closed.
Print overrun Press GO	The print job transferred to the printer was too complex to print on a page. Press [GO] to resume printing. (A page break may be automatically inserted in some places.) You can abandon printing by pressing [Cancel] . If Auto Error Clear is set to On, printing will be automatically resumed after a preset period of time.
RAM disk error## Press GO	A RAM disk error has occurred. Look at the error code given in place of ## and refer to <i>Storage Error Codes</i> on page 6-10. To ignore the RAM disk error, press [GO] .
Replace toner Clean printer	Toner has run out in the toner container. Replace the toner container using a new toner kit. The printer does not operate when this message is displayed.
Size error (Cassette)/ (A4)	The paper size of the actual paper on which the print job was printed is shorter than the intended paper size (the paper size specified in the paper source or specified by the user). This error is released to restart paper supply either by placing the requested size paper in the requested paper source or by matching the paper size setting for the paper supply to the actually printed paper size. You can also temporarily restart paper supply by pressing [GO] . At the same time [ATTENTION] indicator will light up and [READY] indicator will start flashing.
Toner low	Replace the toner container using a new toner kit.
Top tray paper full	The top tray has become full. You must remove all printed pages from the top tray. When the printer detects that the top tray is empty again, the printer will continues printing into the top tray.

Message	Corrective Action
Unknown toner installed	Displayed when the installed toner is not the original Kyocera product. Install original Kyocera toner. Install the toner container.
Unknown toner installed PC	This message is displayed if the installed toner container's regional specification does not match the printer's.
USB memory err## Press GO	An error has occurred in the USB memory device. Look at the error code given in place of ## and refer to <i>CompactFlash (CF) Card and USB Flash Memory Errors</i> on page 6-10. To return the printer to the print-ready status, press [GO] .
Use alternative? Cassette 1	When the cassette does not contain any paper that matches the print data (paper size and type), this message allows you to specify an alternative cassette to use instead. A paper source number is only displayed when an optional paper feeder is installed. To print from a different paper source, press Δ or ∇ to select the alternative paper source, and then press [OK] .
Wrong Account	Displayed when an attempt is made to register an account in the Job Accounting menu by entering an account code that already exists. For more information, refer to <i>Job Accounting (Job Accounting selection/setting)</i> section in the <i>Advanced Operation Guide</i> .
Wrong ID	The ID or Password entered for the Security, Administrator, or Job Accounting function is not correct. Check the ID or Password. For more information, refer to <i>Security</i> section, <i>Admin (Administrator settings)</i> section, and <i>Job Accounting (Job Accounting selection/setting)</i> section in the <i>Advanced Operation Guide</i> .
Wrong Password	The password does not match the password set. Enter the correct password. For more information, refer to <i>Security</i> section, <i>Admin (Administrator settings)</i> section, and <i>Job Accounting (Job Accounting selection/setting)</i> section in the <i>Advanced Operation Guide</i> .

Storage Error Codes

Hard Disk Errors

Code	Meaning
01	Hard disk format error. If this error recurs even if the power has been turned off and then on, reformat the hard disk.
02	The disk system is not installed. Recheck the requirements for using the system and the devices.
04	There is no available hard disk space. Delete unnecessary files, etc., in order to free up space.
05	The specified file does not exist in the hard disk.
06	There is no memory available to the hard disk system. Increase the available memory.
10	Formatting is not possible because host data is being spooled on the hard disk. Wait until the hard disk is ready, and then format.
97	The number of permanent code jobs that can be stored reached the limit value, and no more can be saved. Either delete some unnecessary jobs, etc., or increase the limit.
98	An unreadable page was found in a job (The job is damaged.).
99	A print job for the specified ID does not exist in the hard disk.

CompactFlash (CF) Card and USB Flash Memory Errors




Code	Meaning
01	The printer does not support the CF card inserted, or the CF card is broken. Insert the correct CF card. For more information, refer to <i>Memory Card (Using the memory card)</i> section in the <i>Advanced Operation Guide</i> .
02	The CF card is not installed. Recheck the requirements for using the system and the CF card.
03	The CF card is write protected. Check the CF card's status.
04	There is not enough space in the CF card. Delete unnecessary files or use a new CF card.
05	The specified file is not on the CF card or the USB flash memory.
06	There is not enough printer memory to support the CF card system. Increase printer memory.
50	The USB flash memory is write protected, or invalid. Check the USB flash memory's status.

RAM Disk Errors

Code	Meaning
01	Format error. Try turning the power off and on again.
02	RAM disk mode is Off. Turn RAM disk mode On from the operation panel.
04	No disk space. Purge unnecessary files.
05	Specified file is not on disk.
06	Insufficient printer memory to support the RAM disk system. Expand printer memory.

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:

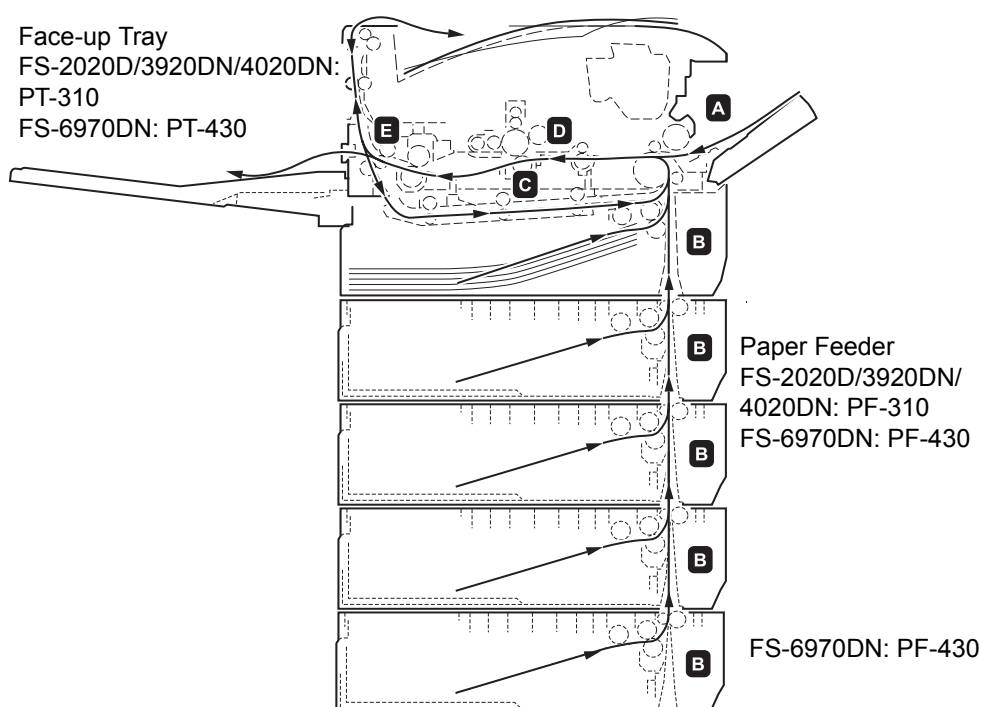
Indicator	Description
 Ready	<p>Flashing. Indicates an error that you can resolve. Refer to <i>Error Messages</i> on page 6-5.</p> <p>On. Indicates that the printer is ready. The printer prints the data it receives.</p> <p>Off. [Cancel] was pressed during Ready is displayed. Data can be received but will not be printed. To resume printing, press [Cancel] again.</p> <p>Printing is cancelling.</p> <p>Also, indicates when paper jam occurred, toner has run out, cover is open, and so on.</p>
 Data	<p>Flashing. Indicates that a data is being received.</p> <p>On. 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.</p>
 Attention	<p>Flashing. Indicates that the printer is ready to print when Please wait is displayed. Also indicates that the corresponding paper cassette is not installed. Indicates that the printer requires maintenance such as adding paper, cleaning the printer, replacement of maintenance kit, preparing the toner container, formatting of hard disk and CF card.</p> <p>On. Indicates when paper jam occurred, toner has run out, cover is open, and so on. If the message includes Press GO, press [GO] to resume printing.</p> <p>The ID or Password entered for the Security, Administrator, or Job Accounting function is not correct. Check the ID or Password, and enter the correct ID or password.</p>

Clearing Paper Jams

If paper jams in the paper transport system, or no paper sheets are fed at all, the `Paper jam` message appears and the location of the paper jam (the component where the paper jam has occurred) is also indicated. Status Monitor or COMMAND CENTER can indicate the location of the paper jam (the component where the paper jam has occurred). Remove the paper jam. After removing the paper jam, the printer will resume printing.

Possible Paper Jam Locations

The figure below shows the printer's paper paths including the optional paper feeder. The locations where paper jams might occur are also shown here, with each location explained in the table below. Paper jams can occur in more than one component on the paper paths.



Paper jam message	Paper jam location	Description	Reference page
Paper jam MP Tray	A	Paper is jammed at the MP tray. Depending on the installed options additional error messages for envelope feeder or bulk paper feeder might appear [FS-3920DN and FS-4020DN only].	page 6-14
Paper jam EF			page 6-18
Paper jam Bulk Feeder			page 6-18

Paper jam message	Paper jam location	Description	Reference page
Paper jam Cassette 1 (to 4)	B	Paper is jammed at the paper cassette. The cassette number can be 1 (topmost) to 5 (bottom) [FS-2020D: 1 and 2].	<i>page 6-15</i>
Paper jam Duplexer	C	Paper is jammed inside the duplex section.	<i>page 6-16</i>
Paper jam Printer	D	Paper is jammed inside the printer.	<i>page 6-17</i>
Paper jam Rear Unit	E	Paper is jammed inside the rear unit.	<i>page 6-18</i>

General Considerations for Clearing Jams

Bear in mind the following considerations when attempting paper jam removal:



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

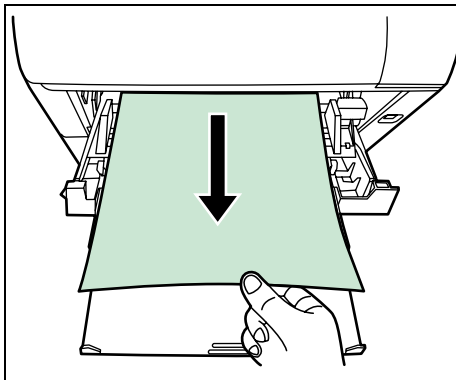
- If paper jams occur frequently, try using a different type of paper, replace the paper with paper from another ream, or flip the paper stack over. The printer may have problems if paper jams recur after the paper is replaced.
- Whether or not the jammed pages are reproduced normally after printing is resumed, depends on the location of the paper jam.

Utilizing Online Help Messages

Online help messages are available in the printer's message display to provide simple instructions for clearing jams. Press (?) when the paper jam message has appeared. Then a help message will appear to facilitate jam clearing in the location.

MP Tray

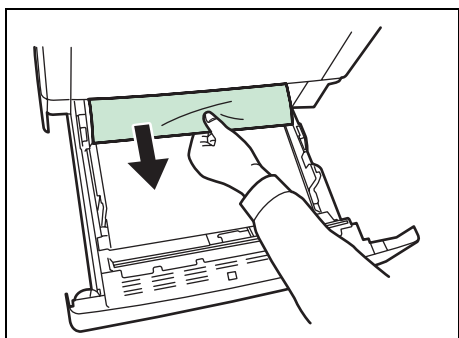
Paper is jammed at the MP tray. Remove the jammed paper using the procedure given below.



- 1** Remove the paper jammed at the MP tray.

- 2** Open and close the top cover to clear the error.

Paper Cassette/Paper Feeder



1 Pull out the cassette or optional paper feeder.

2 Remove any partially fed paper.

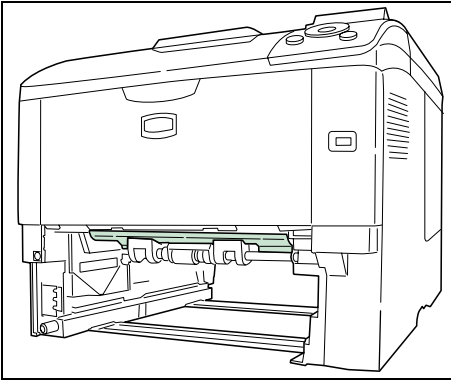


Note Check to see if paper is loaded correctly. If not, reload the paper.

3 Push the cassette back in securely. The printer warms up and resumes printing.

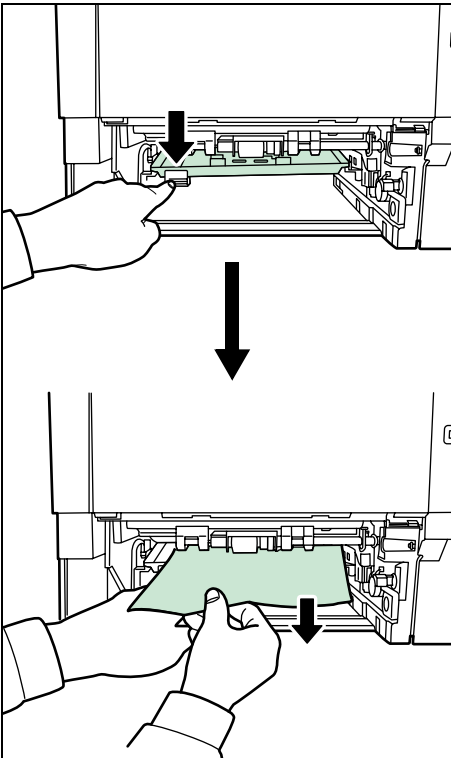
Duplexer

Paper is jammed in the duplexer section. Remove the jammed paper using the procedure given below.



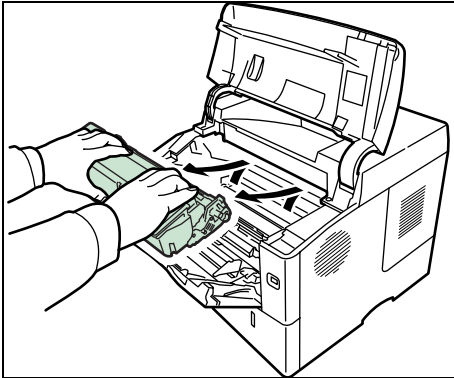
CAUTION Do not touch parts in this area, because it may result in burn injury.

- 1 Pull the paper cassette all the way out of the printer.
- 2 Open the duplexer's cover and remove any jammed paper.

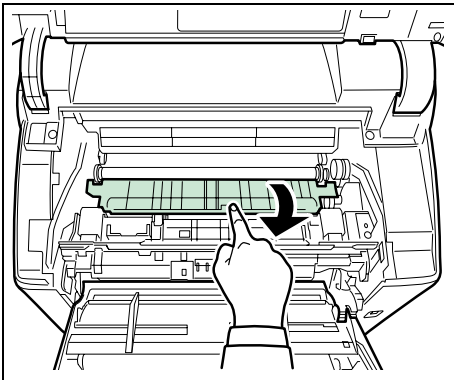


- 3 Insert the paper cassette into the slot in the printer. The printer warms up and resumes printing.

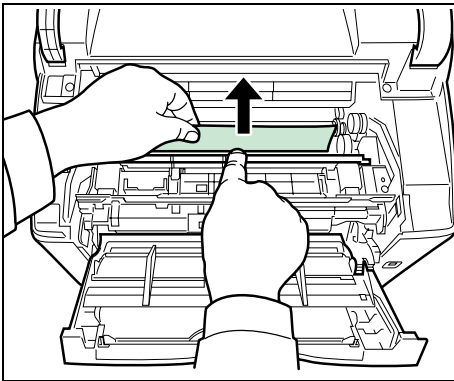
Inside the Printer



- 1 Open the top cover and MP tray.
- 2 Lift the developer unit together with the toner container out of the printer.



- 3 Open the feed cover.

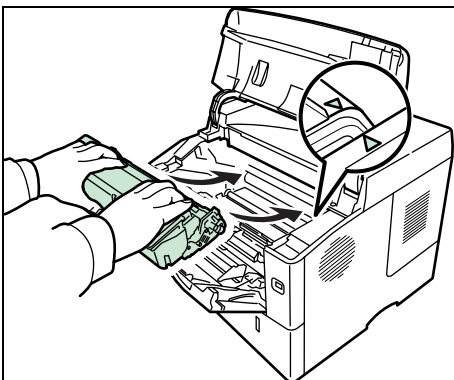


- 4 Remove the paper from the printer

If the jammed paper appears to be pinched by rollers, pull it along the normal running direction of the paper.



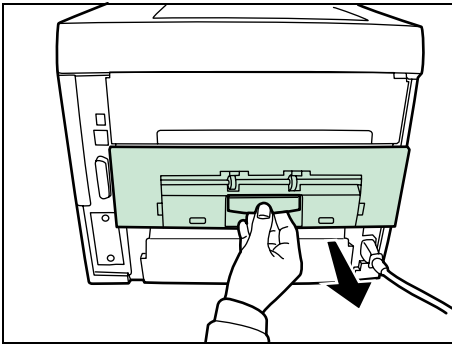
Note If you cannot find a paper jam, try checking inside the rear of the printer. Refer to *Rear Unit* on page 6-18.



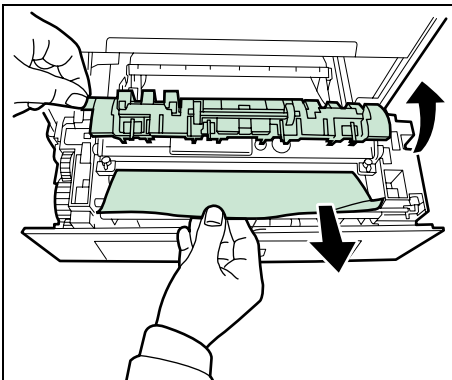
- 5 Insert the developer unit together with the toner container, back into the machine.

- 6 Close the top cover and MP tray. The printer warms up and resumes printing.

Rear Unit



- 1 If paper is not completely ejected into the output tray, open the rear unit.



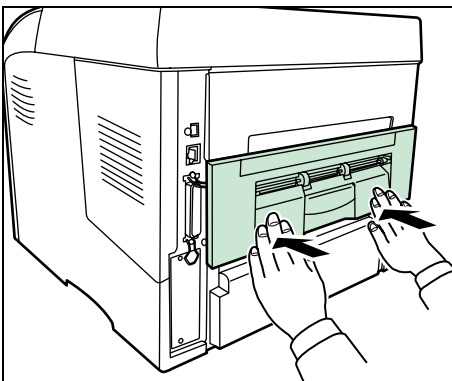
- 2 Open the fuser cover and remove the jammed paper by pulling it out.



Note If you cannot find a paper jam, try checking inside the rear of the printer.



CAUTION The fuser unit inside the printer is hot. Do not touch it with your hands as it may result in burn injury. Remove jammed paper carefully.



- 3 Close the rear unit. The printer warms up and resumes printing out.

Envelope Feeder (FS3920DN/4020DN only)

Paper is jammed at the optional envelope feeder. Remove the jammed paper using the same procedure as for a jam at the MP Tray. Then, open and close the paper transfer unit. For details, refer to the User's Manual for the envelope feeder.

Bulk Paper Feeder (FS3920DN/4020DN only)

Paper is jammed at the optional bulk paper feeder. Detach the bulk paper feeder from the printer by sliding with the rail away from the printer, holding the bulk paper feeder by both hands. If paper is partially fed out from the feeder's output slot, pull the paper out by hand.

7 Using the Operation Panel

This chapter contains explanations on the following topics:

General Information	7-2
Understanding the Operation Panel	7-3
Using the Menu Selection System	7-8
Report Print	7-11
USB Memory (USB flash memory selection)	7-17
Job Box	7-19
Counter (Viewing the counter value)	7-25
Paper Settings	7-26
Print Settings	7-35
Network (Network settings)	7-50
Device Common (Selecting/Setting the common device)	7-55
Security	7-67
Job Accounting (Job Accounting selection/setting)	7-75
Admin (Administrator settings)	7-81
Adjust/Maintenance (Adjust/Maintenance selection/setting)	7-83

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.



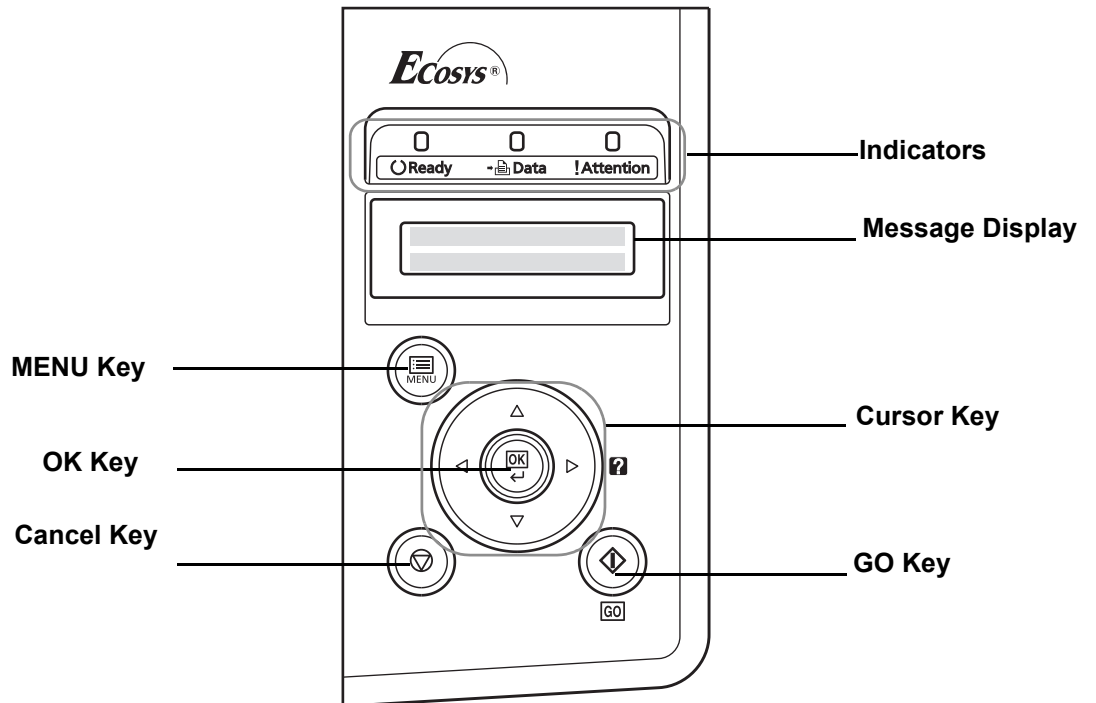
Note Changes to printer settings made using a software application override changes made using the operation panel.

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*.

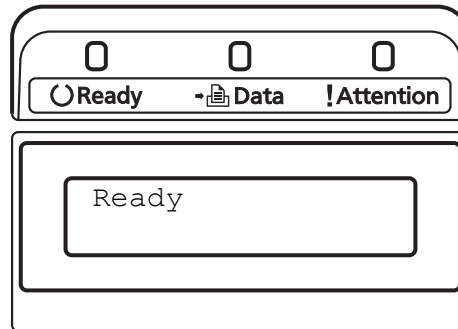
Status Information

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 7-64.
Canceling data	Jobs inside the printer are being canceled. To cancel a job, refer to <i>Canceling a Printing Job</i> on page 7-6.

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	<p>Flashing. Indicates an error that you can resolve. Refer to <i>Troubleshooting</i> section in the <i>Operation Guide</i>.</p> <p>On. Indicates that the printer is ready. The printer prints the data it receives.</p> <p>Off. [Cancel] was pressed during Ready is displayed. Data can be received but will not be printed. To resume printing, press [Cancel] again.</p> <p>Printing is cancelling.</p> <p>Also, indicates when paper jam occurred, toner has run out, cover is open, and so on. For details, refer to the <i>Troubleshooting</i> section in the <i>Operation Guide</i>.</p>
→ Data	<p>Flashing. Indicates that a data is being received.</p> <p>On. 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.</p>
! Attention	<p>Flashing. Indicates that the printer is ready to print when <i>Please wait</i> is displayed. Also indicates that the corresponding paper cassette is not installed.</p> <p>Indicates that the printer requires maintenance such as adding paper, cleaning the printer, replacement of maintenance kit, preparing the toner container, formatting of hard disk and CF card.</p> <p>On. Indicates when paper jam occurred, toner has run out, cover is open, and so on. If the message includes <i>Press GO</i>, press [GO] to resume printing.</p> <p>The ID or Password entered for the Security, Administrator, or Job Accounting function is not correct. Check the ID or Password, and enter the correct ID or password.</p>

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 ∇ to display the desired job and **[OK]**.

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

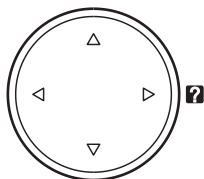
MENU Key



[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 ∇ to change menus, and \triangleleft and \triangleright to move to the sub menu.

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

When `Use alternative?` is shown in the message display, use the \triangle and ∇ 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*, *Please wait*, *Sleeping* or *Processing* is indicated on the printer message display.

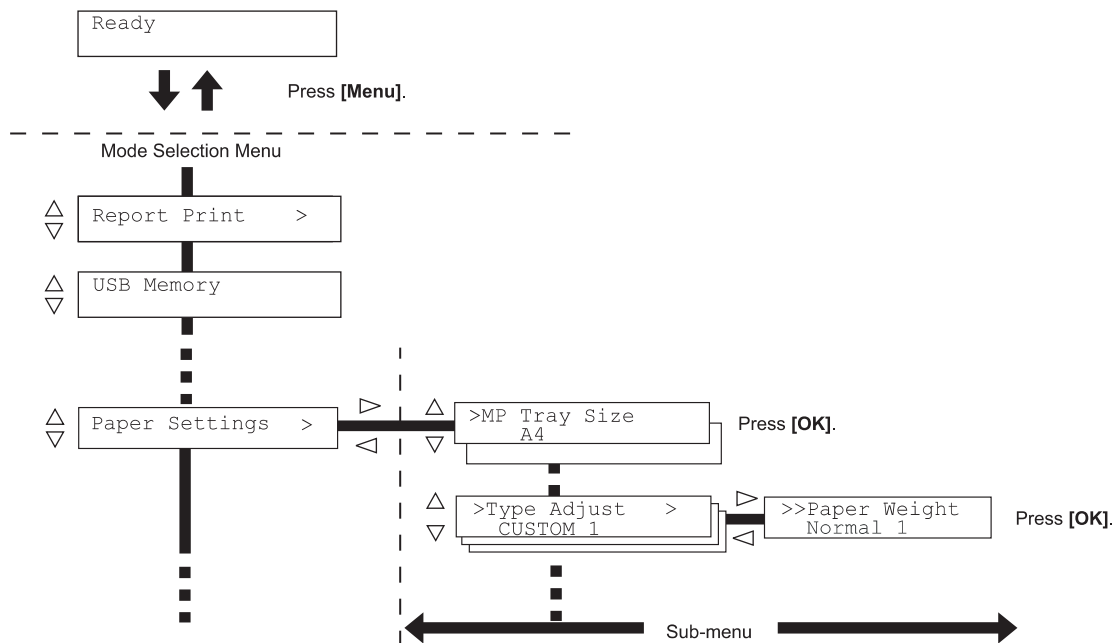


Note Settings that are received from application software and the printer driver will take priority over settings made in the operation panel.

Entering the Mode Selection Menu

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

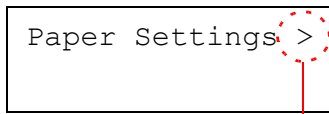
The mode selection menu is displayed.



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 7-19 or *RAM Disk Mode (Using the RAM disk)* on page 7-58.

Selecting a Menu

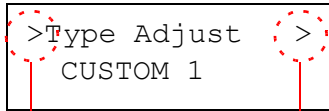
The mode selection menu is hierarchical. Press \triangle or ∇ to display the desired menu.



Indicates that there is a sub-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.

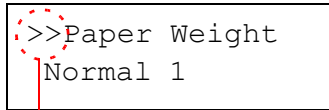


Indicates that this is the sub-menu

Indicates that there is another sub-menu

> is displayed before the sub-menu.

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



Indicates that this is the second sub-menu

>> is displayed before the second sub-menu.

Setting a Menu

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

Press \triangle or ∇ 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 *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 ∇ , the selection changes.
 - Report Print
 - USB Memory
 - Job Box
 - Counter
 - Paper Settings
 - Print Settings
 - Network
 - Device Common
 - Security
 - Job Accounting
 - Admin
 - Adjust/Maintenance



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 Δ or ∇ repeatedly until `Report Print >` appears.

```
Report Print >
```

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 \triangleright while `Report Print >` is displayed.

2 `>Print Menu Map` appears. In other displays, press Δ or ∇ repeatedly until the map appears.

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

```
>Print  
Menu Map ?
```

4 Press **[OK]**. The message `Processing` appears and the printer prints a Menu Map.

Print Status Page

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

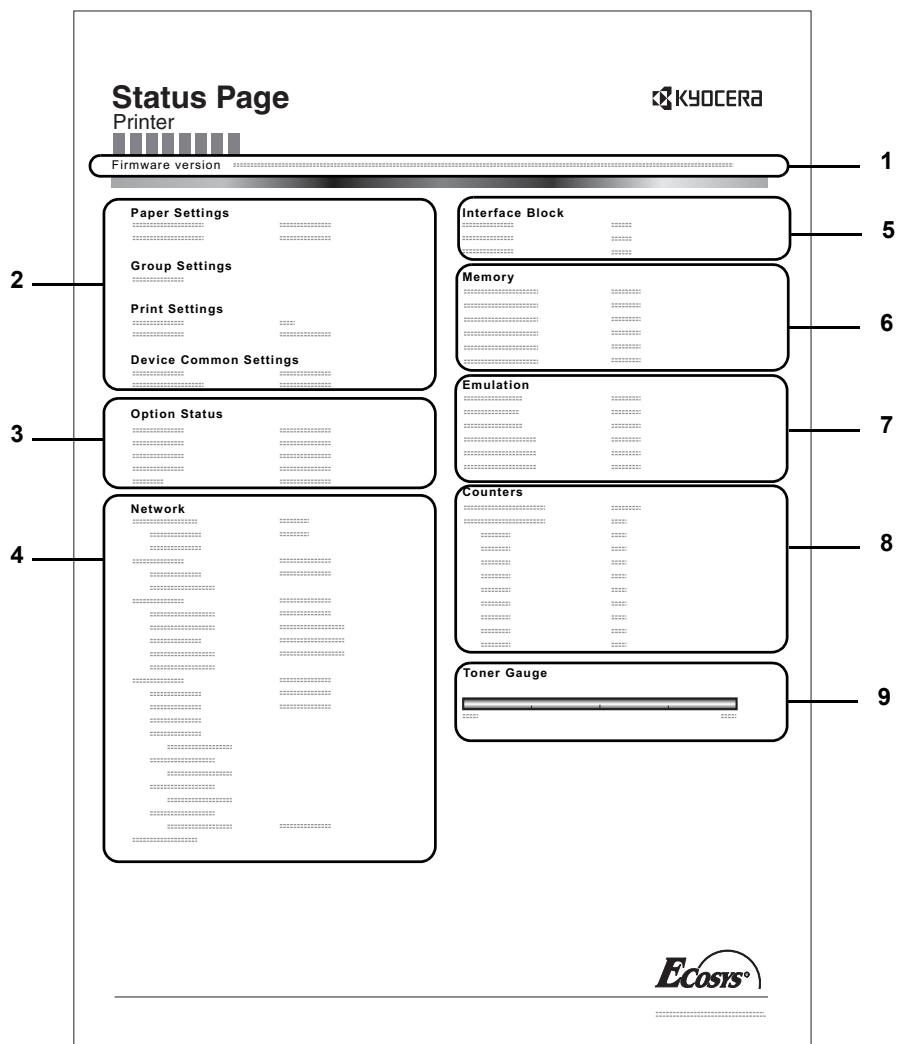
- 1 Press \triangleright while `Report Print >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Print Status Page` appears.
- 3 Press **[OK]**. A question mark (?) appears.
- 4 Press **[OK]** again. The message `Processing` appears and the printer prints a status page.

```
>Print
  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.



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
- KC-GL (FS-6970DN only)

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.

```
>Print
  Fonts List ?
```

- 1 Press \triangleright while `Report Print >` is displayed.
- 2 Press \triangle or ∇ 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.

```
>Print Hard Disk
  File List ?
```

- 1 Press \triangleright while `Report Print >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Print Hard 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 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.

```
>Print RAM Disk
  File List ?
```

- 1 Press \triangleright while `Report Print >` is displayed.
- 2 Press \triangle 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 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 only when the CompactFlash card is installed in the printer and properly formatted.

- 1 Press \triangleright while `Report Print >` is displayed.
- 2 Press \triangle or ∇ 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 7-68.

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 Δ or ∇ repeatedly until `USB Memory >` appears.

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

```
USB Memory >
```

Print File (Printing a file)

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

1 Press \triangleright while `USB Memory >` is displayed.

2 `>Print File` appears. In other displays, press Δ or ∇ 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 Δ or ∇ , the next folder or file appears in succession.

```
/
/00:Folder 1
```

```
/00:Folder 1
/01:Folder 2
```

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

To view lower-level folders or files, press \triangleright .

(For example : `Folder 2`)

To view folders or files on still lower levels, press \triangleright .

(For example : `File 3`)

IMPORTANT The `Print File` menu option is only displayed when there is a PDF, XPS 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 Δ and ∇ or \triangleleft and \triangleright .

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

(For example : `File 3`)

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

6 Press **[OK]** again. `Copies` appears.

```
Copies
001
```

Copies (Number of copies)

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

IMPORTANT To use this feature, an optional hard disk must be installed in the printer or the RAM disk must be set to On.

```
Copies
                                010
```

1 While `Copies` in step 5 above is displayed, press Δ and ∇ or \triangleleft and \triangleright to display the number of copies. (E.g.: 10)

```
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
? Cassette 2
```

1 While `Paper Source` in step 2 above is displayed, press Δ and ∇ or \triangleleft and \triangleright 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.

```
>Remove Device ?
```

1 Press \triangleright while `USB Memory >` is displayed.

2 Press Δ or ∇ 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.

```
>Print
File List ?
```

1 Press \triangleright while `USB Memory >` is displayed.

2 Press Δ or ∇ 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.

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 Δ or ∇ repeatedly until Job Box > appears.

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 7-24. 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

```
>Quick Copy
?Harold
```

```
>Quick Copy
?Arlen
```

```
>Arlen
?Report
```

```
>Report
Copies      001
```

```
>Report
Copies      001
```

```
>Report
Delete
```

- 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 **△** or **▽** 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 **△** or **▽** 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 Quick Copy Job

- 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 **▽** 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.

Printing Remaining Copies of a Proof-and-Hold Job

```
>Quick Copy  
?Harold
```

```
>Quick Copy  
?Arlen
```

```
>Arlen  
?Report
```

```
>Report  
Copies 001
```

- 1 Press \triangleright while `Job Box >` is displayed.
- 2 Press \triangle 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 ∇ 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 ∇ 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 \triangle ; 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
```


- 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 ∇ 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 \triangle 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 ∇ 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 ∇ 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 ∇ .
-  **Note** If you entered the wrong ID, `ID error` appears. Check the ID or Password, and enter the correct ID.
- 8 You can set the number of copies to be printed. To increase the copy count, press \triangle ; 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.

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

```
>Arlen
?Agenda
```

```
>Agenda
ID      0000
```

```
>Agenda
Copies  001
```

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.

```
>Agenda
Copies      001
```

```
>Agenda
Delete
```

- 1 Follow steps 1 through 6 in the above section.
- 2 When the title of the job to be printed is displayed (Agenda, in this example), press **[OK]**. Enter the four-digit access code entered in the printer driver and press **[OK]**.
- 3 Press ∇ 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 32.

```
>Job Box >
Configuration
```

```
>>Quick Copy
32
```

```
>>Quick Copy
32
```

- 1 Press \triangleright while `Job Box >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Job Box Configuration >` appears.
- 3 Press \triangleright .
- 4 Press \triangle or ∇ repeatedly until `>>Quick Copy` appears.
- 5 Press **[OK]**. A blinking cursor (`_`) appears.
- 6 Press \triangle or ∇ to increase or decrease the value at the blinking cursor. The value can be set between 0 and 50. Use \triangleleft and \triangleright 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`.

Counter (Viewing the counter value)

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

```
Counter >
```

```
>Printed Pages  
0002000
```

- 1** Press **[MENU]**.
- 2** Press Δ or ∇ repeatedly until `Counter >` appears.
- 3** Press \triangleright . `>Printed Pages` appears as the 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 Δ or ∇ repeatedly until `Paper Settings >` appears.

`Paper Settings >`

MP Tray Size (Setting MP tray paper size)

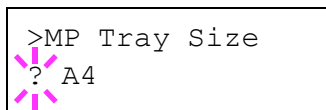
When you use the MP tray, you should set the MP tray size to the paper size that is used to format the job to print. If the sizes do not match, printing will not be performed on the correct size paper.

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 2-2.



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 \triangleright while *Paper Settings* > is displayed.
- 2 Press \triangle or ∇ repeatedly until >MP Tray Size appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.



- 4 Press \triangle or ∇ to display the desired paper size. The message display toggles through the following paper sizes:

For FS-2020D/3920DN/4020DN

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

For FS-6970DN

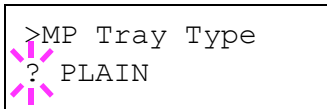
Env. Monarch
Envelope #10
Envelope #9
Envelope #6
Envelope DL
Envelope C5
A6
B6
A5-R
B5
ISO B5
A4-R
A4
Executive
Letter-R
Letter
Legal
A3
B4
Ledger
Custom
Envelope C4
Oficio II
Statement
Folio
Youkei 2
Youkei 4
8K
16K
Hagaki
OufukuHagaki

- 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 2-2.



- 1 Press \triangleright while `Paper Settings >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>MP Tray Type` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.

- 4 Press \triangle or ∇ 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)



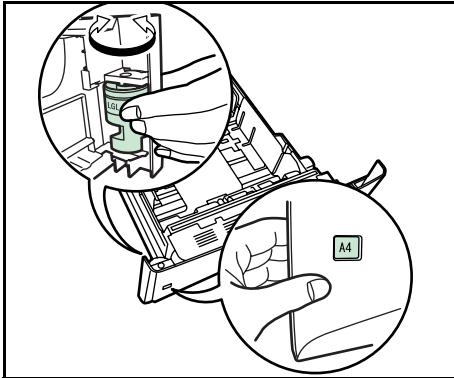
Note You can define any paper type and store that definition in the printer. For more information, refer to *Type Adjust (Creating custom paper type)* on page 7-33.

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

Cassette (1 to 5) Size (Setting the cassette paper size)

To set the standard sizes A5, A4, B5, A3 (FS-6970DN only), 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, A3 (FS-6970DN only) and Letter) into a paper cassette, refer to the custom paper sizes listed on *page 7-30*.

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*).

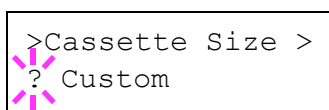
Setting the Paper Size from the Operation Panel

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 \triangleright while `Paper Settings >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Cassette Size >` appears.

If optional paper feeders are added, `Cassette1 Size` will appear for the standard paper cassette and `Cassette2 Size`, `Cassette3 Size` (FS-3920DN/FS-4020DN/FS-6970DN), `Cassette4 Size` (FS-3920DN/FS-4020DN//FS-6970DN) and `Cassette5 Size` (FS-6970DN) will appear for the optional paper feeders.

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



```
>Cassette Size >
? Custom
```

- 4 Press \triangle or ∇ to display the desired paper size. The message display toggles through the following paper sizes:

For FS-2020D/3920DN/4020DN	For FS-6970DN
Envelope C5	Envelope C5
A6 (FS-3920DN/FS-4020DN only)	A5-R
A5	A5 (Cassette 1 only)
B5	B5
ISO B5	ISO B5
A4	A4-R
Executive	A4
Letter	Executive
Legal	Letter-R
Custom	Letter
Oficio II	Legal
Folio	A3
16K	B4
	Ledger
	Custom
	Envelope C4
	Oficio II
	Folio
	16K

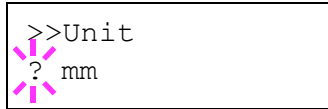
- 5 When the desired paper size is displayed, press **[OK]**. The paper size is set for the paper cassette.

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)

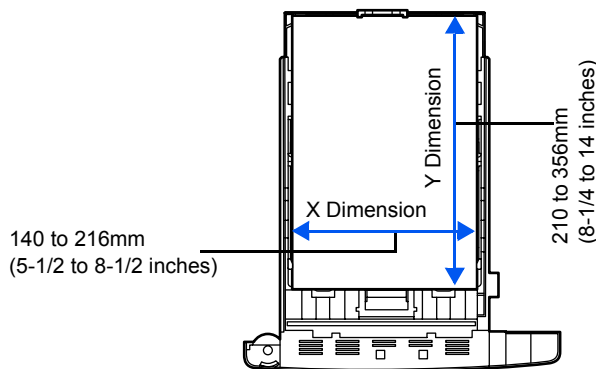
- 1 Press \triangleright .
- 2 Press \triangle or ∇ repeatedly until \gg Unit appears. The unit of measurement can be selected between millimeters and inches. The current unit of measurement is displayed (the default setting is mm).
- 3 Press **[OK]**. A blinking question mark (?) appears.
- 4 Select mm or inch using \triangle or ∇ .
- 5 Press **[OK]**.
Set the dimensions of the paper as described in the next section.



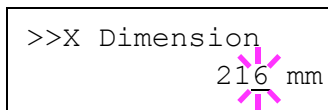
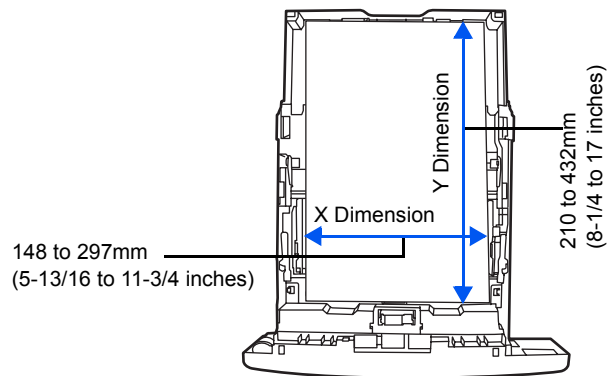
Entering the Width and Length

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

For FS-2020D/3920DN/4020DN



For FS-6970DN



- 1 When the unit of measurement is set, press ∇ .
 \gg X Dimension appears (the paper width setting).
- 2 Press **[OK]**. A blinking cursor ($_$) appears.
- 3 Press \triangle 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 ∇ . \gg Y Dimension appears (the paper length setting). Set the desired length in the same way as the width.
Acceptable paper lengths are:
For FS-2020D/3920DN/4020DN: 210 to 356 mm (8-1/4 to 14 inches).
For FS-6970DN: 210 to 432 mm (8-1/4 to 17 inches).
- 6 Display the paper length, press **[OK]**.
- 7 Press **[MENU]**. The display returns to Ready.

Cassette (1 to 5) 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.

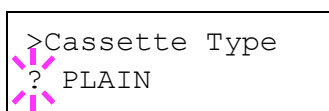
For more information about paper types that you can feed from the paper cassette, refer to *Paper Specifications* on page 2-2.

1 Press \triangleright while Paper Settings \triangleright is displayed.

2 Press \triangle or ∇ repeatedly until \triangleright Cassette Type appears.

If optional paper feeders are added, Cassette 1 Type will appear for the standard paper cassette and Cassette 2 Type, Cassette 3 Type (FS-3920DN/FS-4020DN/FS-6970DN), Cassette 4 Type (FS-3920DN/FS-4020DN/FS-6970DN) and Cassette 5 Type (FS-6970DN) will appear for the optional paper feeders.

3 To change paper type, press **[OK]**. A blinking question mark (?) appears.



4 Press \triangle or ∇ 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 7-33.

5 Press **[OK]**.

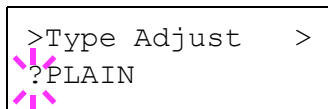
6 Press **[MENU]**. The display returns to Ready.

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 7-33, and *Duplex Path (Setting the duplex path)* on page 7-34) 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 7-34.

- 1 Press \triangleright while `Paper Settings >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Type Adjust >` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.



```
>Type Adjust >
?PLAIN
```

- 4 Press \triangle or ∇ to display the desired paper type. The display changes as shown below.

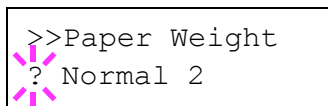
```
PLAIN
TRANSPARENCY
PREPRINTED
LABELS
BOND
RECYCLED
VELLUM
ROUGH
LETTERHEAD
COLOR
PREPUNCHED
ENVELOPE
CARDSTOCK
THICK
HIGH QUALITY
CUSTOM 1 (to 8)
```

- 5 Press **[OK]**.
- 6 Press \triangleright 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 7-33) and press \triangleright .
- 2 Press \triangle or ∇ repeatedly until `>>Paper Weight` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.



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

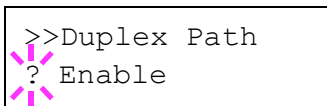
-
- 4 Press Δ or ∇ to display the desired paper thickness. The display changes as shown below. For details of the default setting for each paper type, refer to *Paper Type* on page 2-12.

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 7-33) and press \triangleright .
- 2 Press Δ or ∇ repeatedly until `>>Duplex Path` appears.
- 3 Press [OK]. A blinking question mark (?) appears.



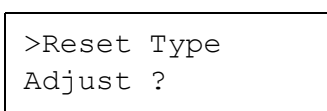
>>Duplex Path
? Enable

- 4 Select `Enable` or `Disable` using Δ or ∇ . For details of the default setting for each paper type, refer to *Paper Specifications* on page 2-2.
- 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 7-33.

- 1 Press \triangleright while `Paper Settings >` is displayed.
- 2 Press Δ or ∇ 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.



>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 Quality 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)

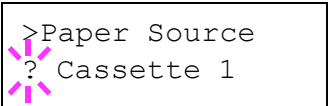


```
Print Settings >
```

- 1 Press **[MENU]**.
- 2 Press Δ or ∇ 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.



```
>Paper Source  
? Cassette 1
```

- 1 Press \triangleright while `Print Settings >` is displayed.
- 2 Press Δ or ∇ repeatedly until `>Paper Source` appears.
- 3 To change the current paper feed source, press **[OK]**. A blinking question mark (?) appears.
- 4 Press Δ 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):

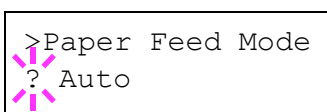
```
MP tray  
Cassette 1  
Cassette 2  
Cassette 3 (FS-3920DN/FS-4020DN/FS-6970DN only)  
Cassette 4 (FS-3920DN/FS-4020DN/FS-6970DN only)  
EF (FS-3920DN/FS-4020DN only)  
Bulk feeder (FS-3920DN/FS-4020DN only)
```

Cassettes 2, 3, 4 and 5 are available for selection when the optional paper feeders are installed.

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

Paper Feed Mode (Setting the paper feed source)

This mode specifies how the paper should be fed once the paper feed source and paper type have been chosen. If `Auto` is selected, the printer searches for a paper feed source that matches the paper size and type, and paper is then delivered from that source. If `Fixed` is selected and there is no matching paper feed source, handling proceeds as specified by `Paper Mismatch for Error Handling`. For details on paper feeding when `Fixed` is selected, refer to *Paper Mismatch (Detection settings for paper size/type errors when the paper source is fixed)* on page 7-62. The default setting is `Auto`. To change the settings, follow the steps described below.



- 1 Press `▷` while `Print Settings >` is displayed.
- 2 Press `△` or `▽` repeatedly until `>Paper Feed Mode` appears.
- 3 Press `[OK]`. A blinking question mark (?) appears.
- 4 Press `△` or `▽` 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 `△` or `▽` repeatedly until `Use alternative?` appears.
- 2 Press `△` or `▽` repeatedly until the desired paper source and size appears.
Each time you press `△` or `▽`, another paper cassette or the paper size that can currently be fed from the MP tray appears.
- 3 Press `[OK]`. Printing continues.

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.

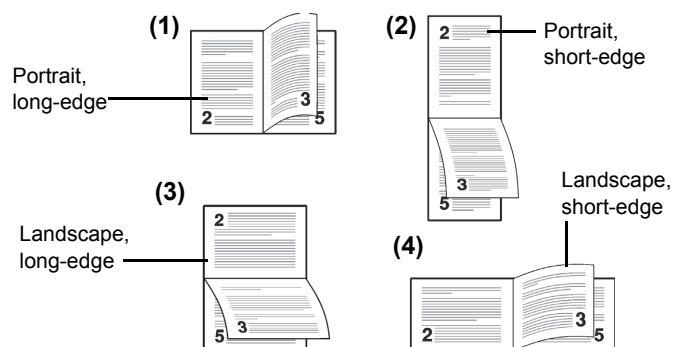


Note Duplex printing can be also performed from the MP tray. If the paper to be fed from the MP tray does not match the paper size and paper type of the current paper feed source cassette, a paper jam may occur.

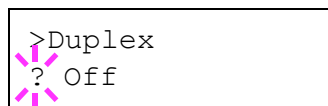
Binding Modes

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



- 4 Press Δ 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.



Note This menu can be used for FS-3920DN and FS-4020DN.

```
>Paper Output  
Top tray FaceDn
```

```
>Paper Output  
?Top tray FaceDn
```

- 1 Press \triangleright while `Print Settings >` is displayed.
- 2 Press Δ or ∇ repeatedly until `>Paper Output` appears.
- 3 To change the output stack, press [OK]. A blinking question mark (?) appears.
- 4 Press Δ 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.

```
>Override A4/LT  
? On
```

- 1 Press \triangleright while `Print Settings >` is displayed.
- 2 Press Δ or ∇ repeatedly until `>Override A4/LT` appears.
- 3 Press [OK]. A blinking question mark (?) appears.
- 4 Select `On` or `Off` using Δ or ∇ .
- 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 \triangleright while `Print Settings >` is displayed.

```
>Emulation
? PCL 6
```

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

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

4 Press Δ or ∇ repeatedly until the desired emulation mode is displayed.

```
PCL 6
KC-GL (FS-6970DN only)
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 Δ or ∇ repeatedly until `>Emulation >` appears on the message display.

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

4 Press Δ or ∇ repeatedly until `KPDL (AUTO)` appears.

5 Press **[OK]**.

6 Press \triangleright . When `>>Alt. Emulation` is displayed, press Δ or ∇ . The names of alternative emulations appear - `PCL 6`, `Line Printer`, `IBM Proprinter`, `DIABLO 630`, `KC-GL (FS-6970DN only)` or `EPSON LQ-850`.

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

8 Press Δ or ∇ repeatedly until the desired alternative emulation appears.

9 Press **[OK]**.

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

```
>Emulation
? PCL 6
```

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

Error Report (Printing KPD L errors)

The printer can print error descriptions when printing error occurs during KPD L emulation. The default is On — the printer prints KPD L errors.

```
>Emulation
? PCL 6
```

```
>Emulation >
? KPD L (AUTO)
```

```
>>Error Report
? On
```

- 1 Press \triangleright while `Print Settings >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Emulation >` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.
- 4 Select `KPD L` or `KPD L (AUTO)` using \triangle or ∇ . Press **[OK]**.
- 5 Press \triangleright . `>>Error Report` appears.
- 6 Press **[OK]**. A blinking question mark (?) appears.
- 7 Select `On` or `Off` using \triangle or ∇ . Press **[OK]**.
- 8 Press **[MENU]**. The display returns to `Ready`.

Selecting KC-GL Pen Width (FS-6970DN only)

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

```
>Emulation
? PCL 6
```

```
>Emulation >
KC-GL
```

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

- 1 Press \triangleright while `Print Settings >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Emulation >` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.
- 4 Select `KC-GL` using \triangle or ∇ .
- 5 Press \triangleright . `>>Pen (1) Width` appears. Press \triangle or ∇ repeatedly until the desired pen number of 1 to 8 is displayed.
- 6 Press **[OK]**. A blinking question mark (?) appears at the last digit.
- 7 Press \triangle or ∇ to increase or decrease the value at the blinking cursor. Use \triangleleft and \triangleright to move the cursor right and left.
- 8 Press **[OK]**.
Proceed to next subsection to select the KC-GL page size.

Selecting KC-GL Page Set

The KC-GL emulation mode also enables you to set the KC-GL page size.

- 1 Press \triangleleft while `>>Pen (X) Width` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>KC-GL Page Set` appears.

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

- 3 Press **[OK]**. A blinking question mark (?) appears.
- 4 Press Δ or ∇ repeatedly until the desired page size (A2, A1, A0, B3, B2, B1, B0, and SPSZ) is displayed. When selecting SPSZ, printing will be done with the paper size specified by the PRESCRIBE SPSZ command.
- 5 Press **[OK]**.
- 6 Press **[MENU]**. The display returns to Ready.

Font Select (Selecting the default font)

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

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

```
>Font Select >
  Internal
```

```
>> I000
```

- 1 Press \triangleright while `Print Settings >` is displayed.
- 2 Press Δ or ∇ repeatedly until `>Font Select >` appears.
- 3 To select an internal font, make sure that `Internal` is displayed and press \triangleright . The display changes. If `Internal` is not displayed, press **[OK]**, then press Δ or ∇ until it appears.

To select an optional font, press **[OK]** while `>Font Select >` is displayed. Press Δ or ∇ repeatedly until `Option` appears and then press **[OK]**. Press \triangleright next to display the font selection shown above. You can perform this operation only when optional fonts are installed in the printer.

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

- I: Internal font
- S: Soft (downloaded) font
- M: Fonts in optional CompactFlash card
- H: Fonts in RAM disk or optional hard disk

```
>>?I000
```

- 4 Press **[OK]**. A blinking question mark (?) appears.
- 5 Press Δ or ∇ repeatedly until the desired font number appears. For font numbers of the internal fonts, refer to *Print Fonts List* on page 7-15.
- 6 When the desired font is displayed, press **[OK]**.
- 7 Press **[MENU]**. The display returns to Ready.

Selecting Regular or Dark Courier/Letter Gothic

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

```
>Font Select >
  Internal
```

- 1 Press \triangleright while `Print Settings >` is displayed.
- 2 Press Δ or ∇ repeatedly until `>Font Select >` appears.

```
>>Courier
Regular
```

```
>>Courier
?Regular
```

- 3** Make sure that `Internal` is displayed and press `▷`.
- 4** Press `△` or `▽` repeatedly until `>>Courier` appears. If you are selecting the thickness of the Letter Gothic font, choose `>>Letter Gothic` here instead.
- 5** Press **[OK]**. A blinking question mark (?) appears.
- 6** Select `Regular` or `Dark` using `△` or `▽`.
- 7** Press **[OK]**.
- 8** 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.

```
>Font Select >
Internal
```

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

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

- 1** Press `▷` while `Print Settings >` is displayed.
- 2** Press `△` or `▽` repeatedly until `>Font Select >` appears.
- 3** Make sure that `Internal` is displayed and press `▷`.
- 4** Press `△` or `▽` repeatedly until `>>Size` appears.
- 5** Press **[OK]**. A blinking question mark (?) appears.
- 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 **[OK]**.
- 8** Press **[MENU]**. The display returns to `Ready`.

```
>Font Select >
  Internal
```

```
>>Pitch
      10.00 cpi
```

```
>>Pitch
      10.00 cpi
```

Character Pitch

You can set the character pitch for fixed fonts.

- 1 Press \triangleright while `Print Settings >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Font Select >` appears.
- 3 Make sure that `Internal` is displayed and press \triangleright .
- 4 Press \triangle or ∇ repeatedly until `>>Pitch` appears.
- 5 Press **[OK]**. A blinking question mark (?) appears.
- 6 Press \triangle 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 \triangleright or \triangleleft to move the cursor right and left.
- 7 When the desired size is displayed, press **[OK]**.
- 8 Press **[MENU]**. The display returns to `Ready`.

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

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

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 \triangleright while `Print Settings >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Code Set` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.
- 4 Press \triangle or ∇ until the desired character code set appears.
- 5 Press **[OK]**.
- 6 Press **[MENU]**. The display returns to `Ready`.

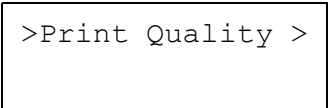
Print Quality (Setting print quality)

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)

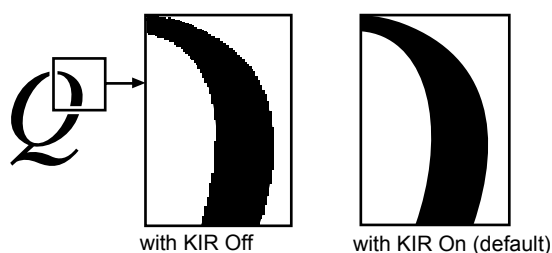
- 1 Press \triangleright while `Print Settings >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Print Quality >` appears.



```
>Print Quality >
```

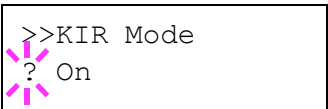
KIR Mode (Selecting the KIR mode)

This printer incorporates the KIR (Kyocera Image Refinement) smoothing function. KIR uses 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 7-45.

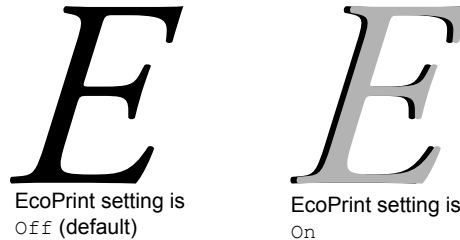
- 1 Press \triangleright while `>Print Quality >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>KIR Mode` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.
- 4 Select `On` or `Off` using \triangle or ∇ .
- 5 Press **[OK]**.
- 6 Press **[MENU]**. The display returns to `Ready`.



```
>>KIR Mode  
? On
```

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 EcoPrint mode. The default setting is Off.

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

The screenshot shows a printer's display with the text `>>EcoPrint Mode` on the top line and `? Off` on the bottom line. A pink question mark icon is positioned to the left of the text.

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

The screenshot shows a printer's display with the text `>>Resolution` on the top line and `? Fast 1200 mode` on the bottom line. A pink question mark icon is positioned to the left of the text.

- 4 Select `Fine 1200 mode`, `Fast 1200 mode`, `600 dpi` or `300 dpi` using the \triangle or ∇ .
- 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 \triangleright while `>Print Quality >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>Print Density` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.

The screenshot shows a printer's display with the text `>>Print Density` on the top line and `? 03` on the bottom line. A pink question mark icon is positioned to the left of the text.

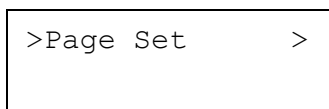
- 4 Select the print density from five steps from 01 (light) to 05 (dark) using the Δ or ∇ .
- 5 Press **[OK]**.
- 6 Press **[MENU]**. The display returns to *Ready*.

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 \triangleright while *Print Settings >* is displayed.
- 2 Press Δ or ∇ repeatedly until *>Page Set >* appears.

Copies (Number of copies)

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



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

Zoom (Reduce print)

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



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

In the reduction mode, printed barcodes may not be read.

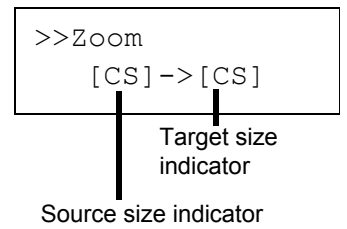
Bring up the Zoom menu. The following display will appear.

Source size indicator:

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

Target size indicator:

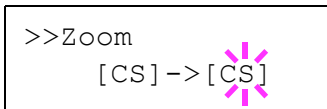
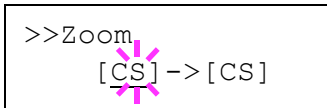
This is the paper size after reduction.
This must be the same as the paper size set for the paper cassette.



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

Source size indicator	Target size indicator
[CS] Current cassette size	[CS] [CS] 98%
[LG] Legal size (8-1/2 × 14 inches)	[LG] [LG] 98%
[LT] Letter size (8-1/2 × 11 inches)	[LT] [A4] [LT] 98%
[LD] Ledger size (11 × 17 inches)	[LD] [LD] 98%
[O2]	[O2]
[FO]	[FO]
[8K]	[8K]
[16K]	[16K]
[A5] (148 × 210 mm)	[A5] [A5] 98%
[B5] (182 × 257 mm)	[B5] [A5] [B5] 98%
[A4] (210 × 297 mm)	[A4] [LT] [B5] [A5] [A4] 98%
[B4] (257 × 364 mm)	[B4] [B5] [A4] [B4] 98%
[A3] (297 × 420 mm)	[A3] [A4] [B4] [A3] 98%

1 Press \triangleright while >Page Set > is displayed.

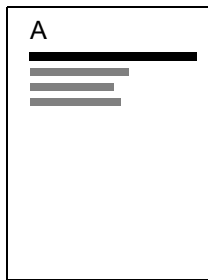


- 2** Press Δ or ∇ repeatedly until `>>Zoom` appears.
- 3** Press **[OK]**. A blinking cursor ($_$) appears under the source size.
- 4** Press Δ or ∇ to select source size. The both sizes change simultaneously.
- 5** Press \triangleright to move the cursor to the target size.
- 6** To make a reduced print, press Δ or ∇ to select the target size.
- 7** Press **[OK]**.
- 8** Press **[MENU]**. The display returns to `Ready`.

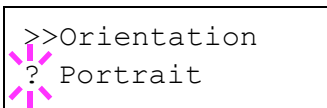
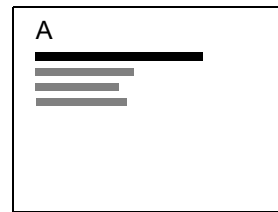
Orientation (Print orientation)

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

Portrait Orientation



Landscape Orientation



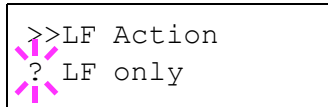
- 1** Press \triangleright while `>Page Set >` is displayed.
- 2** Press Δ or ∇ repeatedly until `>>Orientation` appears.
- 3** Press **[OK]**. A blinking question mark (?) appears.
- 4** Select `Portrait` or `Landscape` using Δ or ∇ .
- 5** Press **[OK]**.
- 6** Press **[MENU]**. The display returns 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 ∇ repeatedly until `>>LF Action` appears.
- 3** Press **[OK]**. A blinking question mark (?) appears.



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

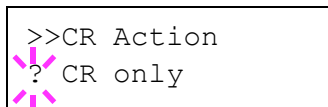
- 4** Press \triangle or ∇ repeatedly until the desired linefeed action appears.
- 5** When the desired action is displayed, press **[OK]**.
- 6** Press **[MENU]**. The display returns to `Ready`.

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 ∇ repeatedly until `>>CR Action` appears.
- 3** Press **[OK]**. A question mark (?) appears.



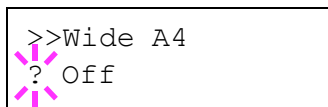
```
>>CR Action
? CR only
```

- 4** Press \triangle or ∇ 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 \triangleright while `>Page Set >` is displayed.
- 2** Press \triangle or ∇ repeatedly until `>>Wide A4` appears.
- 3** Press **[OK]**. A blinking question mark (?) appears.



```
>>Wide A4
? Off
```

- 4** Select `On` or `Off` using \triangle or ∇ .
- 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)



Note Check with your network administrator when selecting the 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 Δ or ∇ repeatedly until `Network >` appears.

```
Network >
```

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 \triangleright while `Network >` is displayed.
- 2 Press Δ or ∇ repeatedly until `>TCP/IP >` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.

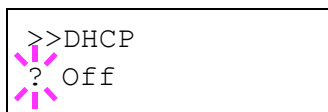
```
>TCP/IP  
? Off
```

- 4 Select **On** or **Off** using Δ or ∇ .
- 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 \triangleright while **>TCP/IP On >** is displayed.
- 2 Press Δ or ∇ repeatedly until **>>DHCP** appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.



- 4 Select **On** or **Off** using Δ or ∇ .
- 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.)

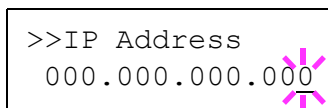
Specifically, an IP address is a bit string consisting of a host address (or host section) that identifies a computer (host) connected to the Internet and a network address (or network section) that identifies the network to which that computer belongs (or more specifically, the computer's network interface). 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 \triangleright while **>TCP/IP On >** is displayed.
- 2 Press Δ or ∇ repeatedly until **>>IP Address** appears.
- 3 Press **[OK]**. A blinking cursor (`_`) appears.



- 4 Press Δ or ∇ to increase or decrease, respectively, the value at the blinking cursor. You can set any value between **000** and **255**. Use \triangleleft and \triangleright 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 be 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 \triangleright while `>TCP/IP On >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>Subnet Mask` appears.
- 3 Press **[OK]**. A blinking cursor (`_`) appears.

```
>>Subnet Mask
000.000.000.000
```

- 4 Press \triangle or ∇ to increase or decrease, respectively, the value at the blinking cursor. You can set any value between 000 and 255. Use \triangleleft 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 \triangleright while `>TCP/IP On >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>Gateway` appears.
- 3 Press **[OK]**. A blinking cursor (`_`) appears.

```
>>Gateway
000.000.000.000
```

- 4 Press \triangle or ∇ to increase or decrease, respectively, the value at the blinking cursor. You can set any value between 000 and 255. Use \triangleleft and \triangleright to move the cursor right and left.
- 5 Display the desired gateway and press **[OK]**.
- 6 Press **[MENU]**. The display returns to Ready.

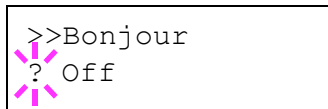
Bonjour (Bonjour setting)

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 \triangleright while `>TCP/IP On >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>Bonjour` appears.
- 3 Press **[OK]**. A blinking cursor (`_`) appears.



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

TCP/IP (IPv6) (IPv6 settings)

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

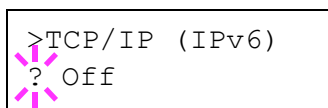
TCP/IP (IPv6) is based on the current Internet protocol, TCP/IP (IPv4). IPv6 is the next-generation Internet protocol and expands the available address space, which resolves the problem of the lack of addresses under IPv4, while also introducing other improvements such as additional security functionality 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 \triangleright while `Network >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>TCP/IP (IPv6) >` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.



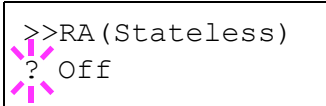
- 4 Select `On` or `Off` using \triangle or ∇ .
- 5 Select `On` and press **[OK]**. The display changes to the settings shown below.

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



```
>>RA(Stateless)
? Off
```

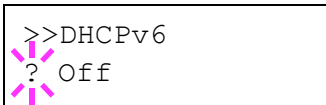
- 4 Select *On* or *Off* using \triangle or ∇ .
- 5 Press **[OK]**.
- 6 Press **[MENU]**. The display returns to *Ready*.

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



```
>>DHCPv6
? Off
```

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

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)



Note The `Hard Disk` and `Memory Card` menu are only displayed when a hard disk and CF card are installed in the printer.

- 1 Press **[MENU]**.
- 2 Press Δ or ∇ repeatedly until `Device Common >` appears.

```
Device Common >
```

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 Δ or ∇ repeatedly until `>MSG Language` appears. The default message language is `English`.
- 3 To change the language, press **[OK]**. A blinking question mark (?) appears.
- 4 Press Δ or ∇ . The display cycles through the available selection in the following order:
 - English
 - Français
 - Deutsch
 - Italiano
 - Nederlands
 - Español
 - Русский
 - Português
- 5 Press **[OK]**.
- 6 Press **[MENU]**. The display returns to `Ready`.

```
>MSG Language  
? English
```

Buzzer (Alarm (Buzzer) setting)

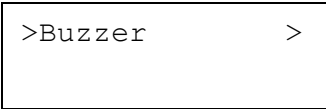
This function uses tones to notify the user of printer operations and the printer status. This setting is useful, for example, when the printer is located some distance from the user.

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 \triangleright while `Device Common >` is displayed.

2 Press \triangle or ∇ repeatedly until `>Buzzer >` appears.



>Buzzer >

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 \triangleright while `>Buzzer >` is displayed.

2 Press \triangle or ∇ repeatedly until `>>Key Confirm.` appears.

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



>>Key Confirm.
? On

4 Select `On` or `Off` using \triangle or ∇ .

5 Press **[OK]**.

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

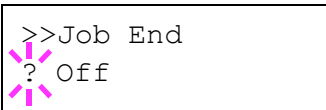
Job End (Job completed tone setting)

When `On` is selected in this setting, a tone sounds when printing ends. The default setting is `Off`.

1 Press \triangleright while `>Buzzer >` is displayed.

2 Press \triangle or ∇ repeatedly until `>>Job End` appears.

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



>>Job End
? Off

4 Select `On` or `Off` using \triangle or ∇ .

5 Press **[OK]**.

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



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 **Off**.

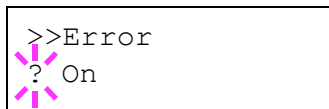
- 1 Press **▷** while **>Buzzer >** is displayed.
- 2 Press **△** or **▽** repeatedly until **>>Ready** appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.

- 4 Select **On** or **Off** using **△** or **▽**.
- 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 **△** or **▽** repeatedly until **>>Error** appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.



- 4 Select **On** or **Off** using **△** or **▽**.
- 5 Press **[OK]**.
- 6 Press **[MENU]**. The display returns to **Ready**.

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.

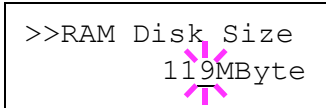
- 1 Press `>` while `Device Common >` is displayed.
- 2 Press `△` or `▽` repeatedly until `>RAM Disk Mode >` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.
- 4 Select `On` or `Off` using `△` or `▽`.
- 5 Press **[OK]**.
- 6 Press **[MENU]**. The display returns to `Ready`.

```
>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.



```
>>RAM Disk Size
119MByte
```

- 1 Press \triangleright while `>RAM Disk Mode On >` is displayed.
- 2 Press **[OK]**. The message display shows a blinking cursor (`_`). Press \triangle or ∇ to display the desired size. Definable RAM disk size is 001 to 512. Use \triangleleft and \triangleright to move the cursor right and left.

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 The `Hard Disk` menu options are only displayed when a hard disk is installed in the printer. If the optional hard disk is installed in the printer, the Job Box will be available.



```
>Hard Disk
>
```

- 1 Press \triangleright while `Device Common >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Hard Disk >` appears.

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

`>>Format ?`

- 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 8-7.



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

- 1 Press \triangleright while `Device Common >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Memory Card >` appears.

`>Memory Card >`

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.

```
>>Format ?
```

- 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)

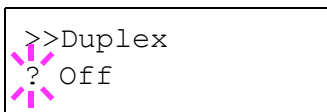
- 1 Press `▷` while `Device Common >` is displayed.
- 2 Press `△` or `▽` repeatedly until `>Error Handling >` appears.

```
>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. The default settings is Off.

On	<ul style="list-style-type: none">To print onto one-side of the paper only when this message is displayed, press [GO].Press [Cancel] to cancel the printing itself.
Off	<ul style="list-style-type: none">To print onto one-side of the paper.



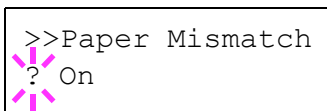
- 1 Press \triangleright while `>Error Handling >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>Duplex` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.
- 4 Select `On` or `Off` using \triangle or ∇ .
- 5 Press **[OK]**.
- 6 Press **[MENU]**. The display returns to `Ready`.

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

This interrupts printing by indicating Paper Mismatch when the paper sizes and/or types do not match between a print job and a paper source. This can be disabled if you want to continue printing even if the paper size or type you specified is different from the fixed paper source. The default setting is On.



Note This setting does not relate to the Size Error. The Size Error will be indicated when the Paper Size Dial and the actual paper size do not match. For details on Size Error, refer to *Error Message of Troubleshooting*.



- 1 Press \triangleright while `>Error Handling >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>Paper Mismatch` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.
- 4 Select `On` or `Off` using \triangle or ∇ .
On: stops printing and an error message appears
Off: continues printing
- 5 Press **[OK]**.
- 6 Press **[MENU]**. The display returns to `Ready`.

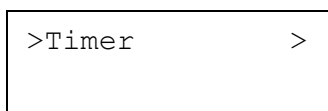
Timer (Timer setting)

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 \triangleright while `Device Common >` is displayed.
- 2** Press \triangle or ∇ repeatedly until `>Timer >` appears.

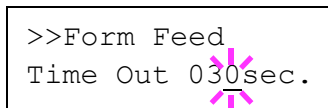


```
>Timer >
```

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 \triangleright while `>Timer >` is displayed.
- 2** Press \triangle or ∇ repeatedly until `>>Form Feed Time Out` appears.
- 3** Press **[OK]**. A blinking cursor (`_`) appears.



```
>>Form Feed  
Time Out 030sec.
```

- 4** Press \triangle 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 \triangleleft and \triangleright to move the cursor right and left.
- 5** Press **[OK]**.
- 6** Press **[MENU]**. The display returns to `Ready`.

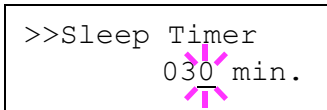
Sleep Timer (Sleep timer timeout time)

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 (FS-2020D/3920DN/4020DN)/5 minutes (FS-6970DN).



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



- 1 Press \triangleright while `>Timer >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>Sleep Timer` appears.
- 3 To change the timeout time, press **[OK]**. A blinking cursor (`_`) appears.
- 4 Press \triangle or ∇ to increase or decrease the value at the blinking cursor and set the desired time. The timer can be set between 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)

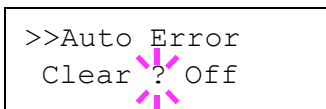
If an error that still allows you to continue printing occurs, the next received data is automatically printed after a set period of time elapses. For example, if the printer is shared over a network as a network printer and one person causes one of the above errors, after the set period of time elapses,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

The auto clear errors are:

- Memory overflow Press GO
- Print overrun Press GO
- KPDL error ## 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 `△` or `▽` repeatedly until `>>Auto Error Clear` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.



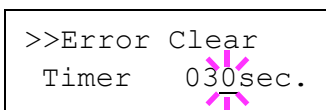
```
>>Auto Error  
Clear ? Off
```

- 4 Select `On` or `Off` using `△` or `▽`.
- 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 `△` or `▽` repeatedly until `>>Error Clear Timer` appears.
- 3 Press **[OK]**. A blinking cursor (`_`) appears.



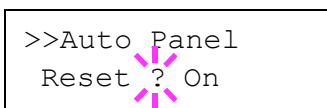
```
>>Error Clear  
Timer 030sec.
```

- 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]**.
- 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)*.



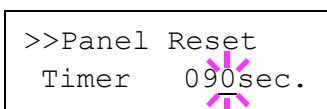
```
>>Auto Panel
Reset ? On
```

- 1 Press \triangleright while `>Timer >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>Auto Panel Reset` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.

- 4 Select `On` or `Off` using \triangle or ∇ .
- 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.

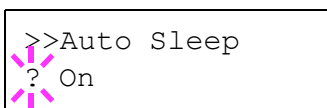


```
>>Panel Reset
Timer 090sec.
```

- 1 Press \triangleright while `>Timer >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>>Panel Reset Timer` appears.
- 3 Press **[OK]**. The message display shows a blinking cursor (`_`).
- 4 Press \triangle 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 \triangleleft and \triangleright 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.



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

- 1 Press \triangleright while `>Timer >` is displayed.
- 2 Press \triangle or ∇ 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 ∇ .
- 5 Press **[OK]**. The sleep timer is turned off.
- 6 Press **[MENU]**. The display returns to `Ready`.

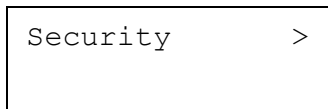
Security

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 Δ or ∇ 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 7-81.

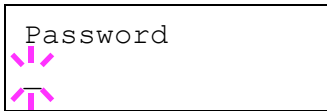
- 1 Press \triangleright while `Security >` is displayed.
- 2 The message display shows `ID` and a blinking cursor (`_`).



- 3 Press Δ or ∇ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified ID. Use \triangleleft and \triangleright 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)

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 7-81.



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 Δ or ∇ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified password. Use \triangleleft and \triangleright to move the cursor right and left. Enter a password consisting of between 0 and 16 numbers.



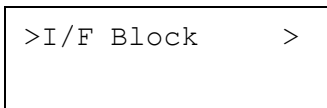
Note If you enter an incorrect administrator ID or password, the message `Wrong ID` or `Wrong Password` appears and the input screen then reappears. Re-enter the password correctly.

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:

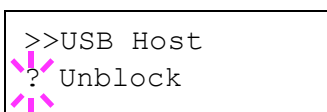
- USB Host (USB memory slot setting)
- USB Device (USB interface setting)
- Parallel I/F (Parallel interface)
- Option I/F (Network interface card setting)



1 After entering the administrator ID and password, press Δ 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 \triangleright while `>I/F Block >` is displayed. `>>USB Host` appears.

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

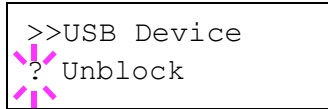
3 Select `Block` or `Unblock` using Δ or ∇ .

4 Press **[OK]**.

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

USB Device (USB interface setting)

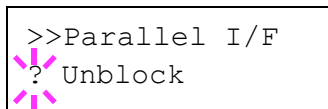
This locks and protects the USB interface. The default setting is Unblock.



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



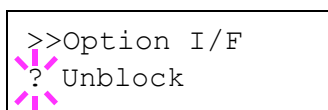
- 1 Press **▷** while **>I/F Block >** is displayed. **>>Parallel I/F** appears.
- 2 Press **[OK]**. A blinking question mark (?) appears.
- 3 Select **Block** or **Unblock** using **△** or **▽**.
- 4 Press **[OK]**.
- 5 Press **[MENU]**. The display returns to **Ready**.

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.
- 3 Select **Block** or **Unblock** using **△** or **▽**.
- 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.

```
>NetWare >
```

```
>NetWare >  
? On
```

- 1 After entering the administrator ID and password, press Δ or ∇ repeatedly until `>NetWare >` appears.
- 2 Press **[OK]**. A blinking question mark (?) appears.
- 3 Select *On* or *Off* using Δ or ∇ .
- 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*.

```
>>Frame Type  
? Auto
```

- 1 Press \triangleright while `>NetWare On >` is displayed. `>>Frame Type` appears.
- 2 Press **[OK]**. A blinking question mark (?) appears.
- 3 Press Δ 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*.

AppleTalk (AppleTalk setting)

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

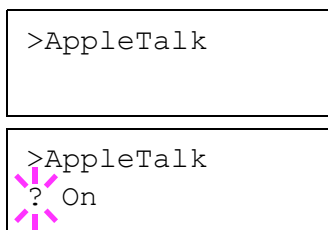
AppleTalk assigns 24-bit network addresses (a 16-bit network section and an 8-bit node address) that are used to identify devices (computers, printers, etc.) on the network.

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*.



Note Check with your network administrator when selecting network settings.



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

IPP (IPP setting)

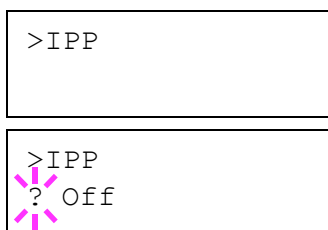
IPP (Internet Printing Protocol) is a standard that uses TCP/IP networks such as the Internet to enable print jobs to be sent between remote computers and printers.

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 Δ or ∇ repeatedly until *>IPP* appears.
- 2 Press **[OK]**. A blinking question mark (?) appears.
- 3 Select *On* or *Off* using Δ or ∇ .
- 4 Press **[OK]**.
- 5 Press **[MENU]**. The display returns to *Ready*.

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.

```
>SSL Server
```

```
>SSL Server  
? Off
```

- 1 After entering the administrator ID and password, press Δ or ∇ repeatedly until `>SSL Server` appears.
- 2 Press **[OK]**. A blinking question mark (?) appears.
- 3 Select *On* or *Off* using Δ or ∇ .
- 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*.

```
>>DES  
? Off
```

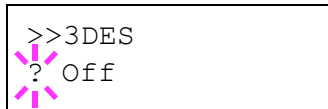
- 1 Press \triangleright while `>SSL Server On >` is displayed. `>>DES` appears.
- 2 Press **[OK]**. A blinking question mark (?) appears.
- 3 Select *On* or *Off* using Δ or ∇ .
- 4 Press **[OK]**.
- 5 Press **[MENU]**. The display returns to *Ready*.

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



- 3 Select *On* or *Off* using \triangle or ∇ .
- 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 \triangleright while `>SSL Server On >` is displayed. `>>AES` appears.
- 2 Press **[OK]**. A blinking question mark (?) appears.



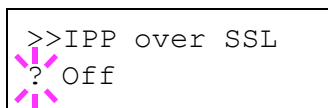
- 3 Select *On* or *Off* using \triangle or ∇ .
- 4 Press **[OK]**.
- 5 Press **[MENU]**. The display returns to *Ready*.

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 \triangleright while `>SSL Server On >` is displayed. `>>IPP over SSL` appears.
- 2 Press **[OK]**. A blinking question mark (?) appears.



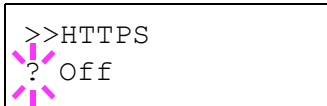
- 3 Select *On* or *Off* using \triangle or ∇ .
- 4 Press **[OK]**.
- 5 Press **[MENU]**. The display returns to *Ready*.

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 \triangleright while *>SSL Server On >* is displayed. *>>HTTPS* appears.

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

3 Select *On* or *Off* using \triangle or ∇ .

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.

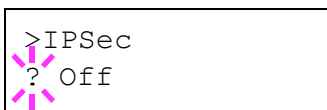


Note IPv4 uses 32-bit IP addresses and IPv6 uses 128-bit IP addresses.

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 ∇ repeatedly until *>IPSec* appears.

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

3 Select *On* or *Off* using \triangle or ∇ .

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.

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 Δ or ∇ repeatedly until Job Accounting > appears.



Job Accounting >

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 -81*.

- 1 Press \triangleright while Job Accounting > is displayed.
- 2 The message display shows ID and a blinking cursor (_).



ID
_

- 3 Press Δ or ∇ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified ID. Use \triangleleft and \triangleright to move the cursor right and left. Enter an ID consisting of between 1 and 16 numbers.

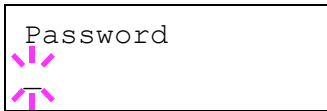


Note If you enter an incorrect administrator ID, the Wrong ID message appears and the input screen then reappears. Re-enter the ID correctly.

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

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 -81*.



- 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 Δ or ∇ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified password. Use \triangleleft and \triangleright to move the cursor right and left. Enter a password consisting of between 0 and 16 numbers.

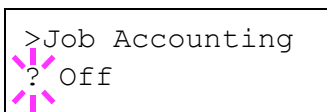


Note If you enter an incorrect administrator ID or password, the message `Wrong ID` or `Wrong Password` appears and the input screen then reappears. Re-enter the ID or password correctly.

- 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 `Off`. The default setting is `Off`.



- 1 After entering the administrator ID and password, press Δ or ∇ repeatedly until `>Job Accounting` appears.

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

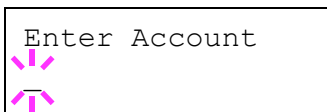
- 3 Select `On` or `Off` using Δ or ∇ .

- 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 Δ or ∇ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified account ID. Use \triangleleft and \triangleright 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.

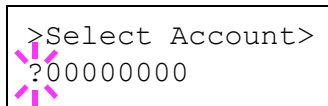
Select Account (Department-specific settings)

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 \triangleright while `Job Accounting >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Select Account>` appears.
- 3 Press **[OK]**. A blinking question mark (?) appears.



```
>Select Account>
?00000000
```

- 4 Each time you press \triangle or ∇ , the next registered account ID in the sequence appears.
- 5 Display the desired account ID and press **[OK]**. Press \triangleright , the display changes to the individual department setting screen.

Counter (Account-specific counter management)

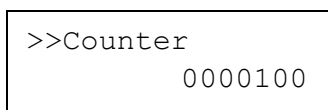
Displays the total number of pages printed for the currently selected account.

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

- 1 Set the account ID and then press \triangle 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`.



```
>>Counter
      0000100
```

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 \triangle or ∇ repeatedly until `>>Restriction` appears.

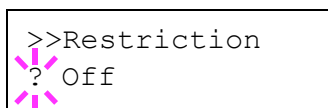
- 2 Press **[OK]**. A blinking question mark (?) appears.

- 3 Press \triangle or ∇ 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.

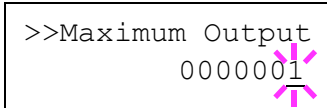
- 5 Press **[MENU]**. The display returns to `Ready`.



```
>>Restriction
? Off
```

Maximum Output (Maximum print output setting)

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

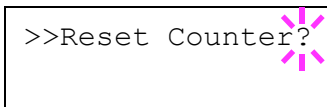


>>Maximum Output
0000001

- 1 Set the account ID and then press Δ or ∇ repeatedly until >>Maximum Output appears.
- 2 Press **[OK]**. The message display shows a blinking cursor ().
- 3 Press Δ 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 \triangleleft and \triangleright 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.



>>Reset Counter?

- 1 Set the account ID and then press Δ or ∇ 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.

Add Account (Department registration)

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

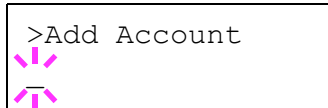
IMPORTANT Because account IDs are managed as numeric strings, "1" and "001" are handled as different accounts. Also, once Job Accounting is enabled, no jobs are printed unless information is attached showing the accounts from which the jobs are being printed.

- 1 Press \triangleright while `Job Accounting >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Add Account` appears.
- 3 Press **[OK]**. The message display shows a blinking cursor (`_`).
- 4 Press \triangle 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 \triangleleft and \triangleright 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`.

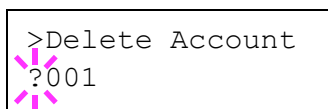


Delete Account (Department removal)

You can use this to delete a registered account.

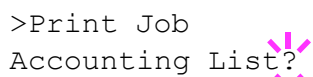
IMPORTANT Because account IDs are managed as numeric strings, "1" and "001" are handled as different accounts. Also, once Job Accounting is enabled, no jobs are printed unless information is attached showing the accounts from which the jobs are being printed.

- 1 Press \triangleright while `Job Accounting >` is displayed.
- 2 Press \triangle or ∇ repeatedly until `>Delete Account` appears.
- 3 Press **[OK]**. A blinking question mark (`?`) appears. (E.g.: `001`)
- 4 Each time you press \triangle or ∇ , 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.



>Print Job
Accounting List?

- 1 Press \triangleright while `Job Accounting >` is displayed.
- 2 Press \triangle or ∇ 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 a user who can use the printer and manage other users.

When using the Security and Job Accounting functions, the administrator ID and password set here are authenticated, and settings can be specified after they are properly authenticated.

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 Δ or ∇ 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 \triangleright while `Admin >` is displayed.

2 The message display shows `ID` and a blinking cursor (`_`).



3 Press Δ or ∇ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified ID. Use \triangleleft and \triangleright 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)

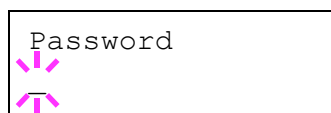
You can use this to set the administrator password. The default setting is the numeric part of your printer's model name. If you use FS-2020D, enter "2020".

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 Δ or ∇ to increase or decrease, respectively, the value at the blinking cursor. Enter the specified password. Use \triangleleft and \triangleright 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.



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 Δ or ∇ repeatedly until `Adjust/Maintenance >` appears.

```
Adjust/      >
Maintenance
```

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 \triangleright while `Adjust/Maintenance >` is displayed.
- 2** Press Δ or ∇ repeatedly until `>Restart Printer` appears.
- 3** Press **[OK]**. A question mark (?) appears.

```
>Restart
Printer ?
```

- 4** Press **[OK]** again. `Self test` appears while the printer is resetting itself, followed by `Ready`.

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 refreshing 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 \triangleright while `Adjust/Maintenance >` is displayed.
- 2** Press \triangle or ∇ repeatedly until `>Service >` appears.

```
>Service >
```

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 \triangleright while `>Service >` is displayed.
- 2** Press \triangle or ∇ repeatedly until `>>Print Status Page` appears.
- 3** Press **[OK]**. A question mark (?) appears.

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

- 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 \triangleright while `>Service >` is displayed.
- 2** Press \triangle or ∇ repeatedly until `>>Print Network Status Page` appears.
- 3** Press **[OK]**. A question mark (?) appears.

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

- 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.

>>Print
Test Page ?

- 1** Press \triangleright while `>Service >` is displayed.
- 2** Press \triangle or ∇ 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.

8 Options

This chapter explains the options for this printer.

General Information	8-2
Expansion Memory Modules	8-4
Paper Feeder (PF-310)	8-6
Paper Feeder (PF-430)	8-6
CompactFlash (CF) Card	8-7
Other Options	8-9

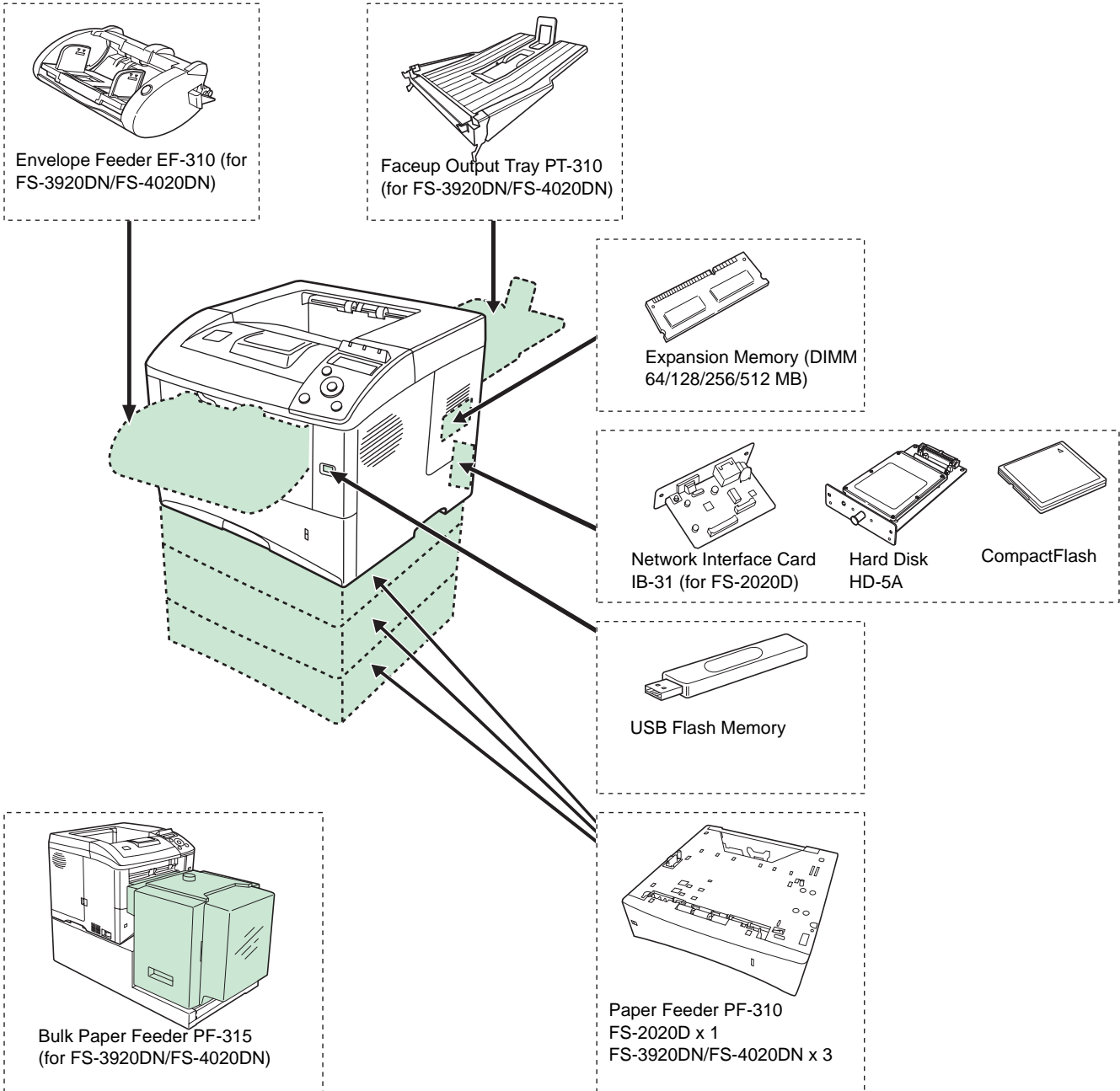
General Information


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.



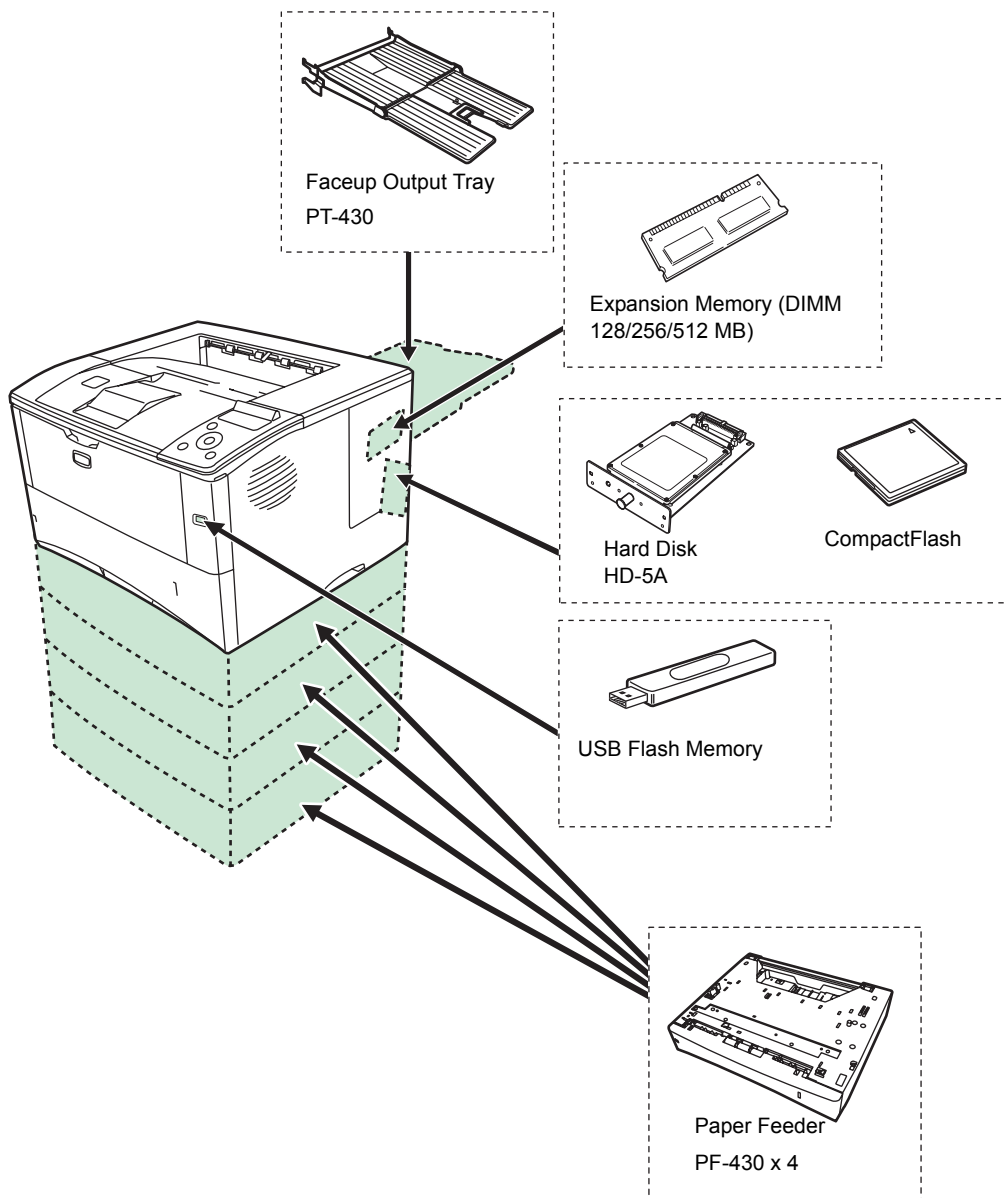
Note Install the memory module before installing the optional paper feeder (PF-310).

FS-2020D/3920DN/4020DN



 **Note** Install the memory module before installing the optional paper feeder (PF-430).

FS-6970DN



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.



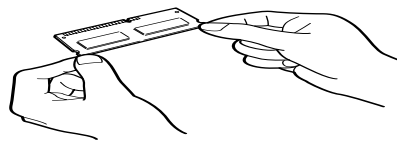
Note The expansion memory should only be installed by your service technician. We shall not be liable for any damages caused by improper installation of expansion memory.

Precautions for handling the memory module

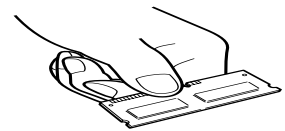
To protect electronic parts, discharge static electricity from your body by touching a water pipe (faucet) or other large metal object before handling the memory module. Or, wear an antistatic wrist strap, if possible, when you install the memory module.

Always hold the main controller board or a memory module by its edges as shown below to avoid damaging electronic parts.

Correct

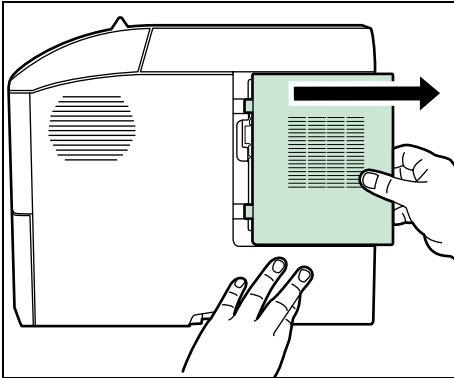


Incorrect

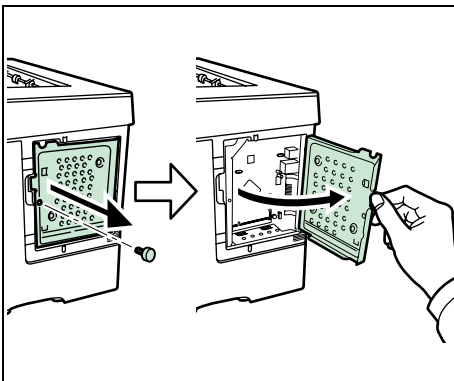


Installing the Memory Module

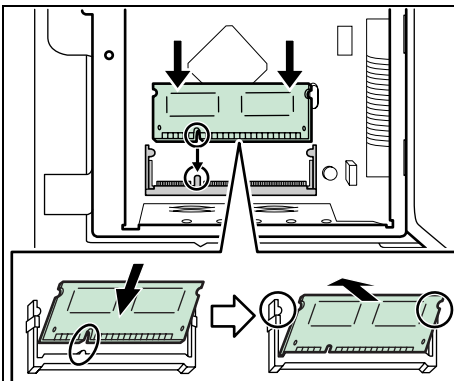
- 1 Turn off the printer and disconnect the power cord and printer cable.
- 2 Remove the right cover.



- 3 Remove the screw and open the inner cover.



- 4 Remove the memory module from its package.
- 5 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

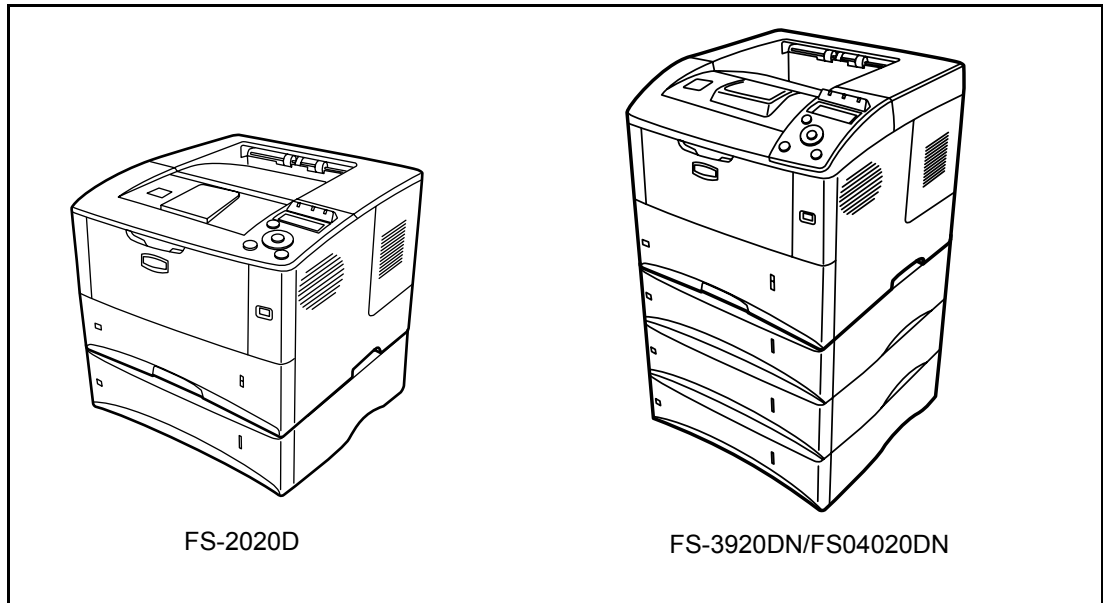
To remove a memory module, remove the right cover and the memory slot cover from the printer. Then, carefully push out the two socket clamps. Ease the memory module out of the socket to remove.

Verifying the expanded memory

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

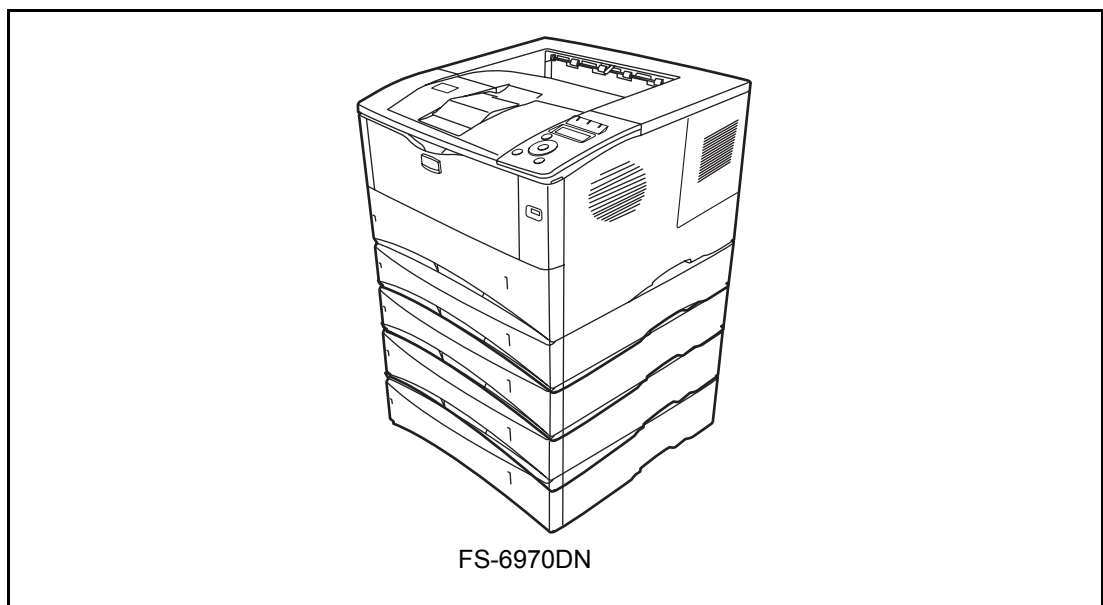
Paper Feeder (PF-310)

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/m²) paper. This feeder is attached at the bottom of the printer as shown on below.



Paper Feeder (PF-430)

The PF-430 paper feeder allows you to add four 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 250 sheets of ISO A4, ISO A5, JIS B5, letter, and legal size (80g/m²) paper. This feeder is attached at the bottom of the printer as shown on below.



CompactFlash (CF) Card

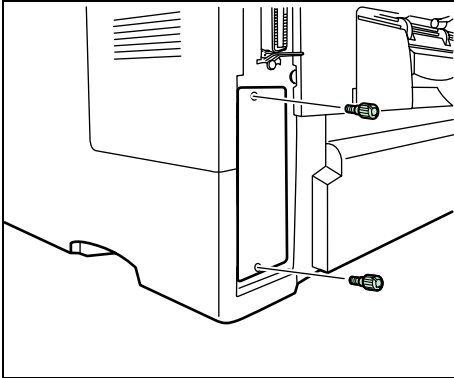
The printer is equipped with a slot for a CF card with the maximum size of 256MB. A CF card is useful for storing fonts, macros, and overlays.

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

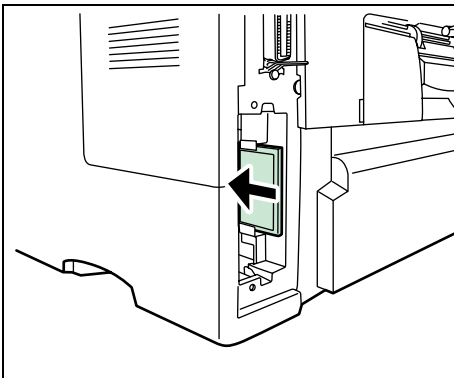


CAUTION Before inserting a CF card in the printer, make sure that the printer is switched off.

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



- 3 Install the CompactFlash card into the slot.



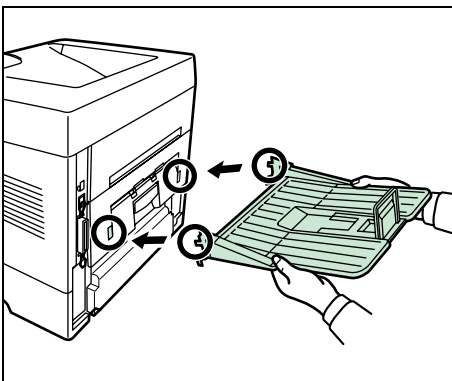
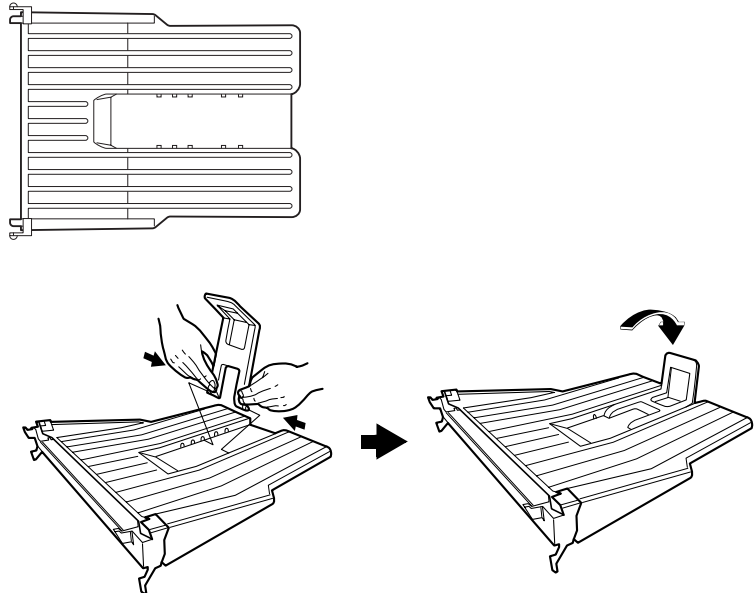
- 4 Secure the option interface slot cover with screws removed in step 2.

Faceup Output Tray (FS-3920DN/4020DN: PT-310; FS-6970DN: PT-430)

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 7-19.

USB Flash Memory

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

9 Computer Interface

This chapter contains explanations on the following topics:

General Information	9-2
Parallel Interface	9-2
USB Interface	9-2
Network Interface	9-3

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 Netables 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.

10 Appendix

This section lists the following information of this printer.

Specifications	10-2
Environmental Standard Requirements	10-4

Specifications



Note These specifications are subject to change without notice.

Item	Description				
	FS-2020D	FS-3920DN	FS-4020DN	FS-6970DN	
Type	Desktop				
Printing Method	Semiconductor laser and electrophotography				
Paper Weight	Cassette	60 to 120 g/m ²			
	MP Tray	60 to 220 g/m ²			
Paper Type	Cassette	Plain, Preprinted, Bond, Recycled, Rough, Letterhead, Color (Colour), Prepunched, High Quality, and Custom (1 to 8)			
	MP Tray/Manual Feed	Plain, Transparency, Preprinted, Labels, Bond, Recycled, Rough, Vellum, Letterhead, Color (Colour), Prepunched, Envelope, Cardstock, Thick paper, High Quality, and Custom (1 to 8)			
Paper Size	Cassette	A4, A5, JIS B5, Letter, Legal, Folio, Oficio II, Statement, ISO B5, Envelope C5, Executive, 16 kai, Custom (140 × 210 to 216 × 356mm)	A4, A5, JIS B5, A6, Letter, Legal, Folio, Oficio II, Statement, ISO B5, Envelope C5, Executive, 16 kai, Custom (105 × 148 to 216 × 356mm)	Ledger, Legal, Letter, A3, A4, B4, A5, JIS B5, A5, A6, Folio, Oficio II, Statement, Envelope C4, Envelope C5, ISO B5, Executive, 8 kai, 16 kai, Custom (148 × 210 to 297 × 432mm)	
	MP Tray	A4, JIS B5, A5, Folio, Legal, Letter, Oficio II, Statement, Executive, A6, JIS B6, ISO B5, Envelope C5, Envelope #10, Envelope #9, Envelope #6, Envelope Monarch, Envelope DL, Hagaki, Ofuku-Hagaki, 16K, Yokei 2, Yokei 4, Custom (70 × 148 to 216 × 356mm)		Ledger, Legal, Letter, A3, A4, B4, A5, JIS B5, A5, A6, Folio, Oficio II, Envelope Monarch, Envelope #10, Envelope DL, Statement, Envelope C4, Envelope C5, ISO B5, Executive, Envelope #9, Envelope #6, Hagaki, Ofuku-Hagaki, 8 kai, 16 kai, Yokei 2, Yokei 4, Custom (70 × 148 to 297 × 450mm)	
Magnification ratio	25 to 400%, 1% increments				
Printing Speed	Simplex	A6: 21 ppm*	A6: 22 ppm	A6: 23 ppm	A4: 35 ppm
		A5: 21 ppm	A5: 22 ppm	A5: 23 ppm	A5: 35 ppm
		A4: 35 ppm	A4: 40 ppm	A4: 45 ppm	A3: 17 ppm
		Letter: 37 ppm	Letter: 42 ppm	Letter: 47 ppm	-
		Legal: 28 ppm	Legal: 33 ppm	Legal: 38 ppm	-
	Duplex	A4: 17.5 ppm	A4: 24.5 ppm	A4: 32.5 ppm	A4: 24.5 ppm
		Letter: 18.5 ppm	Letter: 26 ppm	Letter: 34 ppm	A5-R: 16 ppm
				A3: 10.5 ppm	

Item		Description			
		FS-2020D	FS-3920DN	FS-4020DN	FS-6970DN
First Print Time (A4, feed from Cassette)		9 seconds or less	10.5 seconds or less	10.5 seconds or less	9 seconds or less when EcoFuser is Off and the printer is in Ready status. 24 seconds or less when EcoFuser is On or the printer is in sleep mode
Warm-up Time (22°C/71.6°F, 60%RH)	Power on	17 seconds or less	17 seconds or less	17 seconds or less	15 seconds or less
	Sleep	15.5 seconds or less	15 seconds or less	15 seconds or less	15 seconds or less
Paper Capacity	Cassette	500 sheets (80 g/m ²)			250 sheets (80 g/m ²)
	MP Tray	100 sheets (80 g/m ²)			100 sheets (80 g/m ²)
Output Tray Capacity	Top Tray	250 sheets (80 g/m ²)	500 sheets (80 g/m ²)		250 sheets (80 g/m ²)
	Face-up Tray	-	PT-310: 250 sheets (80 g/m ²)		
Continuous printing		1 to 999 sheets			
Resolution		Fine 1200 mode, Fast 1200 mode, 600 dpi, 300 dpi			
Operating Environment	Temperature	10 to 32.5°C/50 to 90.5°F			
	Humidity	15 to 80 %			
	Altitude	2,500 m/8,202 ft maximum			
	Brightness	1,500 lux maximum			
Controller		PowerPC 440/533 MHz	PowerPC 440/600 MHz	PowerPC 440/667 MHz	PowerPC 440/600 MHz
Supported OS		Windows 2000 Service Pack 2 or later, Windows Server 2003, Windows XP, Windows Vista, Mac OS X 10.x			
Interface	Standard	Parallel: 1 (IEEE1284) Hi-Speed USB: 1 Full-speed USB: 1 (USB flash memory slot) KUIO/W slot	Parallel: 1 (IEEE1284) Hi-Speed USB: 1 Network: 1(10BASE-T/100BASE-TX) Full-speed USB: 1 (USB flash memory slot) KUIO/W slot		
	Option	IB-31: 10/100BASE-TX	-	-	-
PDL		PRESCRIBE			
Emulation		PCL 6, KPDL, KPDL (AUTO), Line Printer, IBM Proprinter, DIABLO 630, EPSON LQ-850			PCL 6, KPDL, KPDL (AUTO), Line Printer, IBM Proprinter, DIABLO 630, EPSON LQ-850, KC-GL
Memory	Standard	128MB			
	Maximum	1152MB			

Item		Description			
		FS-2020D	FS-3920DN	FS-4020DN	FS-6970DN
Dimension (W x D x H)		382 x 394 x 285 mm 15 1/16 x 15 1/2 x 11 1/4"	382 x 394 x 320 mm 15 1/16 x 15 1/2 x 12 5/8"		469 x 395 x 285 mm 18 1/2 x 15 9/16 x 11 1/4"
Weight (without toner container)		16.2 kg/35.7 lb	16.8 kg/37 lb		19.5 kg/43 lb
Power Requirements		120 V AC, 60 Hz, 7.6 A/ 220 to 240 V AC, 50/60 Hz, 4.1 A	120 V AC, 60 Hz, 7.7 A/ 220 to 240 V AC, 50/60 Hz, 4.2 A	120 V AC, 60 Hz, 7.7 A/ 220 to 240 V AC, 50/60 Hz, 4.3 A	220 to 240 V AC, 50/60 Hz, 3.9 A
Power Consumption	Maximum	947 W (U.S.A./Canada), 1004 W (European countries)	964 W (U.S.A./Canada), 1022 W (European countries)	970 W (U.S.A./Canada), 1029 W (European countries)	976 W
	During printing	543 W (U.S.A./Canada), 560 W (European countries)	658 W (U.S.A./Canada), 641 W (European countries)	682 W (U.S.A./Canada), 667 W (European countries)	516 W
	During standby	9.1 W (U.S.A./Canada), 9.2 W (European countries) when EcoFuser is On.	9.4 W (U.S.A./Canada), 9.5 W (European countries) when EcoFuser is On.	9.4 W (U.S.A./Canada), 9.9 W (European countries) when EcoFuser is On.	9.6 W when EcoFuser is On
		69 W (U.S.A./Canada), 68 W (European countries) when EcoFuser is Off.	76 W when EcoFuser is Off.	80 W (U.S.A./Canada), 79 W (European countries) when EcoFuser is Off.	67 W when EcoFuser is Off.
	Sleep mode	5.5 W (U.S.A./Canada), 5.7 W (European countries)	5.5 W (U.S.A./Canada), 5.9 W (European countries)	6.3 W (U.S.A./Canada), 6.4 W (European countries)	-
	Power off	0 W			0 W
Options		Expanded memory, Paper Feeder (500-sheet x 1), Hard disk (HD-5A)	Expanded memory, Paper Feeder (500-sheet x 3), Hard disk (HD-5A)		Expanded memory, Paper Feeder (250-sheet x 4), Hard disk (HD-5A)

*. Only applicable to feeding from MP tray.

Environmental Standard Requirements

This machine conforms to the following environmental standard requirements.

- Time for switching to Sleep mode (default):
15 minutes (FS-2020D/3920DN/4020DN)/5 minutes (FS-6970DN)
- Duplex Printing: Standard Equipment
- Durable paper for feeding: Paper made of 100% recycled paper



Note Contact your Dealer or Service Representative for recommended paper types.

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, KPDLE, KPDLE (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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<Memo>

<Memo>

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