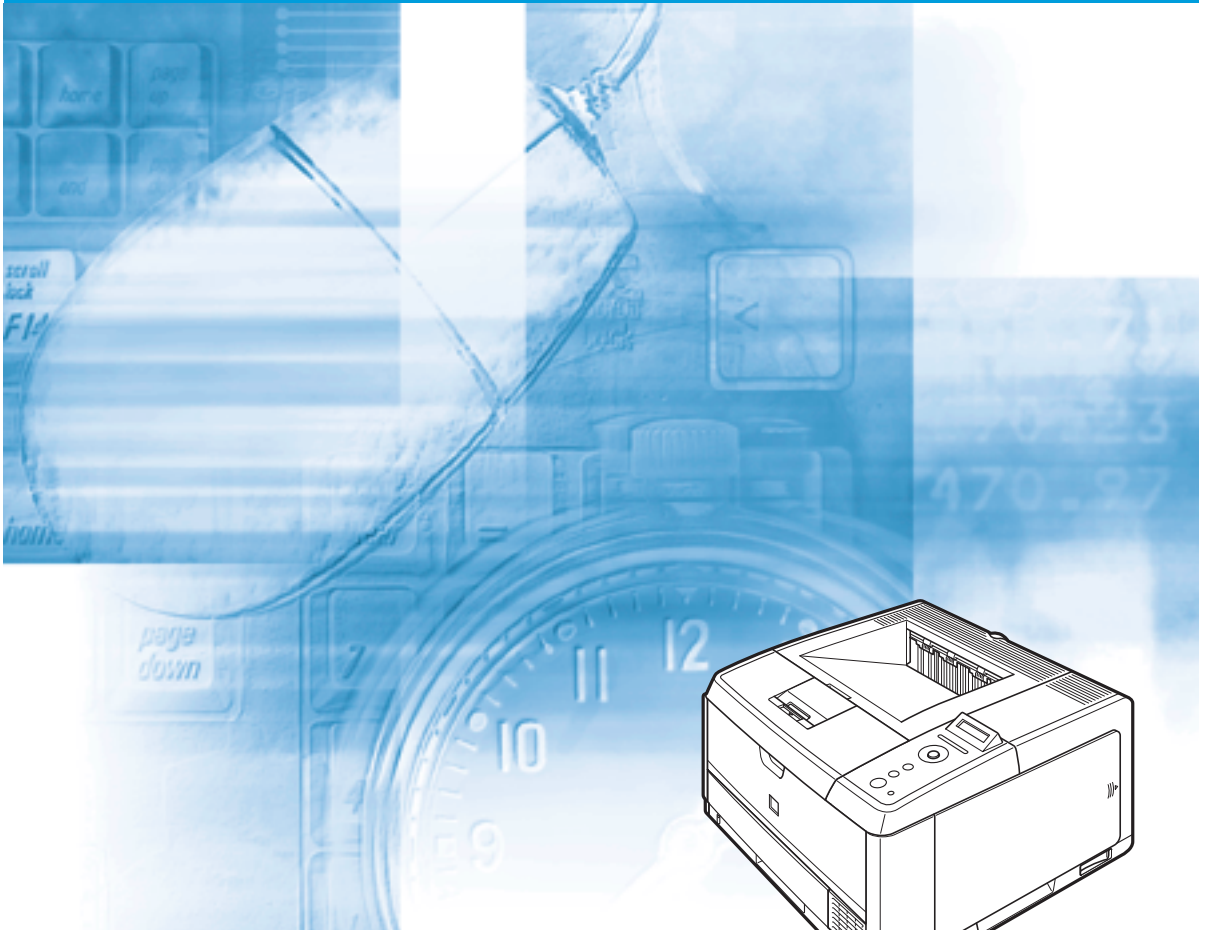# Canon

Laser Beam Printer

LASER SHOT
LBP 3460 *Automatic Image Refinement*

User's Guide

IMPORTANT:
Read this manual carefully before using your printer.
Save this manual for future reference.

ENG

LBP3460
Laser Printer
User's Guide

Manuals for the Printer

The manuals for this printer are arranged as follows. Please refer to them for detailed information.

Guides with this symbol are printed manuals.

Guides with this symbol are PDF manuals included on the accompanying CD-ROM.

- **Installation**
- **Connecting to a Computer**

Getting Started Guide

- **Basic Operations**
- **Troubleshooting**

User's Guide (This Manual)

- **Setting Up the Network Environment for Printing**
- **Managing the Printer in the Network Environment**

Network Guide

- **Operating/Setting the Printer from the Web Browser**

Remote UI Guide

To view the manuals in PDF format, Adobe Reader/Adobe Acrobat Reader is required. If Adobe Reader/Adobe Acrobat Reader is not installed on your system, please download it from the Adobe Systems Incorporated website.

How This Manual Is Organized

Chapter 1   **Before You Start**

Chapter 2   **Using the Printer**

Chapter 3   **Loading and Outputting Paper**

Chapter 4   **The Printing Environment**

Chapter 5   **Printing Environment Settings**

Chapter 6   **Routine Maintenance**

Chapter 7   **Troubleshooting**

Chapter 8   **Appendix**

Considerable effort has been made to ensure that this manual is free of inaccuracies and omissions. However, as we are constantly improving our products, if you need an exact specification, please contact Canon.

Contents

Chapter 2   Using the Printer

Chapter 3   Loading and Outputting Paper

Chapter 4   The Printing Environment

Chapter 5   Printing Environment Settings

Chapter 6   Routine Maintenance

Chapter 7   Troubleshooting

Chapter 8   Appendix

Preface

Thank you for purchasing the Canon LASER SHOT LBP3460.
Please read this manual thoroughly before operating the printer in order to familiarize yourself with its capabilities, and to make the most of its many functions.
After reading this manual, store it in a safe place for future reference.

How To Use This Manual

Symbols Used in This Manual

The following symbols are used in this manual to explain procedures, restrictions, handling precautions, and instructions that should be observed for safety.

⚠ WARNING   Indicates a warning concerning operations that may lead to death or injury to persons if not performed correctly.
In order to use the printer safely, always pay attention to these warnings.

⚠ CAUTION   Indicates a caution concerning operations that may lead to injury to persons, or damage to property if not performed correctly.
In order to use the printer safely, always pay attention to these cautions.

✋ IMPORTANT   Indicates operational requirements and restrictions.
Be sure to read these items carefully in order to operate the printer correctly, and to avoid damage to the printer.

✎ NOTE   Indicates a clarification of an operation, or contains additional explanations for a procedure.
Reading these notes is highly recommended.

Keys and Buttons Used in This Manual

The following button names are a few examples of how keys and buttons to be pressed are expressed in this manual:

• Keys on the Control Panel: [Key Name]

  Example: [Online]
        [Utility]

• Buttons on Computer Operation Screen : [Button Name]

  Example: [OK]
        [Details]

Illustrations Used in This Manual

- The toner cartridge used for the illustrations in this manual is the one that can print approximately 6,000 pages (Canon Genuine Cartridge).
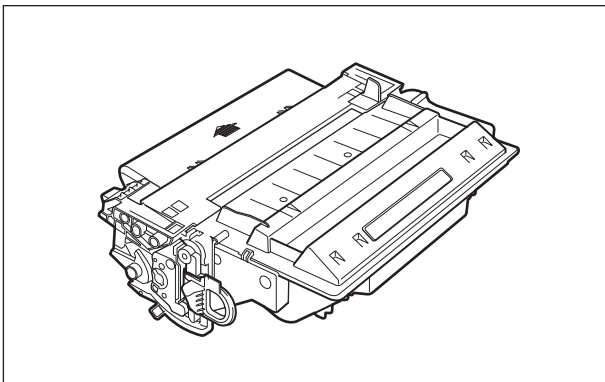
- The names of the indicators and keys are described in English in the illustrations of the control panel used in this manual.
The panel cover on which the names of the indicators or keys on the control panel are indicated is supplied with the printer depending on the country or region.
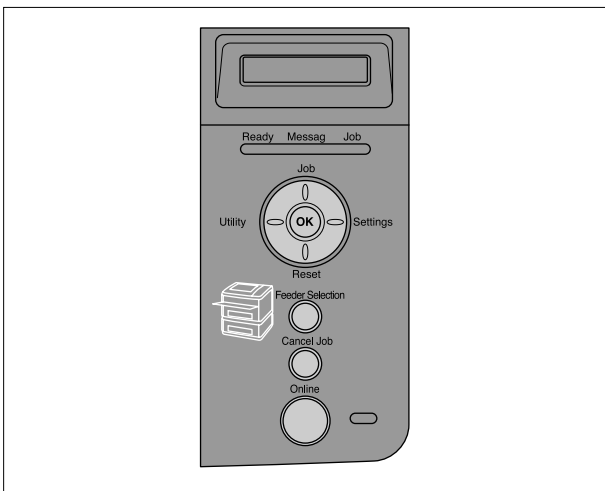
Operating Systems

For details on the procedures, instructions, and so on for Windows 7 and Server 2008, refer to those for Windows Vista.

For details on the latest status of the supported operating systems and Service Pack, see the Canon Web site (http://www.canon.com/).

Abbreviations Used in This Manual

In this manual, product names and model names are abbreviated as follows:

Microsoft Windows 98 operating system:	Windows 98
Microsoft Windows Millennium Edition operating system:	Windows Me
Microsoft Windows NT operating system:	Windows NT
Microsoft Windows 2000 operating system:	Windows 2000
Microsoft Windows XP operating system:	Windows XP
Microsoft Windows Server 2003 operating system:	Windows Server 2003
Microsoft Windows Vista operating system:	Windows Vista
Microsoft Windows Server 2008 operating system:	Windows Server 2008
Microsoft Windows 7 operating system:	Windows 7
Microsoft Windows operating system:	Windows
LASER SHOT LBP3460:	LBP3460

Legal Notices

EMC Directive (220 - 240 V model)

"This equipment has been tested in a typical system to comply with the technical requirements of EMC Directive."

• Use of shielded cable is necessary to comply with the technical requirements of EMC Directive.

The product is in conformity with the EMC directive at nominal mains input 230 V, 50 Hz although the rated input of the product is 220 - 240 V, 50/60 Hz.

C-tick marking ⓥ on the rating label means that we declare the product is in conformity with the relevant requirements at nominal mains input 230 V, 50 Hz although the rated input of the product is 220 - 240 V, 50/60 Hz.

Laser Safety (220 - 240 V model)

Laser radiation could be hazardous to the human body. For this reason, laser radiation emitted inside this printer is hermetically sealed within the protective housing and external cover. No radiation can leak from the printer in the normal operation of the product by the user.

This printer is classified as a Class 1 laser product under IEC60825-1:1993, EN60825-1:1994, and as for the U.S.A., it is classified as Class 1 under the Code of Federal Regulations, 1040.10 of Title 21.
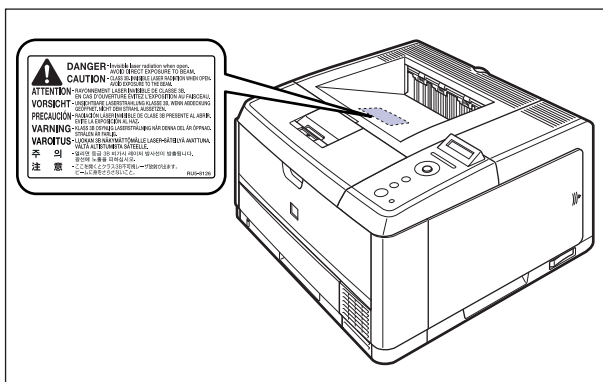
This printer has been classified under IEC60825-1:1993, EN60825-1:1994 and conforms to the following classes:

CLASS 1 LASER PRODUCT
LASER KLASSE 1
APPAREIL A RAYONNEMENT LASER DE CLASSE 1
APPARECCHIO LASER DI CLASSE 1
PRODUCTO LASER DE CLASE 1
APARELHO A LASER DE CLASSE 1

⚠ **CAUTION**

Performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

International Energy Star-Program

As an ENERGY STAR Partner, Canon Inc. has determined that this product meets the ENERGY STAR Program for energy efficiency.

The International ENERGY STAR Office Equipment Program is an international program that promotes energy saving through the use of computers and other office equipment.

The program backs the development and dissemination of products with functions that effectively reduce energy consumption. It is an open system in which business proprietors can participate voluntarily.

The targeted products are office equipment, such as computers, displays, printers, facsimiles, and copiers. The standards and logos are uniform among participating nations.

WEEE Directive

European Union (and EEA) only.

This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2002/96/EC) and your national law. This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, approved WEEE scheme or your household waste disposal service. For more information regarding return and recycling of WEEE products, please visit www.canon-europe.com/environment.

(EEA: Norway, Iceland and Liechtenstein)

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- Money Orders
- Certificates of Deposit
- Postage Stamps (canceled or uncanceled)
- Identifying Badges or Insignias
- Selective Service or Draft Papers
- Checks or Drafts Issued by Governmental Agencies
- Motor Vehicle Licenses and Certificates of Title

- Travelers Checks
- Food Stamps
- Passports
- Immigration Papers
- Internal Revenue Stamps (canceled or uncanceled)
- Bonds or Other Certificates of Indebtedness
- Stock Certificates
- Copyrighted Works/Works of Art without Permission of Copyright Owner

⚠ Important Safety Instructions

Please read these "Important Safety Instructions" thoroughly before operating the printer. As these instructions are intended to prevent injury to the user or other persons or destruction of property, always pay attention to these instructions. Also, since it may result in unexpected accidents or injuries, do not perform any operation unless otherwise specified in the manual. Improper operation or use of this machine could result in personal injury and/or damage requiring extensive repair that may not be covered under your Limited Warranty.

Installation

⚠ **WARNING**

- **Do not install the printer near alcohol, paint thinner, or other flammable substances. If flammable substances come into contact with electrical parts inside the printer, it may result in a fire or electrical shock.**

- **Do not place the following items on the printer. If these items come into contact with a high-voltage area inside the printer, this may result in a fire or electrical shock. If these items are dropped or slipped inside the printer, immediately turn OFF the power switch ① and disconnect the USB cable ② if it is connected. Then, unplug the power plug from the AC power outlet ③ and contact your local authorized Canon dealer.**

  - Necklaces and other metal objects

- Cups, vases, flowerpots, and other containers filled with water or liquids
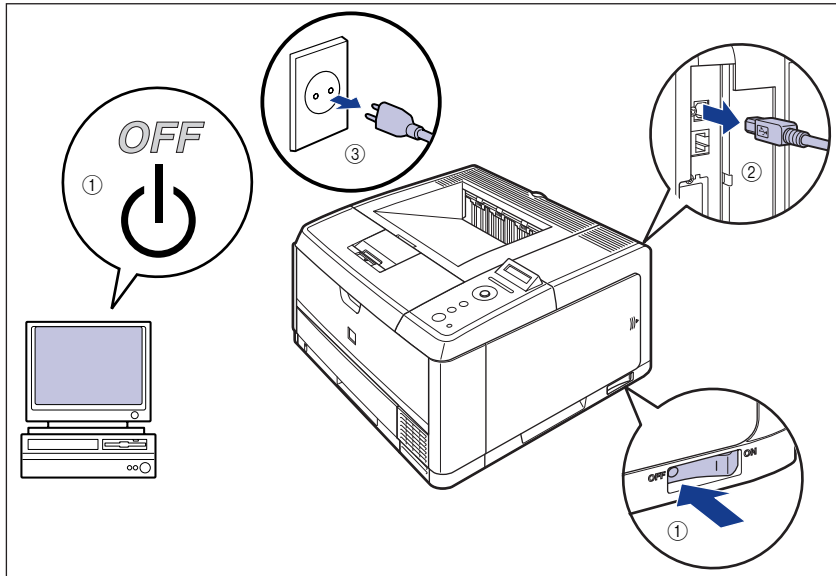
⚠ **CAUTION**

- Do not install the printer in unstable locations, such as unsteady platforms or inclined floors, or in locations subject to excessive vibrations, as this may cause the printer to fall or tip over, resulting in personal injury.

- Never block the ventilation slots on the printer. The ventilation slots are provided for proper ventilation of working parts inside the printer. Never place the printer on a soft surface, such as a sofa or rug. Blocking the ventilation slots can cause the printer to overheat, resulting in a fire.

- Do not install the printer in the following locations, as this may result in a fire or electrical shock.

  - A damp or dusty location
  - A location exposed to smoke and steam such as cookeries and humidifiers
  - A location exposed to rain or snow
  - A location near water faucets or water
  - A location exposed to direct sunlight
  - A location subject to high temperatures
  - A location near open flames

- When installing the printer, gently lower the printer onto the floor or other machine to avoid catching your hands, as this may result in personal injury.

- When connecting the interface cable, connect it properly following the instructions in this manual. If not connected properly, this may result in malfunction or electrical shock.

- When moving the printer, follow the instructions in this manual to hold it correctly. Failure to do so may cause you to drop the printer, resulting in personal injury. (See "Moving the Printer," on p. 6-27)

Power Supply

⚠️ **WARNING**

- **Do not damage or modify the power cord. Also, do not place heavy objects on the power cord, or pull on or excessively bend it, as this could cause electrical damage and result in a fire or electrical shock.**

- **Keep the power cord away from a heat source; failure to do this may cause the power cord coating to melt, resulting in a fire or electrical shock.**

- **Do not plug or unplug the power plug with wet hands, as this may result in electrical shock.**

- **Do not plug the power cord to a multiplug power strip, as this may cause a fire or electrical shock.**

- **Do not bundle up or tie the power cord in a knot, as this may result in a fire or electrical shock.**

- **Insert the power plug completely into the AC power outlet, as failure to do so may result in a fire or electrical shock.**

- **Do not use power cords other than the power cord provided, as this may result in a fire or electrical shock.**

- **As a general rule, do not use extension cords or plug extension cords to a multiple power strip. If extension cords must be used or plugged to a multiple power strip, however, use them observing the following points on user's own authority. If you use extension cords improperly, this may result in a fire or electrical shock.**

  - **Do not connect one extension cord to another.**

  - **Make sure that the voltage of the power plug is the one indicated in the rating label (attached on the back of the printer) when you use the printer.**

  - **Use an extension cord that allows the current value greater than the necessary one indicated in the rating label (attached on the back of the printer).**

  - **When you use an extension cord, untie the cord binding, and insert the power plug completely into the extension cord outlet to ensure a firm connection between the power cord and the extension cord.**

  - **Periodically check that the extension cord is not overheated.**

⚠️ **CAUTION**

- **Do not use power supplies with voltages other than those specified herein, as this may result in a fire or electrical shock.**

- **Always grasp the plug when unplugging the power cord. Pulling on the power cord may expose or snap the core wire, or otherwise damage the power cord. If the power cord is damaged, this could cause current to leak, resulting in a fire or electrical shock.**

- **Leave sufficient space around the power plug so that it can be unplugged easily. If objects are placed around the power plug, you will be unable to unplug it in an emergency.**

Handling

⚠ WARNING

- **Do not attempt to disassemble or modify the printer. There are high-temperature and high-voltage components inside the printer which may result in a fire or electrical shock.**

- **Electrical equipment can be hazardous if not used properly. To avoid injury, do not allow children access to the interior of any electrical product and do not let them touch any electrical contacts or gears that are exposed.**

- **If the printer makes strange noises, or emits smoke, heat or unusual smells, immediately turn OFF the printer and computer, and disconnect the USB cable if it is connected. Then, unplug the power plug from the AC power outlet and contact your local authorized Canon dealer. Otherwise, this may result in a fire or electrical shock.**

- **Do not use highly flammable sprays near the printer. If gas from these sprays comes into contact with the electrical components inside the printer, it may result in a fire or electrical shock.**

- **Always turn OFF the printer and computer, and disconnect the interface cables when moving the printer. Otherwise, the power cord or interface cables may be damaged, resulting in a fire or electrical shock.**

- **Do not drop paper clips, staples, or other metal objects inside the printer. Also, do not spill water, liquids, or flammable substances (alcohol, benzene, paint thinner, etc.) inside the printer. If these items come into contact with a high-voltage area inside the printer, this may result in a fire or electrical shock. If these items are dropped or slipped inside the printer, immediately turn OFF the printer and computer, and disconnect the USB cable if it is connected. Then, unplug the power plug from the AC power outlet and contact your local authorized Canon dealer.**

- **When plugging or unplugging the USB cable when the power plug is plugged in an AC power outlet, do not touch the metal part of the connector, as this may result in electrical shock.**

⚠ CAUTION

- **Do not place heavy objects on the printer, as they may tip over or fall resulting in personal injury.**

- **Be careful when handling the main board and RAM. Touching the edges or a sharp portion of the main board and RAM may result in personal injury.**

- **Turn OFF the power switch for safety when the printer will not be used for a long period of time such as overnight. Also, turn OFF the power switch on the right of the printer and unplug the power plug for safety when the printer will not be used for an extended period of time such as during consecutive holidays.**

- **Keep your hands or clothing away from the roller in the output area. Even if the printer is not printing, sudden rotation of the roller may catch your hands or clothing, resulting in personal injury.**

- **The laser beam can be harmful to human bodies. 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. Read the following remarks and instructions for safety.**

- **Never open covers other than those instructed in this manual.**
- **Do not remove the caution label attached to the cover of the laser scanner unit.**
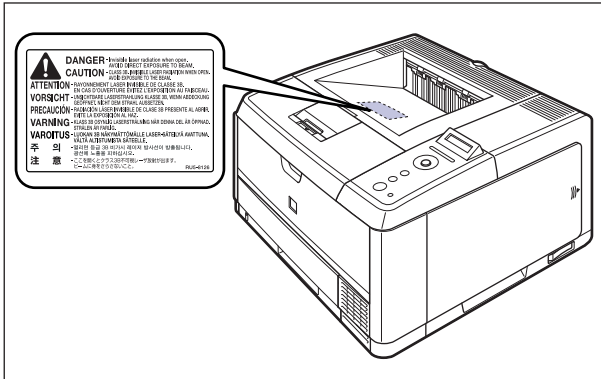
- **If the laser beam escapes from the printer, exposure may cause serious damage to your eyes.**

Maintenance and Inspections

⚠ **WARNING**
- **When cleaning the printer, turn OFF the printer and computer, remove the USB cable, and then unplug the power plug. Failure to observe these steps may result in a fire or electrical shock.**
- **Unplug the power plug from the AC power outlet regularly, and clean the area around the base of the power plug's metal pins and the AC power outlet with a dry cloth to ensure that all dust and grime is removed. If the power plug is plugged for a long period of time in a damp, dusty, or smoky location, dust can build up around the power plug and become damp. This may cause a short circuit and result in a fire.**
- **Clean the printer using a slightly dampened cloth with water or a mild detergent diluted with water. Do not use alcohol, benzene, paint thinner, or other flammable substances. If flammable substances come into contact with electrical parts inside the printer, it may result in a fire or electrical shock.**
- **There are some areas inside the printer which are subject to high-voltages. When removing jammed paper or when inspecting the inside of the printer, do not allow necklaces, bracelets, or other metal objects to touch the inside of the printer, as this may result in burns or electrical shock.**
- **Do not throw a used toner cartridge into open flames, as this may cause the toner remaining inside the cartridge to ignite, resulting in burns or a fire.**

⚠ **CAUTION**
- **Never attempt to service this printer yourself, except as explained in this manual. There are no user serviceable parts inside the printer. Adjust only those controls that are covered in the operating instructions. Improper adjustment could result in personal injury and/or damage requiring extensive repair that may not be covered under your Limited Warranty.**

- **The fixing unit and its surroundings inside the printer become hot during use. When removing jammed paper or when inspecting the inside of the printer, do not touch the fixing unit and its surroundings, as doing so may result in burns or electrical shock.**
- **When removing jammed paper or replacing a toner cartridge, take care not to allow the toner to come into contact with your hands or clothing, as this will dirty your hands or clothing. If they become dirty, wash them immediately with cold water. Washing with warm water will set the toner and make it impossible to remove the toner stains.**
- **When removing paper jammed inside the printer, remove the jammed paper gently to prevent the toner on the paper from scattering and getting into your eyes or mouth. If the toner gets into your eyes or mouth, wash them immediately with cold water and immediately consult a physician.**
- **When loading paper or removing jammed paper, take care not to cut your hands with the edges of the paper.**
- **When removing a used toner cartridge from the toner cartridge slot, remove the cartridge carefully to prevent the toner from scattering and getting into your eyes or mouth. If the toner gets into your eyes or mouth, wash them immediately with cold water and immediately consult a physician.**

Consumables

⚠️ **WARNING**
- **Do not throw a used toner cartridge into open flames, as this may cause toner remaining inside the cartridge to ignite and result in burns or a fire.**
- **Do not store a toner cartridge or copy paper in places exposed to open flames, as this may cause the toner or paper to ignite and result in burns or a fire.**

⚠️ **CAUTION**
Keep toner cartridges and other consumables out of the reach of small children. If these items are ingested, consult a physician immediately.

Others

⚠️ **WARNING**
The toner cartridge generates a low level magnetic field. If you use a cardiac pacemaker and feel abnormalities, please move away from the toner cartridge and consult your physician immediately.

Before You Start

1 CHAPTER

This chapter describes the major features and basic functions of this printer.

Features and Benefits

This chapter describes the major features.

Standard Features

■ High-speed Printing
By mounting a newly-developed high-speed controller on the 33ppm high-speed engine, LBP3460 achieves super high-speed data processing. By improving the "TypeWing" function that enables a quick start due to the adoption of "On-demand Fixing System" and high-speed output of the TrueType fonts, LBP3460 has increased the printing speed on fast printing and multiple page printing as well as copy mode printing that achieves fine high-speed printing.

"On-demand Fixing System" is the Canon-developed technology which enables instantaneous heating of the fusing heater only prior to printing.

■ Superior Print Quality
High resolution printing at 600 dpi (dots per inch) is further enhanced by Automatic Image Refinement to smooth jagged edges in addition to using super fine toner.

Combined, these will ensure superior reproduction quality of text and graphics.

■ Software Compatibility and Language Switching
The printer supports Hewlett-Packard's PCL 5e PCL 6 printer languages, which enables the printer to work with a wide variety of software applications supporting PCL. This printer also supports UFR II. UFR II, a printing system compatible with the latest operating systems, distributes the printing process to a computer and printer, achieving a high-speed print output. Also, a high-speed print output is enabled without expanding the printer memory.

■ Paper Handling
In addition to the standard multi-purpose tray and universal cassette, optional 500-sheet paper feeders are available, enabling the continuous automatic feeding of up to 850 sheets of paper of 3 different sizes (When paper that weighs 64 g/m^2 is used).

Moreover, by installing the duplex unit as standard, you can perform automatic 2-sided printing on the paper loaded in the multi-purpose tray or a paper cassette. By doing so, you can save paper and make the file space more efficient.

■ **Energy Saving**

The on-demand fusing technology of the printer provides improved energy efficiency.

Because of this power saving feature, the printer meets the guidelines for the International Energy Star Program.

■ **Reducing Toner Consumption**

To save toner, you can select toner save to print rough drafts using less toner. The printed page is much lighter, similar to the toner save mode found on many dot matrix printers.

■ **Interface Features**

The printer uses a USB port that supports Microsoft Plug & Play technology. It also comes with a print server as standard, being used as a network printer for Ethernet.

■ **Typefaces**

The printer comes with 80 scalable typefaces in 27 typeface families (Agfa 80 MicroType fonts), all compatible with application software supporting Microsoft Windows. In addition, 10 bitmapped typefaces of the Line Printer family are also included. The printer uses the Universal Font Scaling Technology (UFST) for outline fonts, provided under license from Agfa Monotype Corporation. 31 TrueType screen fonts are also included along with Canon Font Manager for easy management of installed fonts in Microsoft Windows 98/Me and Windows NT/2000/XP.

■ **Printer Drivers and Utilities**

LBP3460 is provided with the printer driver for PCL 5e/PCL 6 that supports Windows 98/ Me/NT 4.0/2000/XP/Server 2003/Vista and UFR II Printer Driver that supports Windows 2000/XP/Server 2003/Vista and Mac OS X, allowing you to print from a various kinds of system environment.

Also, NetSpot Device Installer supplied with LBP3460 simplifies the management and settings of the printer on a network environment.

■ **Remote UI Support**

The printer supports a Remote UI function that allows you to control or monitor the status of the printer from a computer. (See the Remote UI Guide.)

Features and Benefits   **1-3**

Optional Equipment

Below is a list of the options available for this printer. For more information, consult your local authorized Canon dealer.

■ Paper Feeder

This printer is supplied with 2 paper sources: the paper cassette and multipurpose tray. By installing the optional paper feeder, up to 3 paper sources can be used.

The paper feeder unit PF-36 consists of a paper feeder and paper cassette.

The paper cassette can be loaded with up to approximately 500 sheets of plain paper (64 g/m^2) at sizes of A4, B5, A5, Legal, Letter, Executive, and paper at the following custom paper sizes.

- When loading paper in portrait orientation: Width 148.0 to 215.9 mm; Length 210.0 to 355.6 mm
- When loading paper in landscape orientation: Width 210.0 to 215.9 mm; Length 210.0 to 215.9 mm

■ Expansion RAM

Expansion RAM is an extended memory that expands the amount of memory. This printer comes with 64 MB of memory. One expansion RAM module can be added, and the memory capacity can be expanded up to a maximum of 320 MB.

Parts and Their Functions

This printer consists of components that perform various functions. This section describes the name and function of each part in order for you to use this printer properly to make full use of its functions.

Printer

The following are the parts and functions of the printer unit.

⚠ CAUTION

Never block the ventilation slots on the printer. The ventilation slots are provided for proper ventilation of working parts inside the printer. Blocking the ventilation slots can cause the printer to overheat, resulting in a fire.

Front View

The following are the parts on the front side of the printer and their functions.

📝 NOTE

Remove the film attached to the control panel before using the panel.
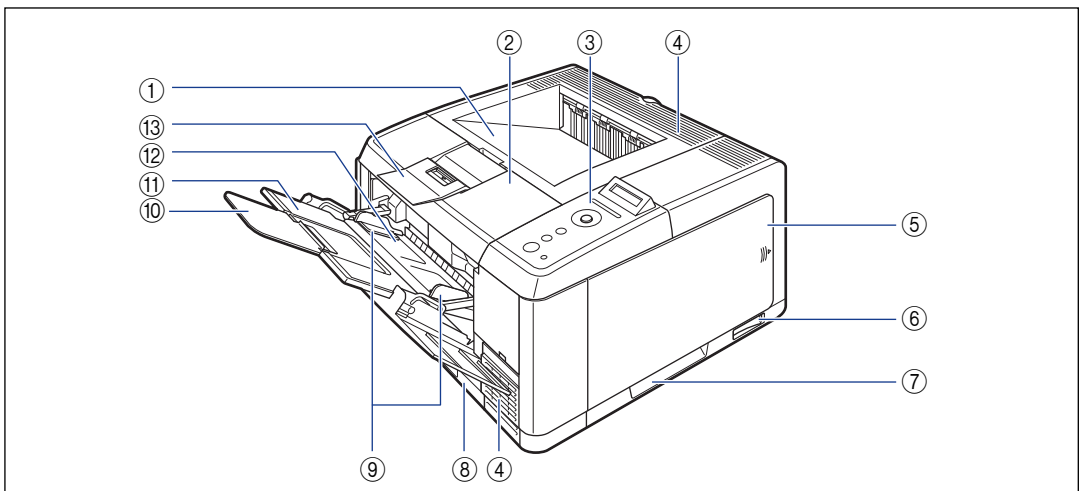
① **Face-down Output Tray**

Outputs paper with the printed side facing down. (See p. 3-15)

② **Front Cover**

Opened when replacing the toner cartridge or removing jammed paper. (See p. 6-4)

③ **Control Panel**

Displays the printer status and allows you to specify the settings. (See p. 1-8)

④ **Ventilation Slots**

Cool the insides of the printer.

⑤ **Right Cover**

Opened when installing an optional RAM module. Make sure that the right cover is attached before using the printer.

⑥ **Power Switch**

Turns the power of the printer ON/OFF. (See p. 2-2)

⑦ **Lift Handles**

Hold these handles when moving the printer. (See p. 6-29)

⑧ **Paper Cassette**

Can be loaded with up to 250 sheets of plain paper (of 64 g/m^2). (See p. 3-21)

⑨ **Paper Guides**

Adjust the position of the paper guides to the width of the paper loaded in the multi-purpose tray. You can load paper up to the load limit marks on this tray.

⑩ **Extension Tray**

Opened to prevent the paper from hanging out of the multi-purpose tray when loading long-size paper, such as A4.

⑪ **Auxiliary Tray**

Pulled out when loading paper in the multi-purpose tray. Be sure to pull out this auxiliary tray before loading the paper.

⑫ **Multi-purpose Tray**

Load paper when feeding the paper from the multi-purpose tray. (See p. 3-38)

⑬ **Face-down Output Tray Support**

Opened to prevent the paper from hanging out of the tray when loading long-size paper, such as Legal size paper, in the face-down output tray.

Rear View

The following are the parts on the rear side of the printer and their functions.
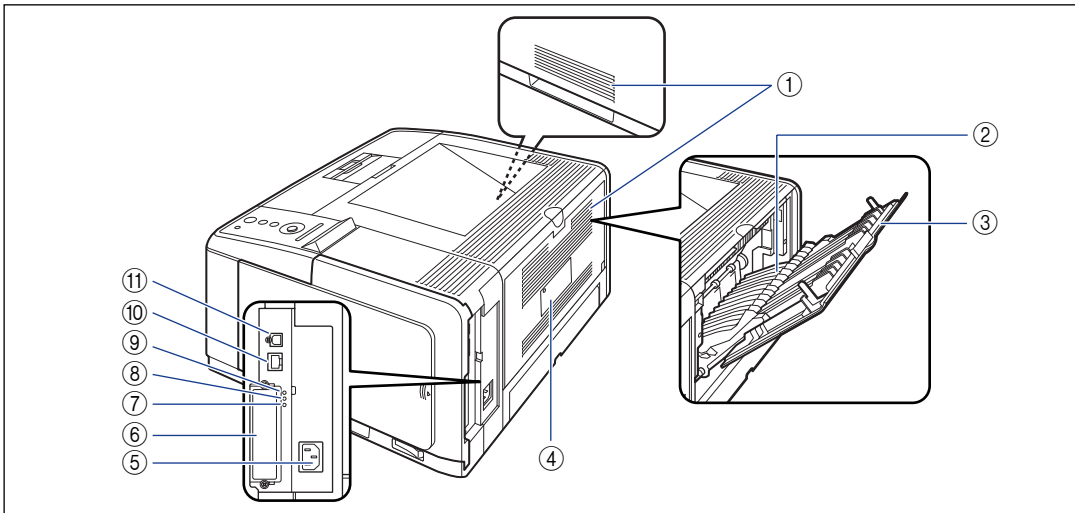
① **Ventilation Slots**

Cool the insides of the printer.

② **Face-up Output Tray**

Outputs paper with the printed side facing up. (See p. 3-17)

③ **Extension Tray**

Pulled out when outputting paper to the face-up output tray. Be sure to pull out this extension tray before outputting the paper.

④ **Rating Label**

The current value indicated in this rating label shows the average power current consumption.

⑤ **Power Socket**

Connect the supplied power cord to this socket.

⑥ **Expansion Slot**

Cannot be used.

⑦ **TX/RX Indicator (Green)**

Blinks while the print server is communicating.

⑧ **10 Indicator (Green)**

Comes on when the printer is connected to a network by 10BASE-T.

⑨ **100 Indicator (Green)**

Comes on when the printer is connected to a network by 100BASE-TX.

⑩ **LAN Connector**

Connects to a 10BASE-T/100BASE-TX LAN cable.

⑪ **USB Connector**

Connected to the USB cable. Connect the other end of the cable to the USB port on the computer.

Inner View

The following are the parts inside the printer and their functions.
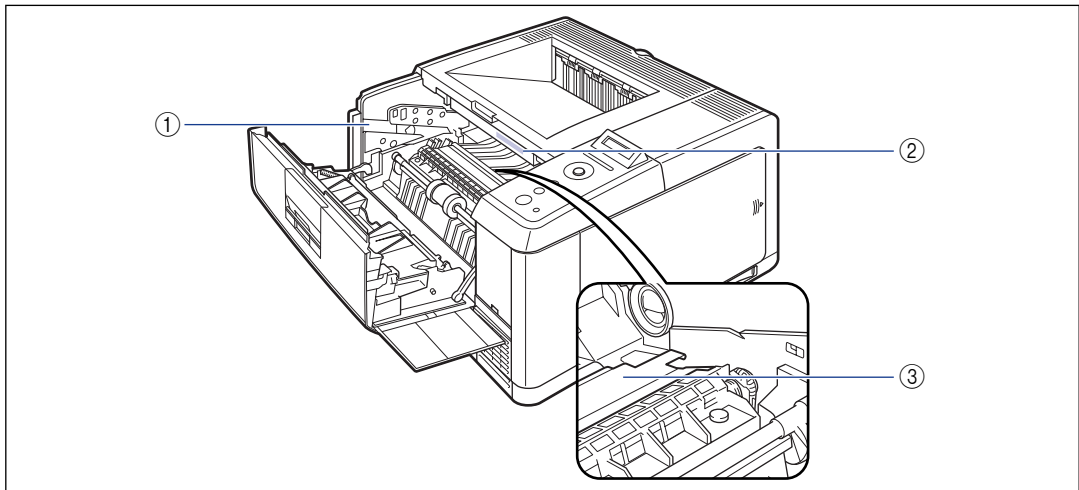
① **Toner Cartridge Guide**

When setting the toner cartridge, push it while aligning the projections on each side of the toner cartridge with this guide. (See p. 6-11)

② **Serial No. Label**

The serial number (Serial No.) for printer identification is indicated on this label. The number is required for receiving service or repairs.

③ **Transport Guide**

Raised when removing paper jammed in the front cover. (See p. 7-10)

Control Panel

The control panel on the top of the printer allows you to check the printer status and use the printer functions.
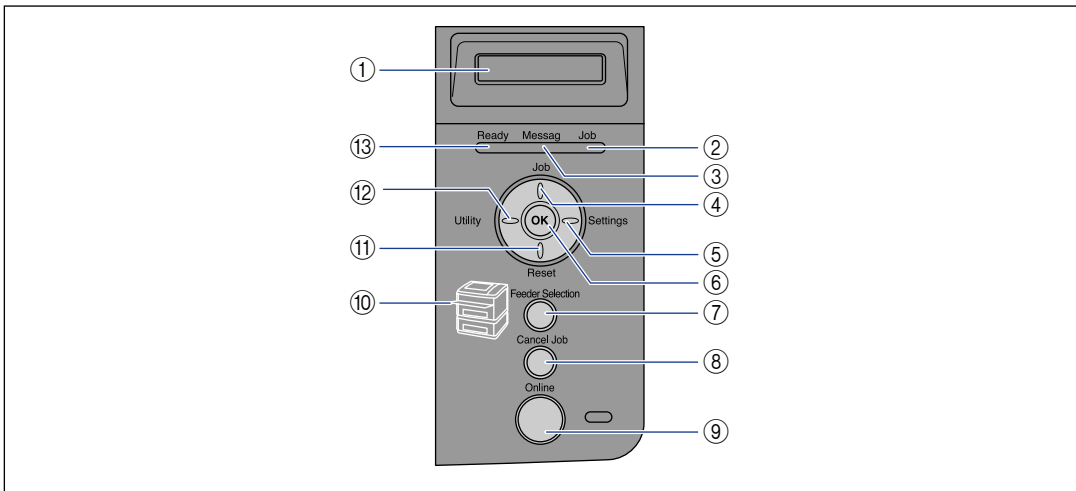
① **Display**

Displays the printer status, messages, the settings and setting values of the menu functions. (See p. 1-10)

② **Job Indicator (Green)**

On:
The printer is receiving print data, or any print data remains in the printer memory.
Blinking:
The printer is processing print data.
Off:
There is no print data in the printer memory.

③ **Message Indicator (Orange)**

On:
The printer cannot print because a problem has occurred in the printer. (If the printer has entered Save Power Mode when it is offline, only the Message indicator (orange) is on, and all the other indicators are off.)
Off:
The printer is in a normal state.

④ **[Job] (▲) Key**

On offline:
Does not function when the printer is offline.
On online:
Displays the JOB menu.
On menu operation:
Goes back to the previous menu (Goes back up the hierarchy).

⑤ **[Settings] (▶) Key**

On offline:
Displays the SETUP menu.
On online:
Displays the SETUP menu. However, the [User Maintenance Menu] options cannot be specified when the printer is online.
On menu operation:
Displays the next right item in the menu. Increases the setting value.

⑥ [OK] Key

On offline:
Does not function when the printer is offline.
On online:
Does not function when the printer is online.
On menu operation:
Goes back to the next menu (Goes down the hierarchy). In a lowest menu level (When a setting value is displayed), determines the setting.

⑦ [Feeder Selection] Key

On offline:
Displays the SELECT FEEDER menu.
On online:
Displays the SELECT FEEDER menu.
On menu operation:
Does not function.

⑧ [Cancel Job] Key

On offline:
Cancels the job when the Job indicator is on or blinking. Does not function when the Job indicator is off.
On online:
Cancels the job when the Job indicator is on or blinking. Does not function when the Job indicator is off.

⑨ [Online] Key/Online Indicator (Green)

Turns on (online)/off (offline) the connection to the computer.
This key also has the function that, when an error has occurred, releases the printer from the error temporarily and continues the paused job. However, depending on the error, you may not be able to cancel it out.
The Online indicator under the Online key indicates the following printer status with its status.
On:
Online (The printer can receive print data from the computer.)
Off:
Offline (The printer cannot receive print data from the computer.)
However, if the printer has entered Power Save Mode, the Online indicator is off even when the printer is online. (See p. 2-7)

⑩ Paper Source Indicators (Green)

On:
The indicator for the currently selected paper source comes on.
Blinking:
There is no paper in the currently selected paper source, or the paper cassette is not set.
Off:
No paper source is selected. No paper cassette including the optional one or paper feeder is set.

⑪ [Reset] (▼) Key

On offline:
Displays the RESET menu.
On online:
Displays the RESET menu.
On menu operation:
Goes back to the next menu (Goes down the hierarchy). In a lowest menu level (When a setting value is displayed), determines the setting.

⑫ [Utility] (◄) Key

On offline:
Does not function when the printer is offline.
On online:
Displays the UTILITY menu.
On menu operation:
Displays the next left item in the menu. Decreases the setting value.

⑬ Ready Indicator (Green)

On:
The printer is ready to print. (If the printer has entered Save Power Mode when it is online, only the Ready indicator (green) is on, and all the other indicators are off.)
Blinking:
The printer is performing a self-diagnostic test. The printer is in a warm-up state.
Off:
The printer cannot print.

Display

The display on the printer's control panel is as shown in the following. It displays the printer status, messages, items and settings of the menu functions.

When the printer is ready to print

① ─ 00 READY   A4 ─ ②

When operating the printer using the control panel

CONTROL MENU   →

① Status/Operation Field

Displays the printer status and operation mode.

② Paper Source/Paper Size Field

Displays the size of paper in the currently selected paper source using an abbreviation. The names of the following paper sizes are indicated by an abbreviation. (Legal: LG, Letter: LT, Executive: EX, Envelope DL: DL, Envelope COM10: CO, Envelope C5: EC5, Envelope Monarch: MO, Envelope B5: EB5, Custom Size: 80 to 99, Custom SizeR: 80R to 99R, Free/Mixed Sizes: FR)

Using the Printer

2

This chapter describes the basic functions of this printer.

2-1

Turning the Printer ON/OFF

The printer can be turned ON/OFF using the power switch on the right side of the printer body. Be sure to observe the following instructions in order to prevent unexpected problems.

Turning the Printer ON

To use this printer, press "I" of the power switch to turn the printer ON. After running a self-diagnostic test on the printer unit and optional accessories, the printer will be ready to print.

ⓘ IMPORTANT
- Do not turn the power ON immediately after turning it OFF. If you want to turn the printer ON again after turning it OFF, wait at least 10 seconds after turning the printer OFF before turning it ON again.
- If the printer does not operate properly or an error message appears, see "Message List," on p. 7-22 and "Service Call Display," on p. 7-34.
- Be sure to set the paper cassette in the printer before you turn the power ON for the first time after you install the printer.
- Although a sheet of blank paper is output when you turn the power ON for the first time after you install the printer, this is not an error.

1 Press "I" of the power switch on the printer.
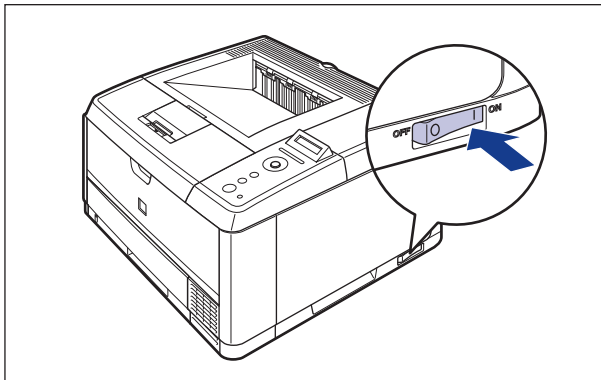
The indicators and display on the control panel come on, and the printer initiates a self-diagnostic test on the printer unit and optional accessories.

If no abnormality is found during the self-diagnostic test, the Online indicator, Ready indicator and Paper Source indicator for the currently selected paper source come on, <00 READY> appears in the display, and the printer is ready to print.

Ready Indicator

Paper Source Indicator

Online Indicator
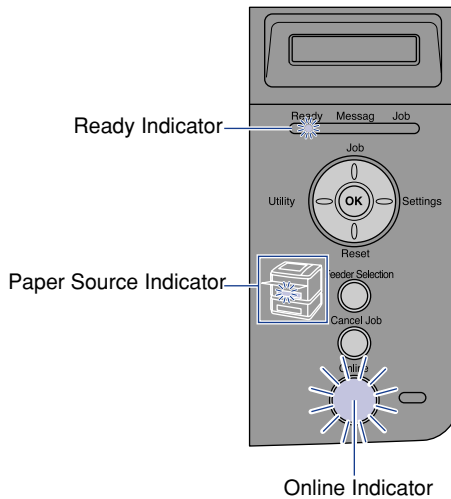
The following information is displayed in the display.

Printable and not processing print data ———— | 00 READY   A4 | ———— Size of paper in the currently selected paper source

Turning the Printer OFF

Turn the printer OFF using the following procedure.

IMPORTANT

- If the printer is connected to a network, make sure that other computers are not sending print data to the printer before turning the printer OFF.
- If you turn the printer OFF when the Job indicator is on, all the print data remaining in the printer memory will be erased. If there is any necessary print data remaining in the printer, wait until it is output, or press [Reset] in the offline state and then select FORM FEED to output the data before turning the printer OFF. (See p. 2-9)
- Do not turn the power OFF when the printer is in any of the following status:
  - During printing
  - While the printer is running a self-diagnostic test immediately after turning the power ON
  - While a message informing you that the NVRAM is being initialized or being written is displayed
  - While <02 WARMING UP> is displayed

1 Make sure that the Job indicator is off.

OFF
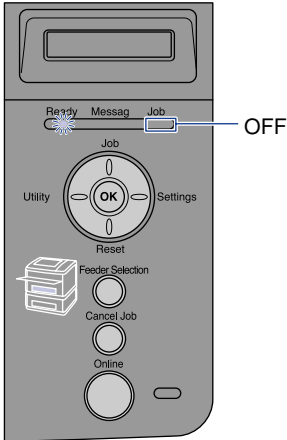
2 Press "○" of the power switch on the printer.
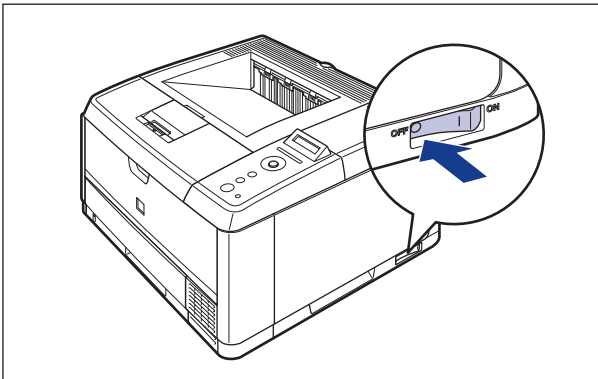
Power Saving (Power Save Mode)

You can reduce power consumption efficiently by using Power Save Mode when the printer is idle or not in use.

There are the following two kinds of Power Save Mode.

⚠ NOTE

- You can release Power Save Mode by setting TIMER SETTINGS to WAKE UP TIME (See p. 5-14).
- To configure the printer so that it does not enter Power Save Mode, set POWER SAVE MODE (See p. 5-10) to OFF.
- To contigure the printer so that it dose not enter Power Save Mode when an error is occurring in the printer (when the Message indicator is on, or the number in the message blinks), set PWR SAVE IN ERR (See p. 5-11) to OFF.

■ Power Save Mode 1 (Panel Off Mode) ... Power-saving effect: Small

The printer enters Power Save Mode 1 when it is in any of the following conditions.

Condition 1	Condition 2
POWER SAVE MODE is set to DEEP SLEEP or PANEL OFF.	POWER SAVE MODE is set to DEEP SLEEP or PANEL OFF.
The panel operation has not been performed and no data has been sent from the computer for the time specified in POWER SAVE TIME (See p. 5-11). (You can select 5 minutes, 15 minutes, 30 minutes, 60 minutes, or 180 minutes for POWER SAVE TIME, and the default value is 15 minutes.)	POW. SAVE TIMER (See p. 5-15) in TIMER SETTINGS is set to ON, and the time specified in POWER SAVE TIME (TIMER SETTINGS) (See p. 5-15) has elapsed.
	Panel operation has not been performed.
	No data has been sent from the computer.
	The printer is not starting up.

⚠ NOTE

- When the printer enters Power Save Mode 1, only the Ready indicator comes on. However, when the printer is offline, only the Message indicator comes on.
- Power Save Mode 1 can be released when the printer is in any of the following status:
  - When any key on the control panel is pressed
  - When an error is occurring
  - When the printer receives data from the computer (Only when the printer is online)
  - When WAKE UP TIMER (See p. 5-15) in TIMER SETTINGS is set to ON, and the time specified WAKE UP TIME (See p. 5-14) has elapsed
  - When the settings for [Utility Menu] are specified in the Remote UI
  - When the settings for [Device Control] are specified in the Remote UI (Except for [Deep Sleep])

■ Power Save Mode 2 (Deep Sleep Mode) ... Power-saving effect: Large

The printer enters Power Save Mode 2 when it is in any of the following conditions.

Condition 1	Condition 2
POWER SAVE MODE is set to DEEP SLEEP.	POWER SAVE MODE is set to DEEP SLEEP or PANEL OFF.
The printer has already entered Power Save Mode 1.	DEEPSLEEP TIMER (See p. 5-16) in TIMER SETTINGS is set to ON, and the time specified in DEEP SLEEP TIME (See p. 5-16) in TIMER SETTINGS has elapsed.
USB in I/F CONNECTION is set to OFF.	
APPLETALK in NETWORK MENU is set to OFF.	APPLETALK in NETWORK MENU is set to OFF.
SMB SERVER in NETWORK MENU is set to OFF*.	SMB SERVER in NETWORK MENU is set to OFF*.
There is no job on the print queue.	There is no job on the print queue.
The printer has not communicated on the network for more than 15 seconds.	The printer has not communicated on the network for more than 15 seconds.

* Even when SMB SERVER is set to ON, the printer enters Power Save Mode 2 if the "server name" for SMB is not entered.

IMPORTANT

Even if POWER SAVE MODE is set to OFF, the printer enters Power Save Mode 2 when [Deep Sleep] is executed in [Device Control] in the Remote UI.

NOTE

- When the printer enters Power Save Mode 2, only the Power indicator comes on.
- Power Save Mode 2 can be released when the printer is in any of the following status:
  - When [Online] on the control panel is pressed
  - When the printer receives data from the computer (Only when the printer is online)
  - When WAKE UP TIMER (See p. 5-15) in TIMER SETTINGS is set to ON, and the time specified WAKE UP TIME (See p. 5-14) has elapsed
  - The settings for [Utility Menu] are specified in the Remote UI
  - When the settings for [Device Control] are specified in the Remote UI (Except for [Deep Sleep])

Online and Offline

When the printer can receive data from the computer and print the data, the printer is in the state of "Online", and when the printer is disconnected with the computer and cannot receive data, the printer is in the state of "Offline".

To perform the settings for each menu using the control panel, switch the printer status as follows:

O: The status that you can enter the menu
X: The status that you cannot enter the menu

	When the printer is online	When the printer is offline
SETUP Menu	○*	○
SELECT FEEDER Menu	○	○
RESET Menu	○	○
JOB Menu	○	x
UTILITY Menu	○	x

* The [User Maintenance Menu] options cannot be specified when the printer is online.

Placing the Printer Online

When printing from the computer, the printer has to be online. Before printing, make sure that the printer is online. If not, place the printer online using the following procedure. The printer comes online automatically after you turn it ON.

1 **Press [Online].**

The Online indicator comes on, and the printer is ready to print.

IMPORTANT
- When an error is occurring in the printer (when the Message indicator is on, or the number in the message blinks), the printer does not come online. Eliminate the cause of the error before you place the printer online.
- Be sure not to open the front cover and the paper cassette of the printer during printing. The printer may stop, disabling printing.

✎ NOTE

If the printer has entered Power Save Mode, the Online indicator is off even when the printer is online, and only the Ready indicator is on. If the printer receives data while it is in Power Save Mode, the mode is released, the Online indicator comes on, and the printer is ready to print.

Placing the Printer Offline

To configure the printer so that it does not receive data from the computer or specify the settings for all the options in the SETUP menu, place the printer offline using the following procedure.

1 **Press [Online].**

The Online indicator goes off, allowing you to specify the settings on the control panel.

🖐 IMPORTANT

This printer comes online automatically if left in the offline state for five minutes or longer. However, when an error is occurring in the printer (when the Message indicator is on, or the number in the message blinks), or while you are performing any setting, such as selecting the menu functions or a paper source, or when specifying the paper size, the printer does not come online.

Canceling a Job

When a part of print data has already been sent to the printer, the print job may not be finished even if you cancel the job from the computer. In this case, you can output the data to finish the printing process of the printer or cancel the job being processed in the printer or all the jobs.

Outputting Data (Forced Output)

When a job is canceled from the computer or the data is less than one page, the data may remain in the printer memory, and the job may not be completed properly. As long as the printer remains in this state, you cannot print the next job because the printer cannot receive the next data. In this case, force the printer to output the print data using the following procedure.

IMPORTANT

- If you have output data, the data being printed is deleted. Print the data from the computer again as needed.
- You cannot output data while the Message indicator is on. If you want to delete the received data, perform a soft reset. (See p. 2-11)

NOTE

- The Job indicator is on when any print data remains in the printer memory or when no print data remains in the printer but a job has not yet been completed.
- If MODE TIMEOUT is specified for the job, even data less than one page is output when the specified time has elapsed. MODE TIMEOUT for a job is set to 15 seconds in the default settings.
- If the Job indicator does not go off even after outputting the data, perform a soft reset. (See p. 2-11)

1 Press [Reset].

RESET

SOFT RESET →
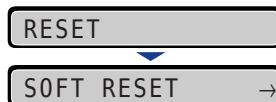
The RESET menu is displayed.

2 Select FORM FEED using [◄] and [►], then press [OK].

```
FORM FEED          →
```

The data remaining in the memory is printed.

Canceling a Job (Cancel Job)

If you want to cancel the job currently being printed, perform [Cancel Job] using the following procedure. A job cancel allows you to cancel the job currently being received or processed. This option does not affect the next print data or the jobs that have not been processed yet.

✋ IMPORTANT

- Cancel the job while the printer is processing the data (While the Job indicator is on or blinking). No job is canceled by pressing [Cancel Job] when the Job indicator is off.
- The data that has already been processed and is being printed (started to be output) cannot be canceled. In this case, the next print data may be canceled.
- When there is any print data sent from a printer driver other than that for this printer, multiple data may be canceled.

🖉 NOTE

When canceling a job you may not be able to cancel the job even if <03 CANCELING JOB> is displayed.

Cancel a job using the following procedure. When canceling a job be sure that the Job indicator is on or blinking (the job that you want to cancel is being received or being processed).

1 Press [Cancel Job].

2 When canceling the job, press [OK].

```
CANCEL?
```
```
03 CANCELING JOB
```
```
00 READY        A4
```

<03 CANCELING JOB> appears, and the print data being processed is canceled. The job is canceled when <00 READY> appears.

✋ IMPORTANT

You cannot operate the printer while <03 CANCELING JOB> is displayed.

Canceling the Process Currently Being Performed (Soft Reset)

If you want to cancel the process currently being performed, perform [Soft Reset] using the following procedure. A soft reset deletes the print data received by all the interfaces, the job being processed, and the print data in the printer memory.

✋ IMPORTANT
- Be sure to operate the printer from the computer to canceling printing before canceling the job from the printer (Soft Reset).
- When a soft reset is performed, the data being printed and the data being received by all the interfaces is deleted. Therefore, perform printing from the computer again as needed.
- The data that has been already sent to the memory are all deleted even if it is the data of other interface. If you are using the printer on a network, be careful so this operation does not affect the data from other computers when performing this procedure.

✎ NOTE
Hard resets delete all the registered files such as the form data saved in the RAM of the printer, but soft resets do not delete them.

1 Press [Reset].

```
RESET
```
⬇
```
SOFT RESET        →
```

The RESET menu is displayed.

2 Select SOFT RESET using [◄] and [►], then press [OK].

Holding down the [OK] key 3 seconds or more is the operation for HARD RESET.

```
SOFT RESET        →
```
⬇
```
03 SOFT RESET
```

When <03 SOFT RESET> disappears, the soft reset is completed.

Canceling All the Jobs (Hard Reset)

When you want to delete all the jobs and data sent to memory for some reason, perform [Hard Reset] using the following procedure. A hard reset deletes the print data received by all the interfaces, the job being processed, and the print data in the printer memory.

🖐 IMPORTANT

- If the printer is reset while it is receiving data, the data that has not yet been sent to the memory will be sent after the reset. However, the data may not be printed properly.
- The data that has been already sent to the memory are all deleted even if it is the data of other interface. If you are using the printer on a network, be careful so this operation does not affect the data from other computers when performing this procedure.

1 Press [Reset].

```
RESET
```
⬇
```
SOFT RESET        →
```

The RESET menu is displayed.

2 Select SOFT RESET using [◄] and [►].

```
SOFT RESET        →
```
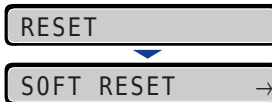
3 Hold down [OK] until HARD RESET is displayed, then release the button.

Hold down the button (approximately 3 seconds) until HARD RESET is displayed. Holding down the button less than 3 seconds is the operation for SOFT RESET.

```
03 SOFT RESET
```
⬇
```
03 HARD RESET
```

When <03 HARD RESET> disappears, the hard reset is completed.

Loading and Outputting Paper

3

CHAPTER

This chapter describes the types of paper that can be used with this printer, and how to load and output paper.

Paper Requirements

Usable Paper

To ensure optimum performance, use only paper that falls within the specifications in the following lists. Using inappropriate paper may result in deterioration in print quality or paper jams.

🤚 IMPORTANT
- Print speed may drop depending on the settings for the paper size, paper type, and total print pages.
  - Envelope: Approximately 5 ppm
- When continuously printing the paper of 200 mm size or smaller, the safety function that prevents damages caused by heat may slow the print speed down in stages. (It may be as slow as approximately 2 ppm.)

Paper Size

The following shows the paper sizes that can be used with this printer. The symbol ◎ indicates the paper that can be used for 1-sided printing and automatic 2-sided printing, the symbol ○ indicates the paper that can be used for only 1-sided printing, and the symbol X indicates the paper that cannot be used.

Paper Size	Paper Source		
	Multi-purpose Tray	Cassette 1	Cassette 2 (Optional)
A4	◎	◎	◎
B5	○	○	○
A5	○	○	○
Legal	◎	◎	◎
Letter	◎	◎	◎
Executive	○	○	○
Custom Size	○*1	○*2	○*2

Paper Size	Paper Source		
	Multi-purpose Tray	Cassette 1	Cassette 2 (Optional)
Envelope			
Envelope DL 110.0 mm x 220.0 mm	○	x	x
Envelope COM10 104.7 mm x 241.3 mm	○	x	x
Envelope C5 162.0 mm x 229.0 mm	○	x	x
Envelope Monarch 98.4 mm x 190.5 mm	○	x	x
Envelope B5 176.0 mm x 250.0 mm	○	x	x

*1 You can load paper of the following custom sizes.
 -When loading paper in portrait orientation: Width 76.2 to 215.9 mm; Length 127.0 to 355.6 mm
 -When loading paper in landscape orientation: Width 127.0 to 215.9 mm; Length 127.0 to 215.9 mm

*2 You can load paper of the following custom sizes.
 -When loading paper in portrait orientation: Width 148.0 to 215.9 mm; Length 210.0 to 355.6 mm
 -When loading paper in landscape orientation: Width 210.0 to 215.9 mm; Length 210.0 to 215.9 mm

Paper Type

The following shows the paper types that can be used with this printer. The symbol ◎ indicates the paper that can be used for 1-sided printing and automatic 2-sided printing, the symbol ○ indicates the paper that can be used for only 1-sided printing, and the symbol X indicates the paper that cannot be used.

Paper Type	Paper Source		
	Multi-purpose Tray	Cassette 1	Cassette 2 (Optional)
Plain paper (64 - 80 g/m^2)	◎	◎	◎
Heavy paper (90 - 120 g/m^2)	◎	◎	◎
Heavy paper (121 - 163 g/m^2)	○	x	x
Heavy paper (199 g/m^2)	○	x	x
Transparency	○	x	x
Label	○	x	x
Envelope	○	x	x

■ **Plain paper**

This printer can print plain paper that is 76.2 to 215.9 mm wide, 127.0 to 355.6 mm long, and that weighs between 64 and 80 g/m^2, including the standard size paper sizes: A4, B5, A5, Legal, Letter, and Executive.

A4, Legal, and Letter sizes can be used for automatic 2-sided printing.

■ **Heavy paper**

This printer can print heavy paper that is 76.2 to 215.9 mm wide, 127.0 to 355.6 mm long, and that weighs between 91 and 199 g/m^2, including the standard size paper sizes: A4, B5, A5, Legal, Letter, and Executive.

Heavy paper that weighs between 90 - 120 g/m^2 can be loaded in the paper cassettes and multi-purpose tray. Heavy paper that weighs between 121 - 199 g/m^2 can be loaded in the multi-purpose tray. Also, paper at a size of A4, Legal, or Letter that weighs between 90 - 120 g/m^2 is available for automatic 2-sided printing.

■ **Transparency**

This printer can print A4 and Letter size transparencies.

You can feed transparencies from the multi-purpose tray.

🖐 IMPORTANT

Thoroughly fan the transparencies before loading them as they may stick to each other.

■ **Label**

This printer can print A4 and Letter size labels.

You can feed labels from the multi-purpose tray.

🖐 IMPORTANT

Do not use the labels in the following conditions. Using inappropriate labels may result in paper jams that are difficult to clear or may result in damage to the printer.

- Peeled labels or partly used labels
- Coated labels that are easily peeled off from the backing sheet
- Labels with uneven adhesive

■ Envelope

The envelopes that can be used with this printer are as follows:
You can feed envelopes from the multi-purpose tray.

Envelope DL
(110.0 mm x 220.0 mm)
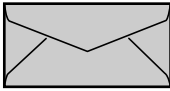
Envelope Monarch
(98.4 mm x 190.5 mm)
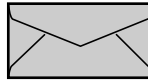
Envelope B5
176.0 mm x 250.0 mm

Envelope COM10
(104.7 mm x 241.3 mm)
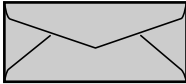
Envelope C5
(162.0 mm x 229.0 mm)

* You cannot use envelopes at sizes of DL, COM 10, Monarch, and C5 that have a flap on the short edge.

🖐 IMPORTANT

- Do not use the following types of envelopes. Using inappropriate envelopes may result in paper jams that are difficult to clear or may result in damage to the printer.
  - Envelopes with fasteners or snaps
  - Envelopes with address windows
  - Envelopes with adhesive on the surface
  - Wrinkled or creased envelopes
  - Poorly manufactured envelopes in which the glued parts are uneven
  - Irregularly-shaped envelopes
- Before loading the envelopes, flatten the stack of envelopes to release any remaining air, and press the fold lines along the edges tight.
- Do not print on the reverse side (glued side) of envelopes.
- When loading envelopes at a size of DL, COM10, C5, or Monarch, load them so that the flap is toward the left of the printer when viewed from the front.
  (◀— : Feeding direction)
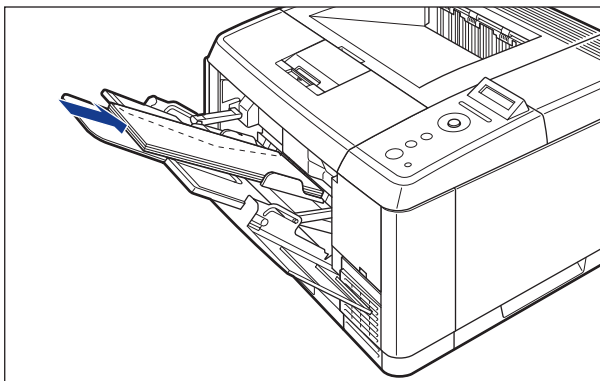
• When printing envelopes of the Envelope B5 size, close the flaps and load them so that the envelopes are printed from the top (the edge with the flap).
(◄─ : Feeding direction)
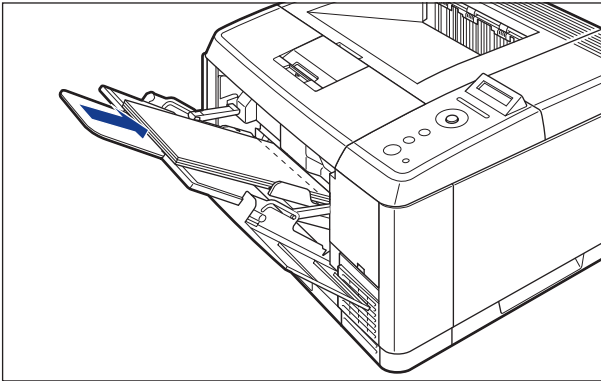
• When printing envelopes, output them to the face-up output tray.
• Printing speed drops when printing envelops.

✎ NOTE

When printing envelopes, they may be creased.

Abbreviations of Paper Sizes

The following shows the abbreviations of paper sizes that are marked on the paper cassette.

Paper Size	Paper Guides
Legal	LGL
Letter	LTR
Executive	EXEC

Printable Area

The following shows the printable area of this printer:

■ **Plain Paper/Heavy Paper/Transparency/Label**
You cannot print on any area within 5 mm (4.23 mm) of the edges of paper.
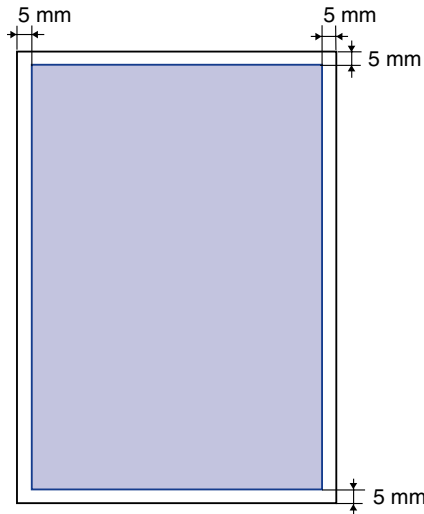
- UFR II Printer Driver   - PCL5e/PCL6 Printer Driver

5 mm		5 mm		4.23 mm		4.23 mm

5 mm

4.23 mm

5 mm

4.23 mm
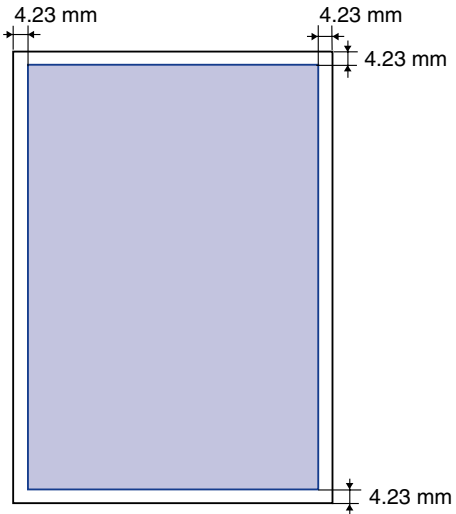
■ **Envelope/Index Card**
You cannot print on any area within 10 mm of the edges of paper.
You may have to change the printable area before printing, depending on the application you use.

(Sample: Envelope COM10)

241.3 mm
(9.50 in.)

10 mm   10 mm

10 mm

104.7 mm
(4.13 in.)

10 mm
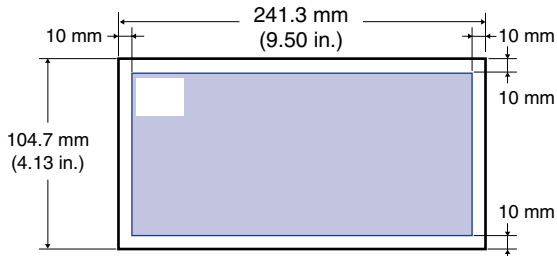
Unusable Paper

To avoid problems such as paper jams and other malfunctions, the following types of paper should never be used:

IMPORTANT

- Paper that jams easily
  - Paper that is too thick or too thin
  - Irregularly-shaped paper
  - Wet or moist paper
  - Torn or damaged paper
  - Rough, extremely smooth, or glossy paper
  - Paper with binding holes or perforations
  - Curled or creased paper
  - Specially coated paper (coated paper for ink jet printers, etc.)
  - Labels with backing sheet that is easily peeled off
  - Paper that has already been printed by a copy machine or another laser printer (The reverse side of the paper is also unusable. Using the multi-purpose tray, however, you can perform 2-sided printing manually on the other side of previously printed paper. You cannot print on the printed side again.)
  - Paper with jagged edges
  - Wrinkled paper
  - Paper with the corners folded
- Paper that changes its quality at a high temperature
  - Paper that contains ink that melts, burns, evaporates or emits harmful gases with the heat (approx. 215°C or 419°F) of the fixing unit
  - Heat-sensitive paper
  - Treated color paper
  - Specially coated paper (coated paper for ink jet printers, etc.)
  - Paper with adhesive on the surface
- Paper that causes printer malfunctions or damages the printer
  - Carbon paper
  - Paper with staples, clips, ribbons or tapes
  - Paper that has already been printed by a copy machine or another laser printer (The reverse side of the paper is also unusable. Using the multi-purpose tray, however, you can perform 2-sided printing manually on the other side of previously printed paper. You cannot print on the printed side again.)
- Paper that is difficult for the toner to fix onto
  - Paper with rough surfaces
  - Specially coated paper (coated paper for ink jet printers, etc.)
  - Paper containing thick fibers

Storing Paper

The quality of paper may deteriorate if it is stored improperly even when the paper meets the normal specifications. Inferior paper may cause misfeeds, paper jams, or deterioration in print quality.
Observe the following guidelines when storing and handling paper:

🖐 IMPORTANT
- Store paper away from moisture since paper quality deteriorates in a moist environment.
- Paper wrappers help avoiding moisture and dryness. Keep paper in the wrapper until it is ready to be used. Store all unused paper in a wrapper.
- Store paper on a flat surface.
- Do not store paper on the floor where water and moisture can accumulate.
- Avoid physical damage to stored paper.
- Do not store paper vertically or store too many stacks of paper in one pile.
- Do not store paper in places exposed to direct sunlight or places with high or low humidity.
- If the paper storage room and work area differ from each other significantly in temperature or humidity, keep packed paper stack in the work area for at least one day prior to printing so that it can adapt to the new environment. When paper is moved to a location where the temperature or humidity differs significantly, the paper may curl or become creased.

Storing Printouts

When handling or storing printouts printed by this printer, be careful of the following points:

🖐 IMPORTANT
- Avoid storing printouts with PVC materials such as clear folders. Otherwise toner may melt and stick to the PVC material.
- Use insoluble adhesive when gluing printouts. Toner may melt when soluble adhesive is used. Before using the adhesive, test it with paper that is no longer required.
  Make sure that the printed paper is completely dry before placing one over another. Toner may melt if they are placed together half-dried.
- Store paper on a flat surface. Toner may peel when they are folded or creased.
- Avoid storing printouts at high temperatures. Otherwise toner may melt and blot.
- Put printouts in a binder when storing them for a long period of time (two years or longer). (Printouts may discolor when they are stored for a long period of time.)

Paper Source

This printer is supplied with two paper sources: the paper cassette (Cassette 1) and multi-purpose tray. By installing the optional paper feeder (Cassette 2), up to 3 paper sources can be used.

● **Paper Level Indicator**

The paper cassette has a paper level indicator (A) that shows the amount of paper remaining in the cassette. If the cassette is full, the paper level indicator is at the top. Because the indicator moves down as the amount of paper drops, this gives a rough estimate of the amount of paper remaining.

(A)
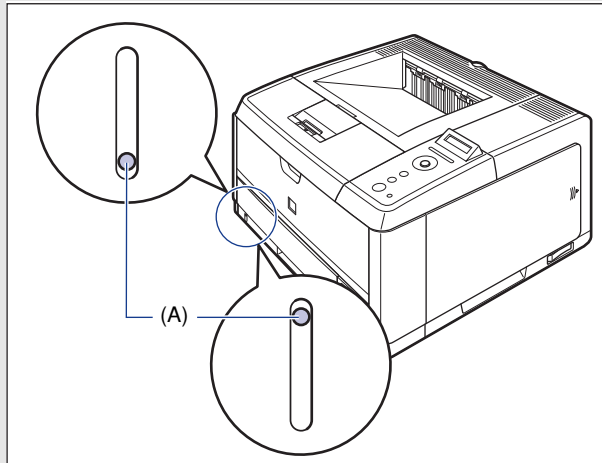
Paper Source Type

This printer has the following paper sources:

(A): Multi-purpose Tray
(B): Cassette 1
(C): Cassette 2 (Optional)
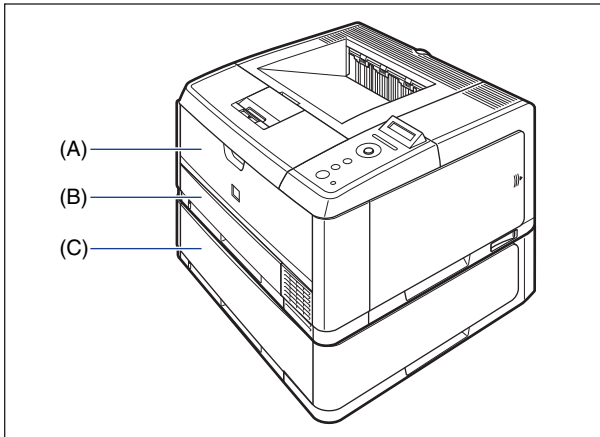
🖐 IMPORTANT

If you are printing from Cassette 2, make sure that Cassette 1 is set before printing. If you print from Cassette 2 when Cassette 1 is not set, this will cause paper jams.

Paper Capacity for Paper Source

Paper Type	Paper Source		
	Multi-purpose Tray	**Cassette 1**	**Cassette 2 (Optional)**
Plain paper (64 g/m^2)	Approx. 100 sheets	Approx. 250 sheets	Approx. 500 sheets
Heavy paper (90 g/m^2)	Approx. 80 sheets	Approx. 200 sheets	Approx. 400 sheets
Heavy paper (128 g/m^2)	Approx. 50 sheets	x	x
Heavy paper (199 g/m^2)	30 sheets	x	x
Transparency	50 sheets	x	x
Label	Approx. 40 sheets	x	x
Envelope	10 sheets	x	x

3

Loading and Outputting Paper

Selecting a Paper Source

A paper source can be selected using the following procedure.

■ When printing from Windows or Macintosh

Select a paper source in the printer driver. Because the default setting for the paper selection in the printer driver is [Auto], if a paper size is specified by an application, the printer selects the paper source automatically and feeds paper from the paper source. Even when the paper source runs out of paper during printing, if paper of the same size is loaded in other paper source, the paper source is switched automatically and the paper is fed.

If you want to specify a paper source, select the paper source in the printer driver. For more details on using the printer driver, see Help of the printer driver.

■ When printing from DOS or UNIX

When you are printing from DOS, UNIX, or other operating system on which you cannot use the printer driver, select a paper source using the control panel. The default setting for this printer's paper source is set to AUTO.

Select a paper source with the printer's control panel using the following procedure.

1 Press [Feeder Selection].

PAPER SOURCE →

PAPER SOURCE is displayed in the display.

2 Select PAPER SOURCE using [◄] and [►], then press [OK].

PAPER SOURCE →

=AUTO →

3 Select the paper source using [◄] and [►], then press [OK].

CASSETTE 1 →

=CASSETTE 1 →

◇ NOTE

- CASSETTE 2 is displayed only when the paper feeder is installed.
- If paper of the same size is loaded in two or more paper sources when the paper source setting is specified to be selected automatically, paper is fed from the upper paper source regardless of the status of the paper source indicators. When the paper source runs out of paper, the paper source automatically switches to other one in which paper of the same size is loaded.

Precautions for Handling the Multi-purpose Tray or Paper Cassette

Be careful of the following points when handling the multi-purpose tray or paper cassette.

⚠ IMPORTANT

- Do not pull out the paper cassette while the printer is printing. This may result in paper jams or damage to the printer.
- Do not touch the paper in the multi-purpose tray or pull it out during printing. This may result in a faulty operation.
- Refill the paper cassette after all the loaded paper runs out. If the cassette is refilled when paper still remains in the cassette, it may result in misfeeds.
- Do not put anything other than the printing paper on the multi-purpose tray. Also, do not press on top of or apply excessive force to the multi-purposes tray. This may result in damage to the multi-purpose tray.
- Do not touch the black rubber pad (A) in the paper cassette. This may result in misfeeds.

Cassette 1
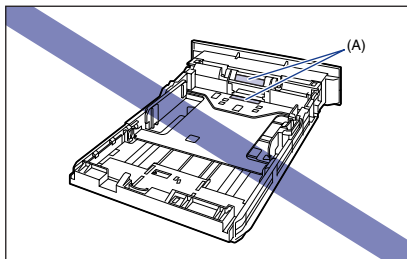
Cassette 2
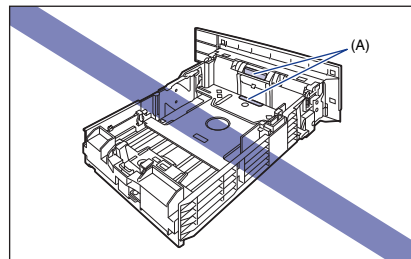
Before closing the multi-purpose tray, remove any loaded paper.
Keep the multi-purpose tray closed when it is not used.
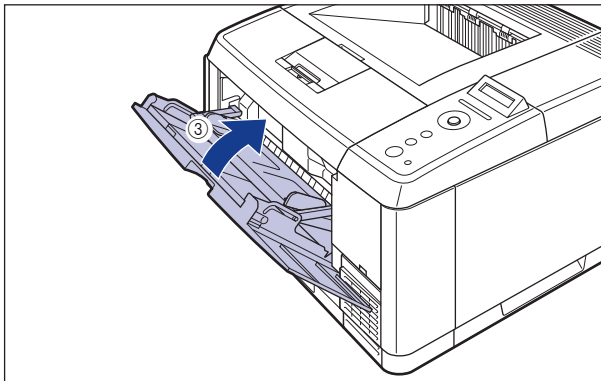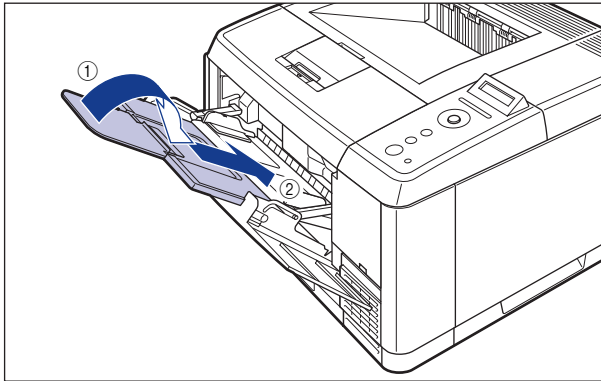
Output Trays

Output Tray Types

This printer has two output trays: "face-down output tray" and "face-up output tray".

Do not switch the output tray during printing. This may result in misfeeds.

> ⚠ **CAUTION**
>
> **Keep your hands or clothing away from the roller in the output area. Even if the printer is not printing, sudden rotation of the roller may catch your hands or clothing, resulting in personal injury.**

Face-down Output Tray

Printed paper is output to the face-down output tray with the printed side facing down.
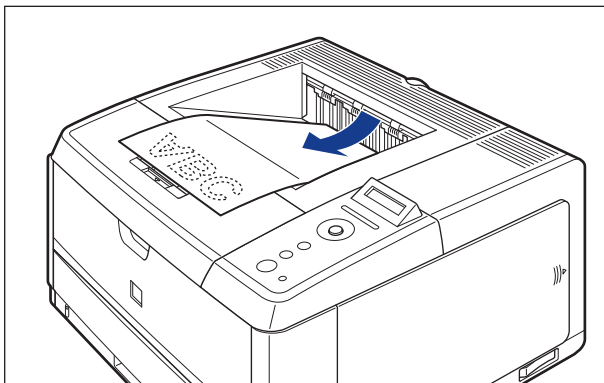
When outputting Legal size paper or other long-size paper to the face-down output tray, open the face-down output tray support to prevent the paper from hanging out of the tray. When you use the face-down output tray support, gently open it until it stops.
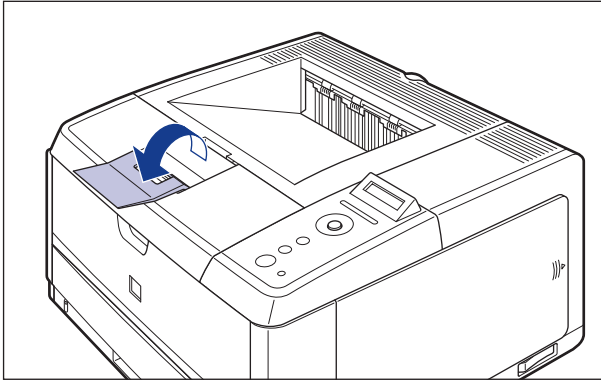
🖐 IMPORTANT
- Do not touch the paper during automatic 2-sided printing until it is completely output to the face-down output tray. In automatic 2-sided printing, the paper is partially output once after printed on its surface and is fed again to be printed on its reverse side.
- When performing automatic 2-sided printing, the printer can output paper only to the face-down output tray.
- When printing envelopes, output them to the face-up output tray. If envelopes are output to the face-down output tray, this may result in misfeeds.
- The surroundings of the face-down output tray are hot during printing or immediately after printing. When taking out of the paper or removing jammed paper, be careful not to touch the surroundings of the face-down output tray.
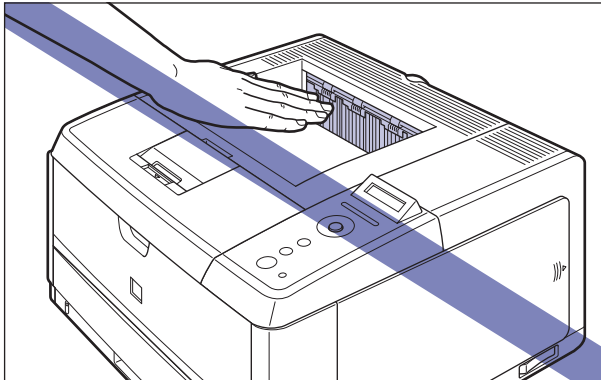
✏ NOTE
The face-down output tray can hold up to approximately 250 sheets of plain paper (64 g/m^2). The paper capacity varies depending on the paper type and paper size. For more details, see "Paper Capacity of the Output Trays," on p. 3-18.

Face-up Output Tray

Printed paper is output to the face-up output tray on the rear of the printer unit with the printed side facing up. The face-up output tray is suitable to print transparencies, labels, or envelopes which tend to curl, since the printed paper is output flattened.
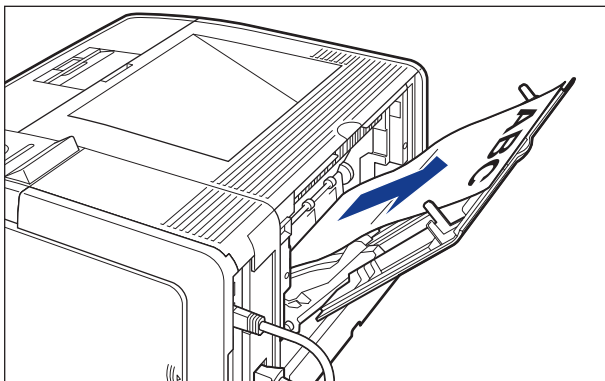
IMPORTANT

- Be sure to close the face-up output tray before performing automatic 2-sided printing.
- The surroundings of the face-up output tray are hot during printing or immediately after printing. When taking out of the paper or removing jammed paper, be careful not to touch the surroundings of the face-up output tray.
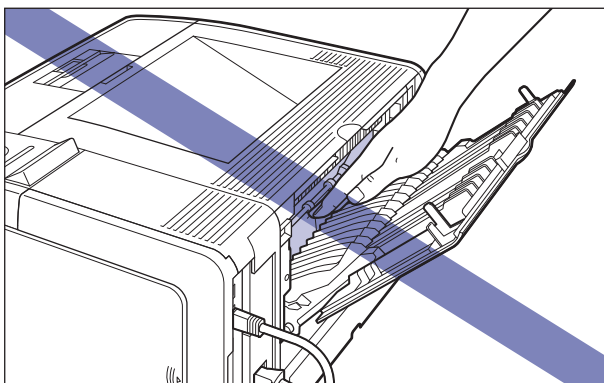
NOTE

The face-up output tray can hold up to approximately 50 sheets of plain paper (64 g/m^2). The paper capacity varies depending on the paper type and paper size. For more details, see "Paper Capacity of the Output Trays," on p. 3-18.

Paper Capacity of the Output Trays

Paper Type	Output Tray*	
	Face-down Output Tray	**Face-up Output Tray**
Plain paper (64 g/m^2)	Approx. 250 sheets	Approx. 50 sheets
Heavy paper (90 g/m^2)	Approx. 100 sheets	Approx. 50 sheets
Heavy paper (128 g/m^2)	Approx. 40 sheets	Approx. 30 sheets
Heavy paper (199 g/m^2)	30 sheets	Approx. 30 sheets
Transparency	10 sheets	10 sheets
Label	Approx. 60 sheets	Approx. 40 sheets
Envelope	x	Approx. 10 sheets

* Actual paper capacity varies depending on the installation environment, paper type and paper size.

Loading and Outputting Paper

3

Selecting an Output Tray

Switching to the Face-up Output Tray

To switch to the face-up output tray, open the face-up output tray ①, and then pull out the extension tray ② as shown in the figures. When you use the extension tray, pull it out completely until it stops.
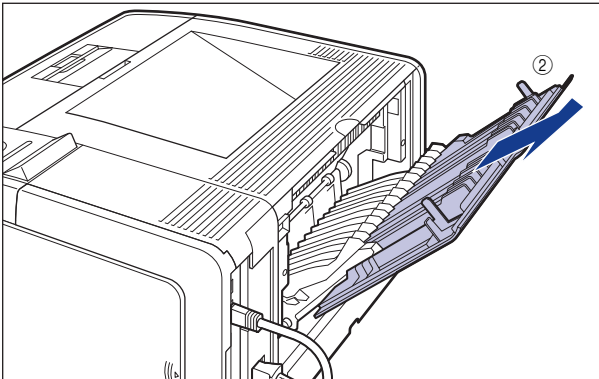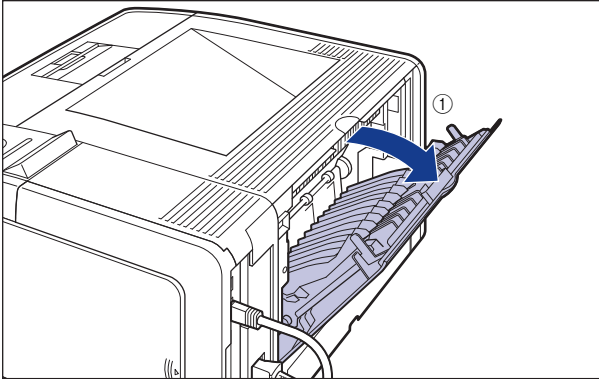
Switching to the Face-down Output Tray

To switch to the face-down output tray, place the extension tray back in its slot ①, and then close the face-up output tray ② as shown in the figures.
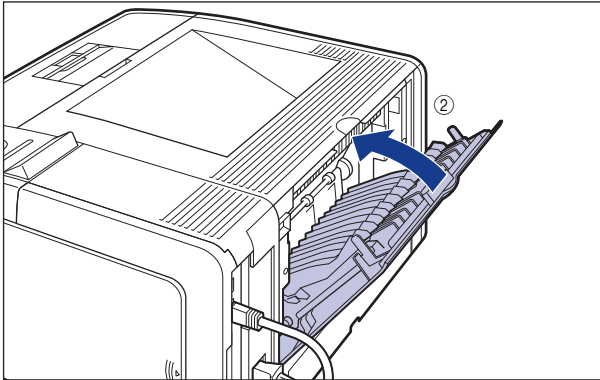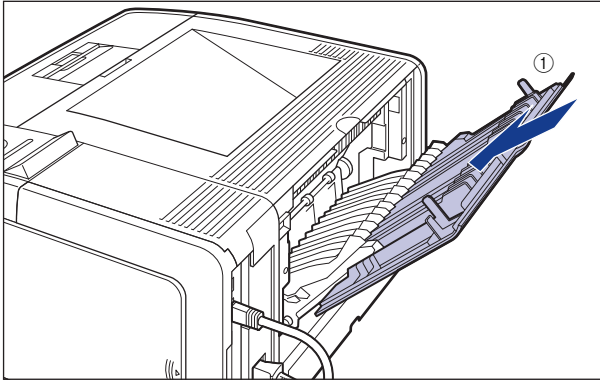
Printing from the Paper Cassette

The paper cassette can be loaded with plain paper (64 to 80 g/m^2), heavy paper (90 to 120 g/m^2) at sizes of A4, B5, A5, Legal, Letter, Executive, and Custom Size. When the paper cassette runs out of paper, <11 NO "size" PAPER> appears in the display, or the Paper Source indicator blinks indicating the status. Refill the cassette.

This printer comes with a paper cassette (Cassette 1) as standard. Cassette 2 is added by installing the optional paper feeder.

When printing from the paper cassette, you need to specify the following settings.

✋ IMPORTANT
- Match the settings for CASSETTE1 SIZE and CASSETTE2 SIZE in the SETUP menu of the printer and those in the printer driver. If they do not match, the message <PC LOAD "size"> appears. In this case, the settings for CASSETTE1 SIZE and CASSETTE2 SIZE are changed to those in the printer driver by pressing [Online], allowing you to continue printing.
- If you are printing from Cassette 2, make sure that Cassette 1 is set before printing. If you print from Cassette 2 when Cassette 1 is not set, this will cause paper jams.

📝 NOTE
If you are printing from an operating system on which the printer driver cannot be used, previously specify the paper source to CASSETTE 1 or CASSETTE 2. (See p. 3-12)

■ Loading Paper in a Paper Cassette (See p. 3-23)

■ Specifying the Size of the Paper in the Paper Cassette (See p. 3-35)
The FEEDER MENU options in the SETUP menu

- CASSETTE1 SIZE = the size of the paper loaded in Cassette 1
- CASSETTE2 SIZE = the size of the paper loaded in Cassette 2

When printing from DOS, UNIX, or other operating system on which the printer driver cannot be used, specify the following settings in addition to CASSETTE1 SIZE and CASSETTE2 SIZE.

The FEEDER MENU options in the SETUP menu

- STD PAPER SIZE = the size of the loaded paper (See p. 5-19)
- STD PAPER TYPE = the type of the loaded paper (See p. 5-21)

■ **Specifying the Paper Settings in the Printer Driver (See Help of the printer driver)**
When printing from the printer driver, specify the following settings. For more details on using the printer driver, see Help of the printer driver.

[Page Setup] Sheet
   [Output Size] = the size of the loaded paper

[Paper Source] Sheet
   [Paper Source] = [Cassette1]
                 [Cassette 2]
   [Paper Type] = [Plain Paper L]: Specify when the paper curls excessively on printing plain paper (64 - 80 g/m^2) with [Paper Type] set to [Plain Paper].
              [Plain Paper]: Plain Paper (64 - 80 g/m^2), Labels
              [Heavy Paper 1]: Heavy Paper (90 - 163 g/m^2)

Precautions on Loading Paper

Load paper when the printer status is in any of the following. When the Job indicator is blinking, the printer is printing. Do not pull out the paper cassette.

IMPORTANT
- Be sure to turn the printer ON once when loading paper in the paper cassette for the first time after installing the paper feeder.
- Be sure not to open the covers or paper cassette during printing. The printer may stop, disabling printing.

■ **When the Job indicator is off**
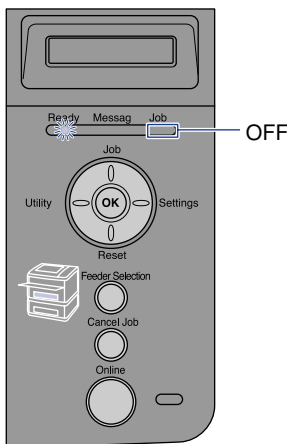
■ **When a message that informs you of a paper-out condition or requests paper replacement is displayed**

```
11 NO A4 PAPER        PC LOAD A4
```

■ **When the printer is OFF**
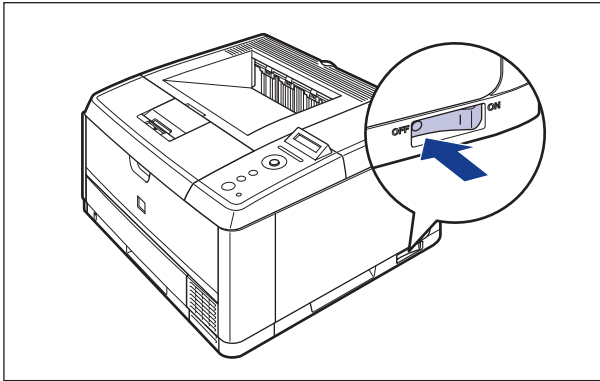
Loading Paper in the Paper Cassette

Load paper in the paper cassette. The paper loading methods are different between standard size paper and custom size paper.

• Standard Size Paper (See "When Loading Standard Size Paper," on p. 3-23)
• Custom Size Paper (See "When Loading Custom Size Paper," on p. 3-29)

When Loading Standard Size Paper

Load standard size paper in the paper cassette using the following procedure. Be sure to load standard size paper in portrait orientation when loading it in the paper cassette.
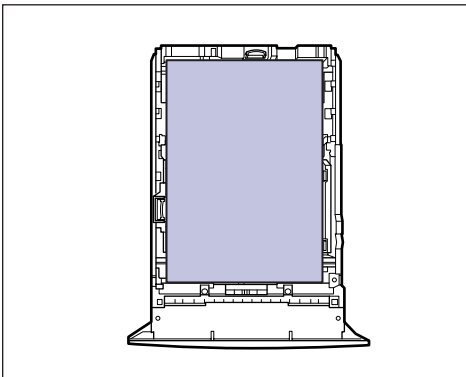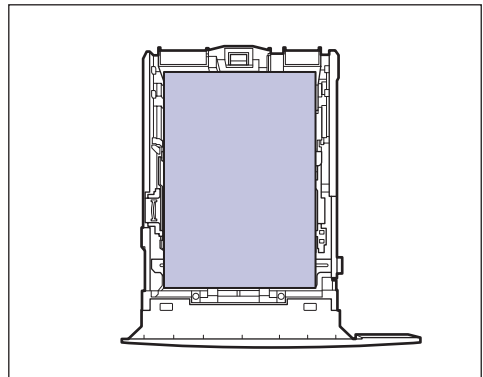
Cassette 1

Cassette 2

IMPORTANT

- For more details on the usable paper, see "Usable Paper," on p. 3-2.
- For details on handling the paper cassette, see "Precautions for Handling the Multi-purpose Tray or Paper Cassette," on p. 3-13.
- Do not load paper other than plain paper (64 to 80 g/m^2) and heavy paper (90 to 120 g/m^2). This may result in paper jams or damage to the printer.

NOTE

Load paper in Cassette 2 (Only when the optional paper feeder is installed) in the same manner as you load paper in Cassette 1.
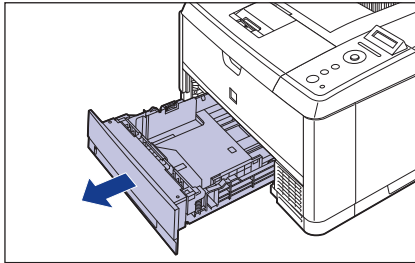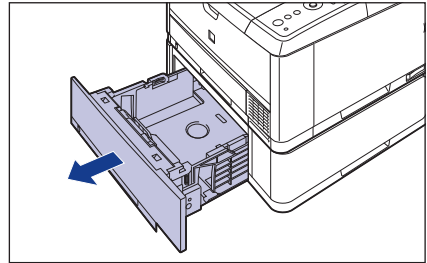
---

1 **Pull out the paper cassette.**

Cassette 1   Cassette 2

⚠ CAUTION

Be sure to take the paper cassette out of the printer before loading paper. If paper is loaded while the paper cassette is partially pulled out, the paper cassette may drop or the printer may become damaged resulting in personal injury.

2 **When changing the size of the paper to be loaded, adjust the length of the paper cassette and change the positions of the paper guides.**

● **While holding the lock release lever of the side paper guides, slide the guides to the mark for the size of the paper to be loaded.**

The side paper guides move together. Align the position of (A) with the mark for the size of the paper to be loaded.
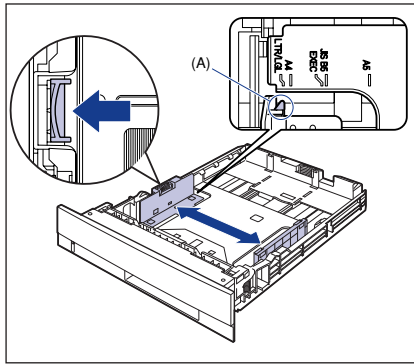
Cassette 1   Cassette 2
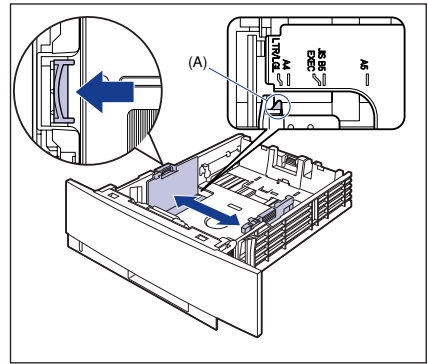
✐ **NOTE**

If you are using B5 size paper (182 mm x 257 mm), set the paper guide to "JIS B5".

● **While holding the lock release lever of the rear paper guide, slide the guide to the size mark for the paper to be loaded.**

Align the position of (A) with the mark for the size of the paper to be loaded.

Cassette 1   Cassette 2

Printing from the Paper Cassette   **3-25**
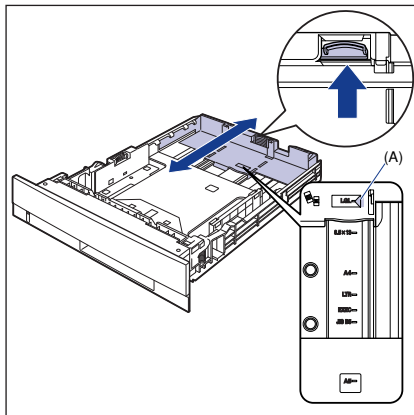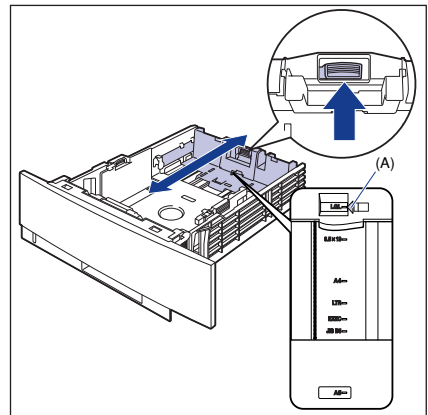
IMPORTANT

> Do not use the "8.5 x 13" position.

3 Load the paper stack so that the rear edge is aligned with the paper guide.

Cassette 1
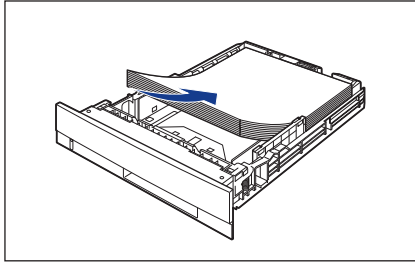
Cassette 2
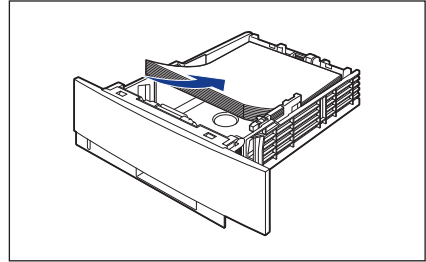
⚠ **CAUTION**

When loading paper, take care not to cut your hands with the edges of the paper.

IMPORTANT

- Be sure to check if the paper guide is at the position of the size of the loaded paper. If the paper guide is set at a wrong position, this may result in misfeeds.
- If you use paper that has been poorly cut, multiple sheets of paper may be fed at once. In this case, fan the paper thoroughly, and then align the edges of the stack on a hard, flat surface.

NOTE

- If you want to print custom size paper of its long edges 215.9 mm or less when CASSETTE1 SIZE and/or CASSETTE2 SIZE in the FEEDER MENU options in the SETUP is set to MIXED SIZES, specify the settings according to the printer driver you are using as follows.
  When using UFR II Printer Driver: Load the paper in landscape orientation
  When not using UFR II Printer Driver: Load the paper in portrait orientation

• To print letterhead paper or paper printed with a logo, load the paper so that the printing side is facing down, as shown in the following figures.
(← : Feeding direction)

Cassette 1

Cassette 2

Loading and Outputting Paper
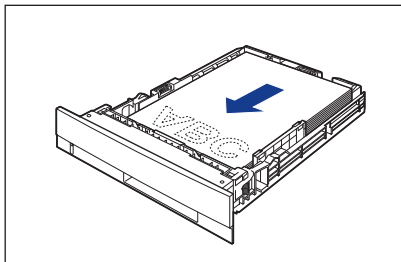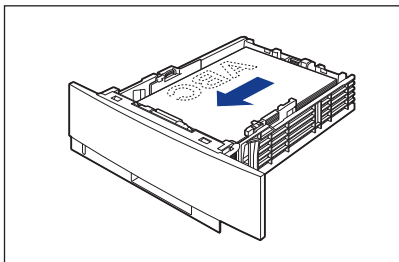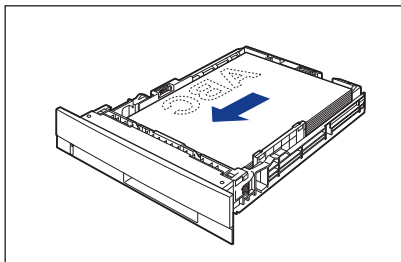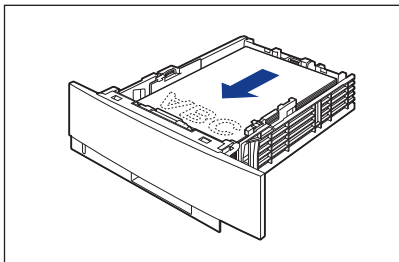
4 Hold down the paper as shown in the figures, make sure that the paper stack does not exceed the load limit marks (A), and then set it under the hooks (B) on the paper guides.

Make sure that there is sufficient space between the hooks of the paper guides and the paper stack. If there is no sufficient space, slightly reduce the amount of paper.

Cassette 1

Cassette 2

The following shows the paper capacity of the paper cassette. Be sure that the paper stack does not exceed the load limit marks. If the paper stack exceeds the load limit marks, this may result in misfeeds.

Paper Type	Cassette 1	Cassette 2
Plain paper (Ex. 64 g/m ^{2})	Approx. 250 sheets	Approx. 500 sheets
Heavy paper (Ex. 90 g/m^2)	Approx. 200 sheets	Approx. 400 sheets

5 Set the paper cassette in the printer.

Push the paper cassette into the printer firmly until the front side of the paper cassette is flush with the front surface of the printer.
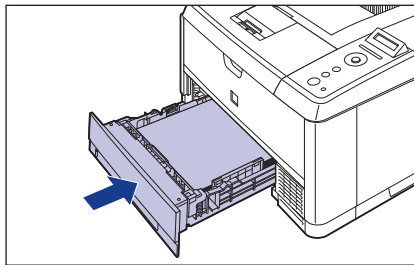
Cassette 1   Cassette 2
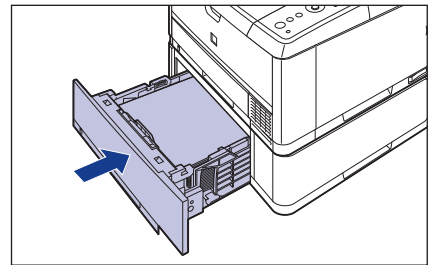
This printer's paper cassette cannot automatically detect the paper size. Therefore, you need to register the size of the paper loaded in the paper cassette.
See "Specifying the Size of the Paper in the Paper Cassette" (p. 3-35) to register the paper size.

When Loading Custom Size Paper

Load custom size paper in the paper cassette using the following procedure.

 IMPORTANT
- You can load paper of the following custom sizes.
  - When loading paper in portrait orientation: Width 148.0 to 215.9 mm; Length 210.0 to 355.6 mm
  - When loading paper in landscape orientation: Width 210.0 to 215.9 mm; Length 210.0 to 215.9 mm
- For more details on the usable paper, see "Usable Paper," on p. 3-2.
- For details on handling the multi-purpose tray or paper cassette, see "Precautions for Handling the Multi-purpose Tray or Paper Cassette," on p. 3-13.
- Do not load paper other than plain paper and heavy paper. This may result in paper jams or damage to the printer.

3

Loading and Outputting Paper

- When custom size paper is loaded, specify the settings for CASSETTE1 SIZE and/or CASSETTE2 SIZE as follows.
  - When the paper is loaded in landscape orientation: CUSTOM SIZE
  - When the paper is loaded in portrait orientation: CUSTOM SIZER
- When you change the orientation of the loaded custom size paper frequently, it is convenient if you set CASSETTE1 SIZE and/or CASSETTE2 SIZE to MIXED SIZES. When CASSETTE1 SIZE and/or CASSETTE2 SIZE is set to MIXED SIZES, you do not need to specify the setting for CASSETTE1 SIZE and/or CASSETTE2 SIZE each time the paper orientation is changed. However, observe the following when specifying MIXED SIZES.
  - Make sure that the size of the loaded paper matches the paper size specified in the printer driver before printing. If they do not match, the printer may stop printing, displaying the message <41 CHK PAPER SZE>, or a paper jam may occur. Be sure to check if the paper size specified in the printer driver matches the size of the paper loaded in the cassette before using the printer. However, if SPECIAL MODE J is set to ON, the printer prints without checking the paper size even when the paper size specified in the printer driver and the size of the paper loaded in the cassette do not match. For more details, see "SPECIAL MODE J," on p. 5-36.
  - When printing from UFR II Printer Driver, you can load paper either in portrait or landscape orientation. However, when printing custom size paper of its long edges 215.9 mm or less, load the paper in landscape orientation. When you are not using UFR II Printer Driver, load the paper in portrait orientation.

✎ NOTE

Load custom size paper in Cassette 2 (Only when the optional paper feeder is installed) in the same manner as you load custom size paper in Cassette 1.
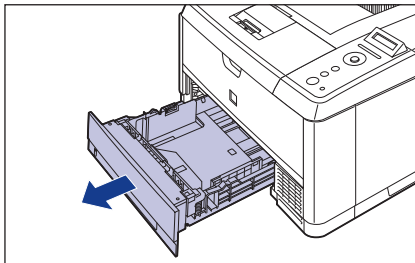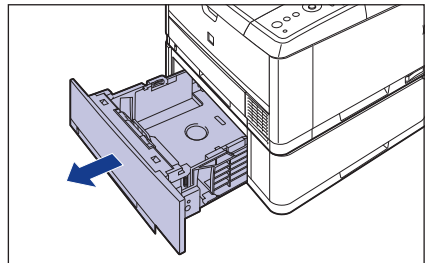
---

1 Pull out the paper cassette.

Cassette 1   Cassette 2

⚠ **CAUTION**

Be sure to take the paper cassette out of the printer before loading paper. If paper is loaded while the paper cassette is partially pulled out, the paper cassette may drop or the printer may become damaged resulting in personal injury.

2 Load the paper so that the edge of the paper is aligned with the front side of the paper cassette.
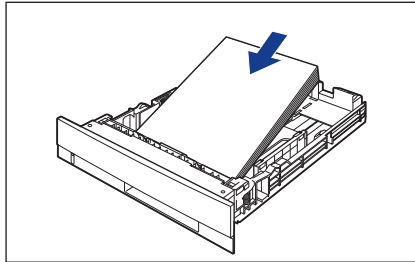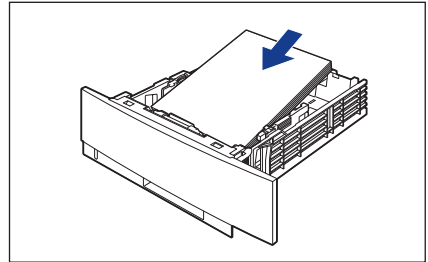
Cassette 1

Cassette 2

⚠ CAUTION

When loading paper, take care not to cut your hands with the edges of the paper.

🖐 IMPORTANT

If you use paper that has been poorly cut, multiple sheets of paper may be fed at once. In this case, fan the paper thoroughly, and then align the edges of the stack on a hard, flat surface.

📝 NOTE

• To print letterhead paper or paper printed with a logo when loading paper in portrait orientation, load the paper so that the printing side is facing down as shown in the following figures.
(◀━ : Feeding direction)
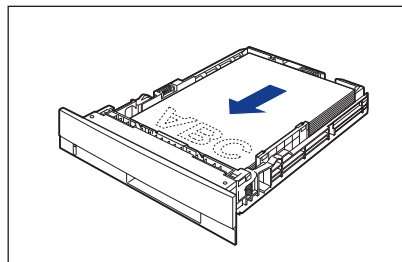
Cassette 1
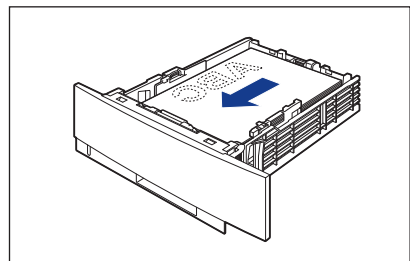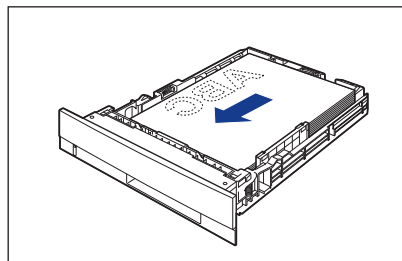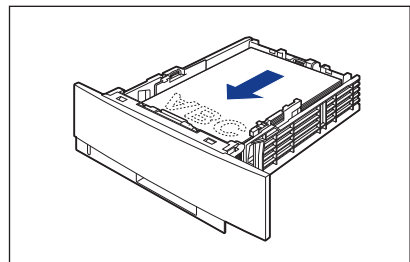
Cassette 2

• To print letterhead paper or paper printed with a logo when loading paper in landscape orientation, load the paper so that the printing side is facing down as shown in the following figures.
(◄ : Feeding direction)
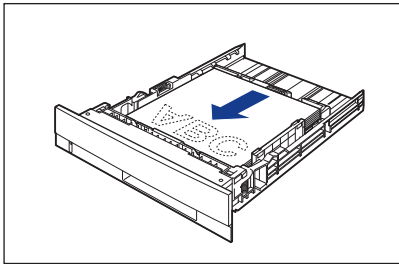
Cassette 1
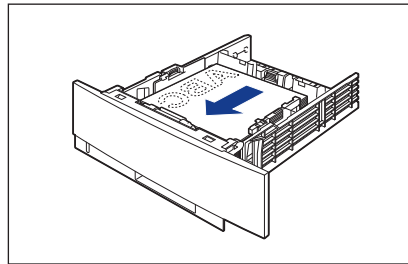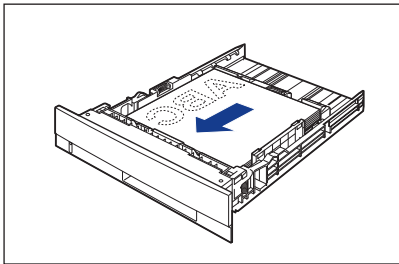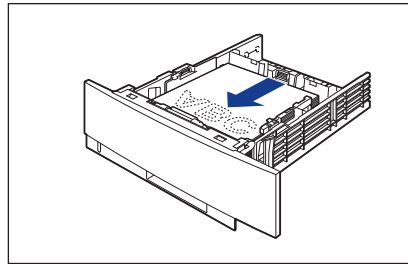
Cassette 2

3 While holding the lock release lever of the side paper guides, slide the guides to the mark for the size of the loaded paper.

The side paper guides move together.

Cassette 1
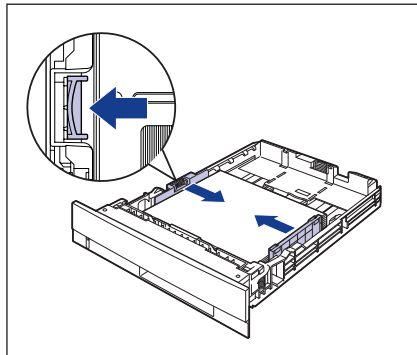
Cassette 2
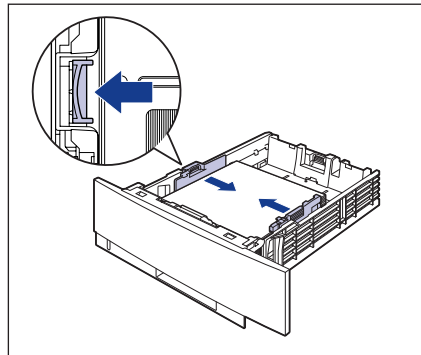
IMPORTANT

Be sure to align the paper guides with the width of the paper. If the paper guides are too loose or too tight, this may result in misfeeds or paper jams.
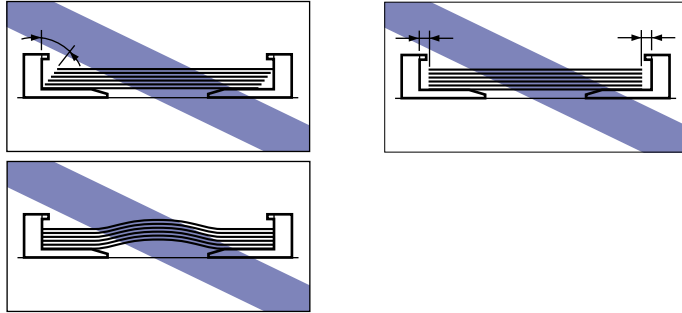
4 **While holding the lock release lever of the rear paper guide, slide the guide to the size mark for the loaded paper.**

Cassette 1   Cassette 2

Printing from the Paper Cassette   **3-33**
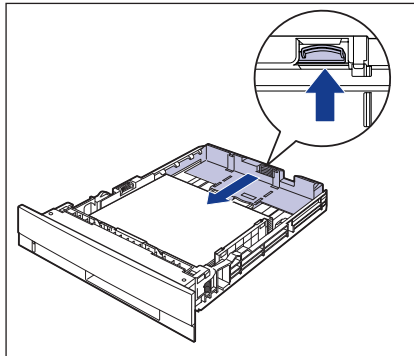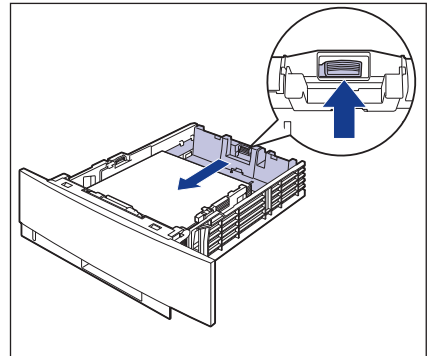
5 Hold down the paper as shown in the figures, make sure that the paper stack does not exceed the load limit marks (A), and then set it under the hooks (B) on the paper guides.

Make sure that there is sufficient space between the hooks of the paper guides and the paper stack. If there is no sufficient space, slightly reduce the amount of paper.
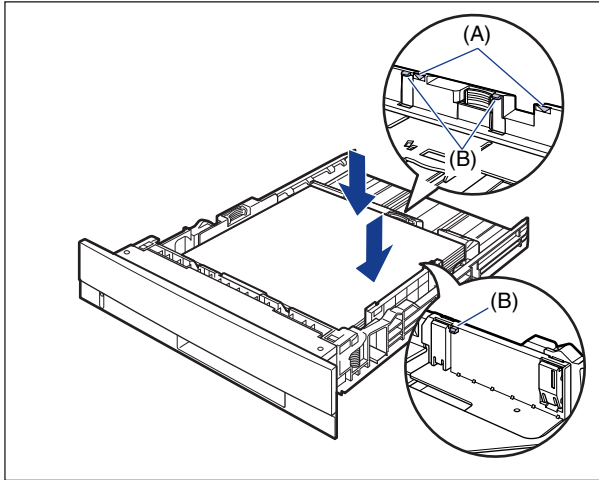
Cassette 1

Cassette 2

6 Set the paper cassette in the printer.

Push the paper cassette into the printer firmly until the front side of the paper cassette is flush with the front surface of the printer.
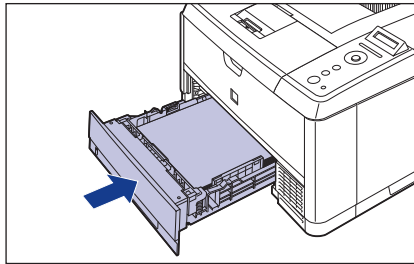
Cassette 1   Cassette 2
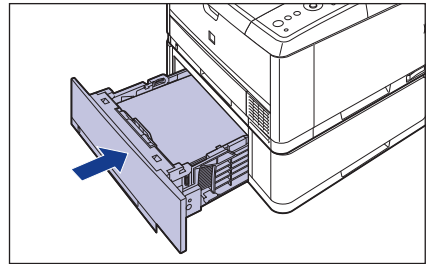
This printer's paper cassette cannot automatically detect the paper size. Therefore, you need to register the size of the paper loaded in the paper cassette.
See "Specifying the Size of the Paper in the Paper Cassette" (p. 3-35) to register the paper size.

Specifying the Size of the Paper in the Paper Cassette

This printer's paper cassette cannot automatically detect the paper size. Therefore, when you loaded paper in the paper cassette, you need to specify the size of the paper loaded in the paper cassette using the control panel. When using standard size paper, specify its size. When loading custom size paper, specify CUSTOM SIZE or CUSTOM SIZER. The paper size setting for the paper cassette is set to "A4" by default.

Specify the paper size setting for the paper cassette using the following procedure.

IMPORTANT
- Match the paper size specified in the SETUP menu of the printer and that specified in the printer driver. If they do not match, the message <PC LOAD "size"> appears. In this case, the settings for CASSETTE1 SIZE and CASSETTE2 SIZE are changed to those in the printer driver by pressing [Online], allowing you to continue printing.
- When custom size paper is loaded, specify the settings for CASSETTE1 SIZE and/or CASSETTE2 SIZE as follows.
  - When the paper is loaded in landscape orientation: CUSTOM SIZE
  - When the paper is loaded in portrait orientation: CUSTOM SIZER

• When you change the paper loaded in the paper cassette frequently, it is convenient if you set CASSETTE1 SIZE and/or CASSETTE2 SIZE to MIXED SIZES. When CASSETTE1 SIZE and/or CASSETTE2 SIZE is set to MIXED SIZES, you do not need to specify the settings for CASSETTE1 SIZE and/or CASSETTE2 SIZE each time the different size paper is loaded. However, observe the following when specifying MIXED SIZES.

- Make sure that the size of the paper loaded in the paper cassette matches the paper size specified in the printer driver before printing. If they do not match the printer may stop printing, displaying the message <41 CHK PAPER SZE>, or a paper jam may occur. Be sure to check if the paper size specified in the printer driver matches the size of the paper loaded in the paper cassette before using the printer. However, if SPECIAL MODE J is set to ON, the printer prints without checking the paper size even when the paper size specified in the printer driver and the size of the paper loaded in the paper cassette do not match. For more details, see "SPECIAL MODE J," on p. 5-36.
- When printing from UFR II Printer Driver, you can load paper either in portrait or landscape orientation. However, when printing custom size paper of its long edges 215.9 mm or less, load the paper in landscape orientation. When you are not using UFR II Printer Driver, load the paper in portrait orientation.

📎 NOTE

The names of the following paper sizes are indicated by an abbreviation.
Legal: LG, Letter: LT, Executive: EX, Custom Size: 80 to 99, Custom SizeR: 80R to 99R, Free/Mixed Sizes: FR

1 **Press [Settings].**

> SETUP

> CONTROL MENU →

2 **Select FEEDER MENU using [◄] and [►], then press [OK].**
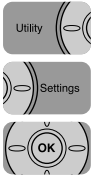
> FEEDER MENU →

> TRAY PAPER SIZE→

3 **Select CASSETTE1 SIZE or CASSETTE2 SIZE using [◄] and [►], then press [OK].**

> CASSETTE1 SIZE →

> =A4 →

4 **Select the paper size using [◄] and [►], then press [OK].**

B5	→

=B5	→

"=" is displayed on the left of the paper size, and the paper size for the paper cassette is specified.

When printing from the printer driver on Windows or Macintosh, configure the printer driver. (See Help of the printer driver)
When printing from DOS or UNIX, specify the settings for STD PAPER SIZE (See p. 5-19) and STD PAPER TYPE (See p. 5-21) using the control panel.

3

Loading and Outputting Paper

Printing from the Multi-purpose Tray

The multi-purpose tray can be loaded with plain paper (64 g/m^2) at sizes of A4, B5, A5, Legal, Letter, Executive, and paper at the following custom sizes.

• Custom Size Paper
  When loading paper in portrait orientation: Width 76.2 to 215.9 mm; Length 127.0 to 355.6 mm
  When loading paper in landscape orientation: Width 127.0 to 215.9 mm; Length 127.0 to 215.9 mm

Paper that cannot be loaded in a paper cassette such as transparencies and envelopes can be loaded in the multi-purpose tray.

When printing from the multi-purpose tray, you need to specify the following settings.

IMPORTANT

Match the setting for TRAY PAPER SIZE in the SETUP menu of the printer and that in the printer driver. If they do not match, the message <PC LOAD "size"> appears. In this case, the setting for TRAY PAPER SIZE is changed to that in the printer driver by pressing [Online], allowing you to continue printing.

NOTE

If you are printing from an operating system on which the printer driver cannot be used, previously specify the paper source to TRAY. (See p. 3-12)

■ **Loading Paper in the Multi-purpose Tray (See p. 3-39)**

■ **Specifying the Size of the Paper in the Multi-purpose Tray (See p. 3-51)**
The FEEDER MENU options in the SETUP menu

• TRAY PAPER SIZE = the size of the loaded paper
When printing from DOS, UNIX, or other operating system on which the printer driver cannot be used, specify the following settings in addition to TRAY PAPER SIZE.

The FEEDER MENU options in the SETUP menu

• STD PAPER SIZE = the size of the loaded paper (See p. 5-19)
• STD PAPER TYPE = the type of the loaded paper (See p. 5-21)

■ **Specifying the Paper Settings in the Printer Driver (See Help of the printer driver)**

When printing from the printer driver, specify the following settings. For more details on using the printer driver, see Help of the printer driver.

[Page Setup] Sheet
   [Output Size] = the size of the loaded paper

[Paper Source] Sheet
   [Paper Source] = [Multi-purpose Tray]

   [Paper Type] = [Plain Paper L]: Specify when the paper curls excessively on printing
                         plain paper (64 - 80 g/m^2) with [Paper Type] set to
                         [Plain Paper].
            [Plain Paper]: Plain Paper (64 - 80 g/m^2), Labels
            [Heavy Paper 1]: Heavy Paper (90 - 163 g/m^2)
            [Heavy Paper 2]: Heavy Paper (199 g/m^2)
            [Transparency]: Transparencies
            [Envelope]: Envelopes

Loading Paper in the Multi-purpose Tray

Load paper in the multi-purpose tray. The paper loading procedure varies depending on the paper type. Refer to the respective procedures for each paper type.

• Plain Paper, Heavy Paper, Transparency, Label (See "Loading Plain Paper, Heavy Paper, Transparencies, or Labels in the Multi-purpose Tray," on p. 3-40)

• Envelope (See "Loading Envelopes in the Multi-purpose Tray," on p. 3-46)

🖑 IMPORTANT
   • For more details on the usable paper, see "Usable Paper," on p. 3-2.
   • For details on how to handle the multi-purpose tray, see "Precautions for Handling the Multi-purpose Tray or Paper Cassette," on p. 3-13.

3

Loading and Outputting Paper

Loading Plain Paper, Heavy Paper, Transparencies, or Labels in the Multi-purpose Tray

Perform the following procedure to load plain paper, heavy paper, transparencies, or labels in the multi-purpose tray.

1 Open the multi-purpose tray.

Holding the opening at the center of the printer, open the multi-purpose tray.
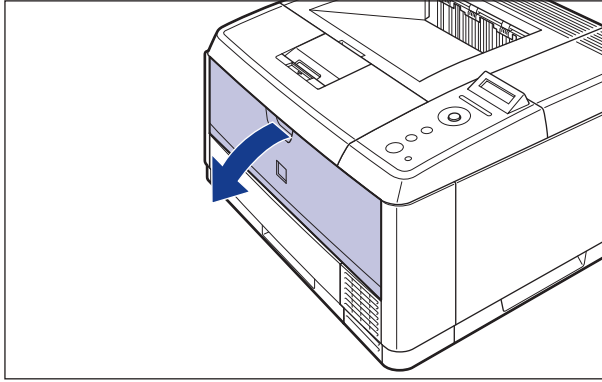
2 Pull out the auxiliary tray.
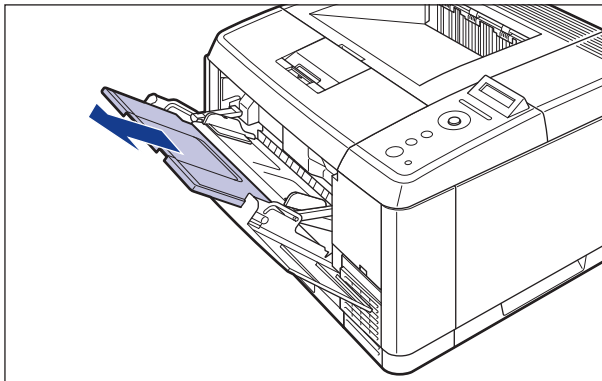
🖐 IMPORTANT

Be sure to pull out the auxiliary tray when loading paper in the multi-purpose tray.

3 **When loading long-size paper such as A4, open the extension tray.**
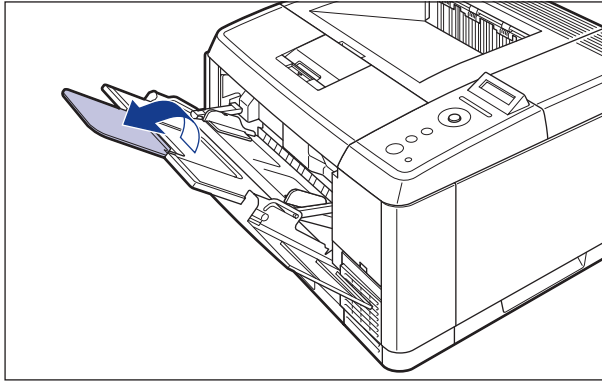
4 **Spread the paper guides a little wider than the actual paper width.**
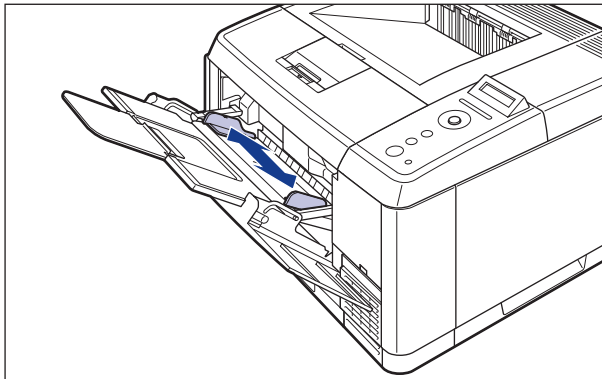
5 Before loading transparencies or labels, fan them in small batches and align the edges.
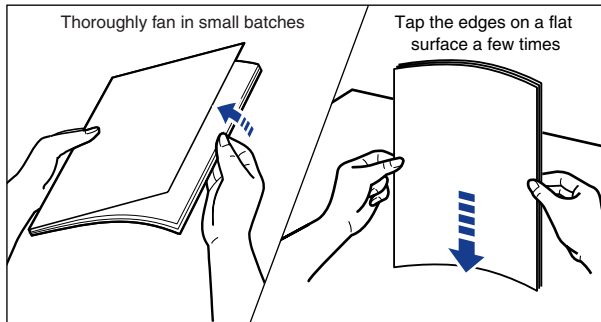
Thoroughly fan in small batches | Tap the edges on a flat surface a few times

⚠ CAUTION

When loading paper, take care not to cut your hands with the edges of the paper.

🖐 IMPORTANT

- Be sure to fan the transparencies or labels thoroughly before loading them. If they are not fanned enough, multiple sheets of paper may be fed at once, causing paper jams.
- When fanning or aligning the transparencies, try to hold the edges to avoid touching the printing surface.
- Take care not to mark or stain the printing surface of the transparencies with fingerprints, dust, or oil. This may result in poor print quality.

6 Gently load the stack of paper with the printing side facing up until it touches the back of the tray.

Be sure that the paper stack is loaded under the paper limit guide (A).
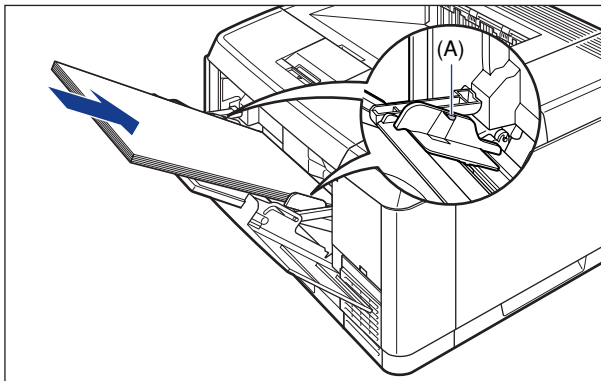
⚠ CAUTION

When loading paper, take care not to cut your hands with the edges of the paper.

🖑 IMPORTANT

- The multi-purpose tray can be loaded with up to the number of sheets listed below.
  - Plain paper (Ex. 64 g/m^2)   : Approx. 100 sheets
  - Heavy paper (Ex. 90 g/m^2)   : Approx. 80 sheets
  - Heavy paper (Ex. 128 g/m^2)   : Approx. 50 sheets
  - Heavy paper (Ex. 199 g/m^2)   : 30 sheets
  - Transparency   : 50 sheets
  - Label   : Approx. 40 sheets
- Make sure that there is sufficient space between the paper limit guides and the paper stack. If there is no space, slightly reduce the amount of paper.
- Load the paper so that it is straight.
- If the rear edge of the paper stack is not properly aligned, it may result in misfeeds or paper jams.
- If the paper is curled or folded at corners, flatten it before loading it in the printer.
- If you use paper that has been poorly cut, multiple sheets of paper may be fed at once. In this case, align the edges of the stack on a hard, flat surface.

📝 NOTE

- If you want to print custom size paper of its long edges 215.9 mm or less when TRAY PAPER SIZE in the FEEDER MENU options in the SETUP is set to MIXED SIZES, specify the settings according to the printer driver you are using as follows.
 When using UFR II Printer Driver: Load the paper in landscape orientation
  When not using UFR II Printer Driver: Load the paper in portrait orientation
- To print letterhead paper or paper printed with a logo, load the paper in the proper orientation according to the following instructions:

3

Loading and Outputting Paper

Printing from the Multi-purpose Tray   **3-43**

- When loading paper at a size of A4, B5, A5, Legal, Letter, or Executive or custom size paper in portrait orientation, load the paper so that the printing side is facing up as shown in the following figures.
(◀━ : Feeding direction)
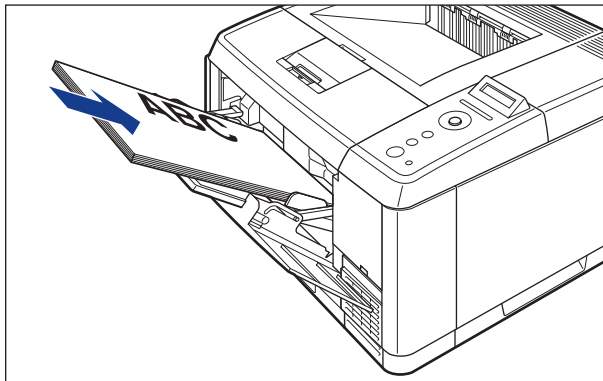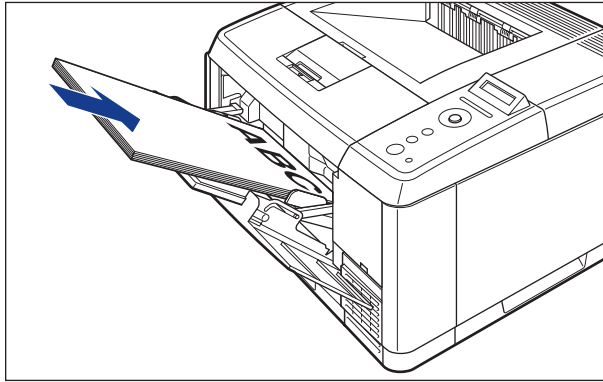
- When loading custom size paper in landscape orientation, load the paper so that the printing side is facing up as shown in the following figures.
(◀━━ : Feeding direction)
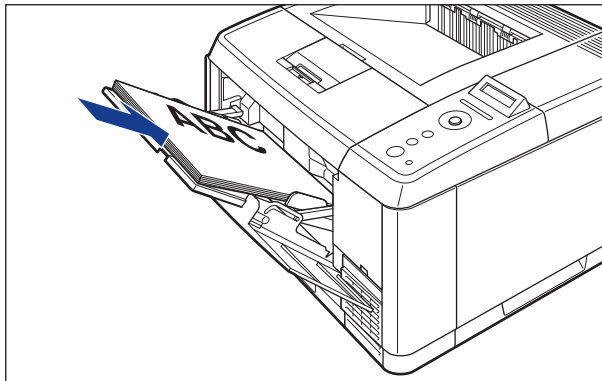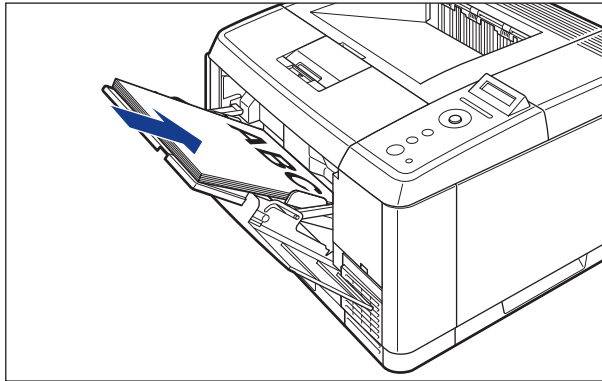
7 **Align the paper guides with both sides of the stack.**
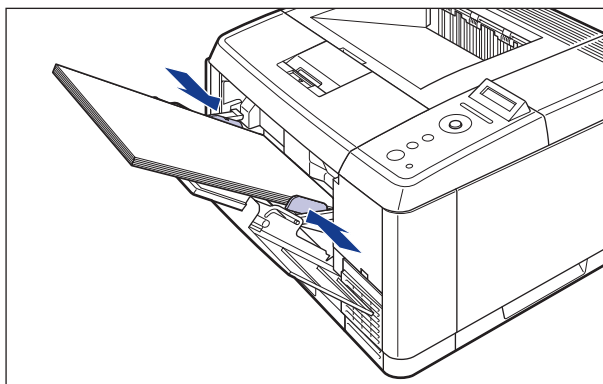
IMPORTANT

Be sure to align the paper guides with the width of the paper. If the paper guides are too loose or too tight, this may result in misfeeds or paper jams.
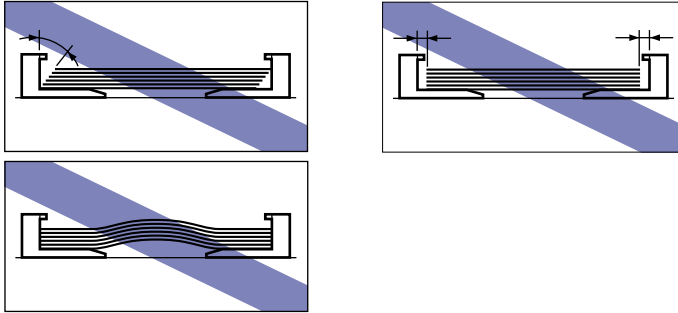
Next, specify the paper size for the multi-purpose tray (See p. 3-51).

Loading Envelopes in the Multi-purpose Tray

You can load envelopes at sizes of DL, COM10, C5, Monarch, and B5 in the multi-purpose tray. Use the following procedure when loading envelopes in the multi-purpose tray.

1 Open the multi-purpose tray.

Holding the opening at the center of the printer, open the multi-purpose tray.
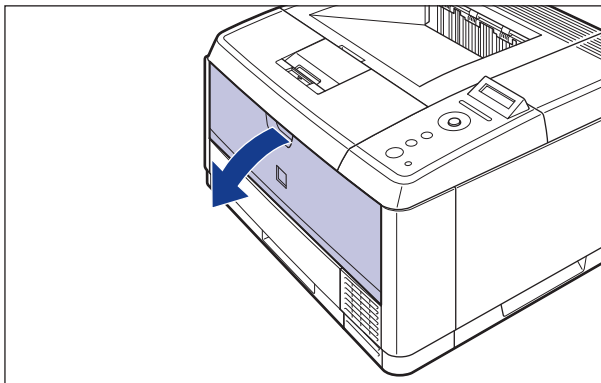
2 Pull out the auxiliary tray.
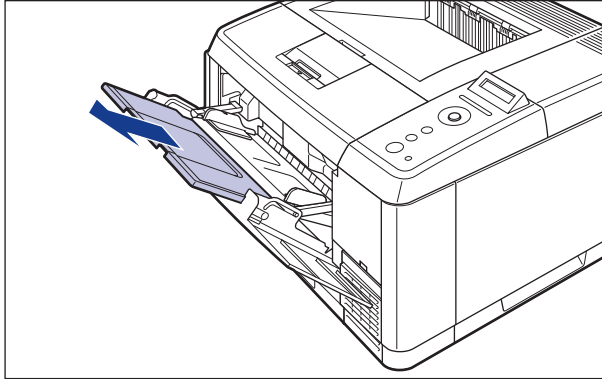
🖐 IMPORTANT

Be sure to pull out the auxiliary tray when loading paper in the multi-purpose tray.

3 When loading long-size paper such as Envelope COM10, open the extension tray.
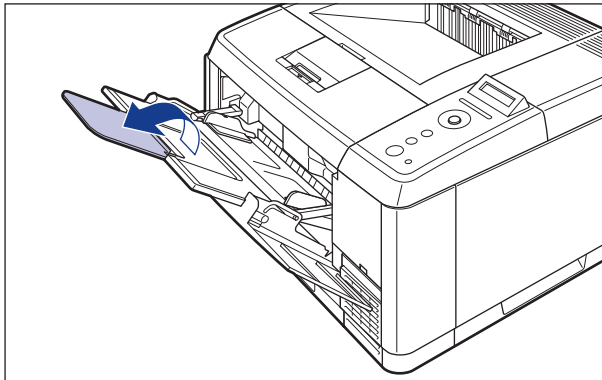
4 **Spread the paper guides a little wider than the actual envelope width.**
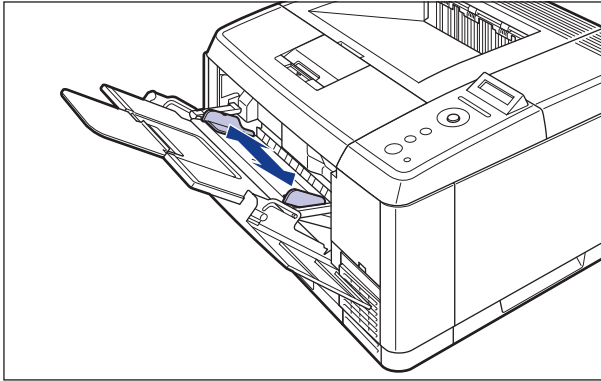
5 **Place the stack of envelopes on a flat surface, flatten them to release any remaining air, and be sure that the edges are pressed tightly.**
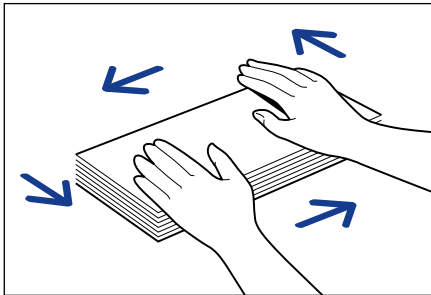
⚠ **CAUTION**

When loading paper, take care not to cut your hands with the edges of the paper.

6 **Loosen any stiff corners of the envelopes and flatten curls as shown in the figure.**
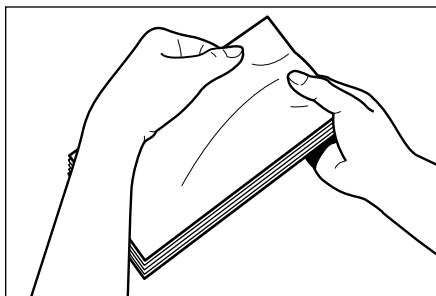
7 **Align the edges of the envelopes on a flat surface.**
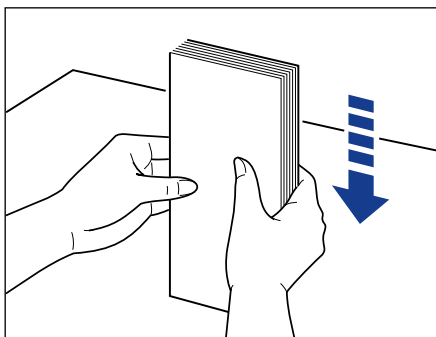
8 **Gently load the stack of envelopes with the address side facing up until it touches the back of the tray.**

Be sure that the stack of envelopes is loaded under the paper limit guide (A).

Printing from the Multi-purpose Tray   **3-49**
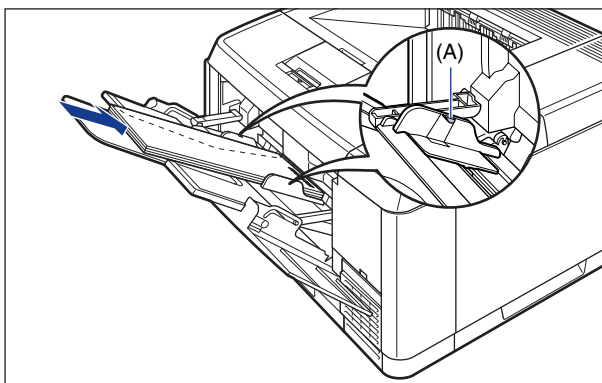
IMPORTANT

- Up to 10 envelopes can be loaded in the multi-purpose tray.
- You cannot print on the reverse side (glued side) of envelopes.
- When loading envelopes at a size of DL, COM10, C5, or Monarch, load them so that the flap is toward the left of the printer when viewed from the front.
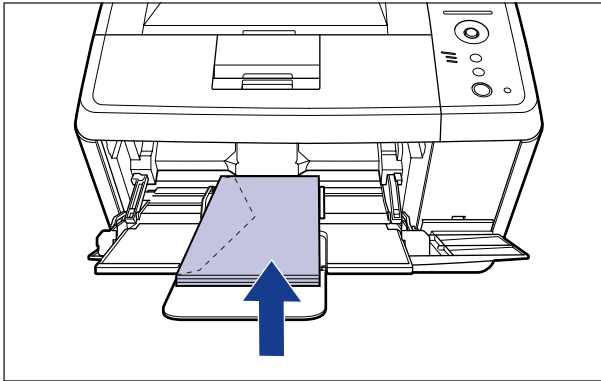
- When loading envelopes of the Envelope B5 size, close the flaps and load them so that the envelopes are fed from the top (the edge with the flap).

9 Align the paper guides with both sides of the stack.
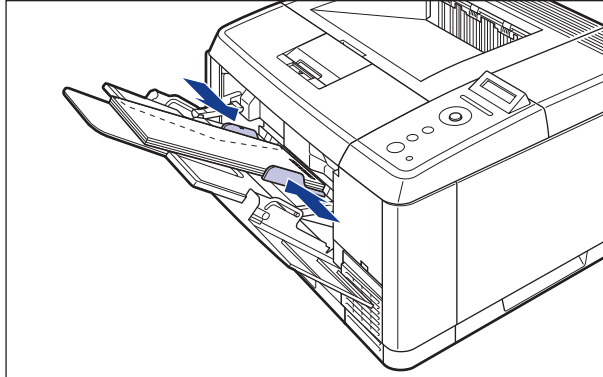
Specifying the Size of the Paper in the Multi-purpose Tray

When you loaded paper in the multi-purpose tray, specify the paper size for the multi-purpose tray using the control panel. When using paper or envelopes of standard size, specify its size. When loading custom size paper, specify CUSTOM SIZE or CUSTOM SIZER. The paper size setting for the multi-purpose tray is set to "A4" by default.

Specify the paper size setting for the multi-purpose tray using the following procedure.

IMPORTANT
- Match the paper size specified in the SETUP menu of the printer and that specified in the printer driver. If they do not match, the message <PC LOAD "size"> appears. In this case, the setting for TRAY PAPER SIZE is changed to that in the printer driver by pressing [Online], allowing you to continue printing.
- When custom size paper is loaded, specify the setting for TRAY PAPER SIZE as follows.
  - When the paper is loaded in landscape orientation: CUSTOM SIZE
  - When the paper is loaded in portrait orientation: CUSTOM SIZER

- When you change the paper loaded in the multi-purpose tray frequently, it is convenient if TRAY PAPER SIZE is set to MIXED SIZES. If TRAY PAPER SIZE is set to MIXED SIZES, you do not need to specify the setting for TRAY PAPER SIZE each time you load the different size paper. However, observe the following when specifying MIXED SIZES.
  - Make sure that the size of the paper loaded in the multi-purpose tray matches the paper size specified in the printer driver before printing. If they do not match, the printer may stop printing, displaying the message <41 CHK PAPER SZE>, or a paper jam may occur. Be sure to check if the paper size specified in the printer driver matches the size of the paper loaded in the multi-purpose tray before using the printer. However, if SPECIAL MODE J is set to ON, the printer prints without checking the paper size even when the paper size specified in the printer driver and the size of the paper loaded in the multi-purpose tray do not match. For more details, see "SPECIAL MODE J," on p. 5-36.
  - When printing from UFR II Printer Driver, you can load paper either in portrait or landscape orientation. However, when printing custom size paper of its long edges 215.9 mm or less, load the paper in landscape orientation. When you are not using UFR II Printer Driver, load the paper in portrait orientation.

✎ NOTE

The names of the following paper sizes are indicated by an abbreviation.
Legal: LG, Letter: LT, Executive: EX, Envelope DL: DL, Envelope COM10: CO, Envelope C5: EC5, Envelope Monarch: MO, Envelope B5: EB5, Custom Size: 80 to 99, Custom SizeR: 80R to 99R, Free/Mixed Sizes: FR

1 **Press [Settings].**

```
SETUP
```
▼
```
CONTROL MENU    →
```

2 **Select FEEDER MENU using [◄] and [►], then press [OK].**

```
FEEDER MENU     →
```
▼
```
TRAY PAPER SIZE→
```

3 **Select TRAY PAPER SIZE using [◄] and [►], then press [OK].**

```
TRAY PAPER SIZE→
```
▼
```
=A4             →
```

4 **Select the paper size using [◄] and [►], then press [OK].**

| B5 | → |

| =B5 | → |

"=" is displayed on the left of the paper size, and the paper size for the multi-purpose tray is specified.

When printing from the printer driver on Windows or Macintosh, configure the printer driver. (See Help of the printer driver)
When printing from DOS or UNIX, specify the settings for STD PAPER SIZE (See p. 5-19) and STD PAPER TYPE (See p. 5-21) using the control panel.

3

Loading and Outputting Paper

2-sided Printing

You can perform 2-sided printing with the standard equipment of this printer. Plain paper (64 to 80 g/m^2) and heavy paper (90 to 120 g/m^2) at sizes of A4, Legal, and Letter can be used for automatic 2-sided printing.

🖐 IMPORTANT

- You cannot perform automatic 2-sided printing on heavy paper (121 to 199 g/m^2), transparencies, labels, and envelopes.
- When 2-sided printing is specified, and a job with odd number of pages is printed, the printing surface of the last page are as follows according to the setting for ALT.METHOD (See p. 5-26) or the paper source.
  - When printing from the paper cassette
    If ALT.METHOD is set to ON, the printer prints on the underside of the loaded paper.
    If ALT.METHOD is set to OFF, the printer prints on the upper side of the loaded paper.
  - When printing from the multi-purpose tray
    If ALT.METHOD is set to ON, the printer prints on the upper side of the loaded paper.
    If ALT.METHOD is set to OFF, the printer prints on the underside of the loaded paper.
- Do not touch the paper during automatic 2-sided printing until it is completely output to the face-down output tray. In automatic 2-sided printing, the paper is partially output once after printed on its surface and is fed again to be printed on its reverse side.
- Be sure to close the face-up output tray before performing automatic 2-sided printing.

Switching Between Automatic 2-sided Printing and 1-sided Printing

Perform automatic 2-sided printing using the following procedure.

■ When printing from Windows
When performing automatic 2-sided printing, set [Print Style] in the [Finishing] sheet in the printer driver to [2-sided Printing]. For more details on using the printer driver, see Help of the printer driver.

■ When printing from Macintosh
When performing automatic 2-sided printing, specify the settings for 2-sided printing in the printer driver. For more details on using the printer driver, see Help of the printer driver.

■ When printing from DOS or UNIX
When you are printing from DOS, UNIX, or other operating system on which you cannot use the printer driver, specify the settings using the control panel.

Switch between automatic 2-sided printing and 1-sided printing with the printer's control panel using the following procedure.

1 **Press [Settings].**

```
SETUP
       ▼
CONTROL MENU    →
```

2 **Select FEEDER MENU using [◄] and [►], then press [OK].**

```
FEEDER MENU     →
       ▼
TRAY PAPER SIZE→
```
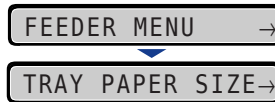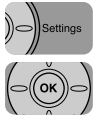
3 **Select 2-SIDED PRINT. using [◄] and [►], then press [OK].**

```
2-SIDED PRINT. →
       ▼
=OFF           →
```
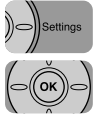
4 **Select ON using [◄] and [►], then press [OK].**

```
ON             →
       ▼
=ON            →
```
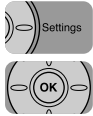
"=" is displayed on the left of ON, and 2-sided printing is specified.

Loading Paper When Performing Automatic 2-sided Printing

In automatic 2-sided printing, the orientation of the paper you load is opposite to that when performing 1-sided printing because the reverse side of paper is printed first. When printing paper such as that with a letterhead in which faces and printing orientation specified, load the paper using the following procedure:

When Feeding Paper from the Paper Cassette

Load the paper so that the printing side is facing up as shown in the following figures.
(◀ : Feeding direction)
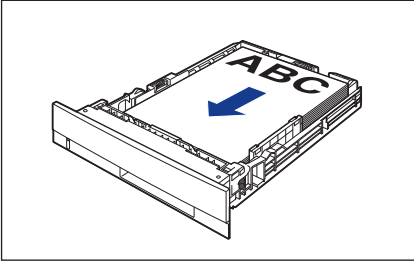
Cassette 1

Cassette 2
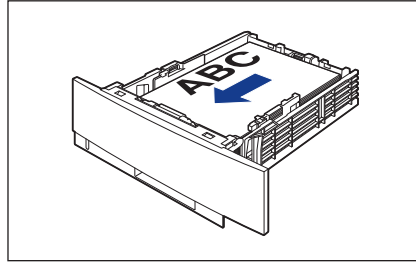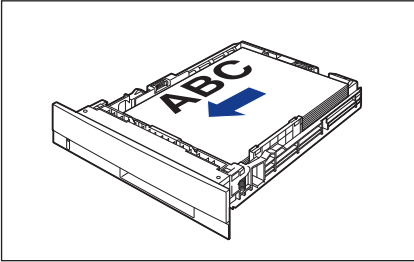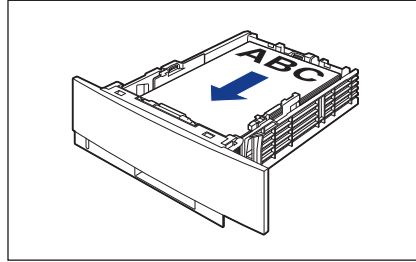
When Loading Paper in the Multi-purpose Tray

Load the paper so that the printing side is facing down as shown in the following figures.
(◄━━ : Feeding direction)
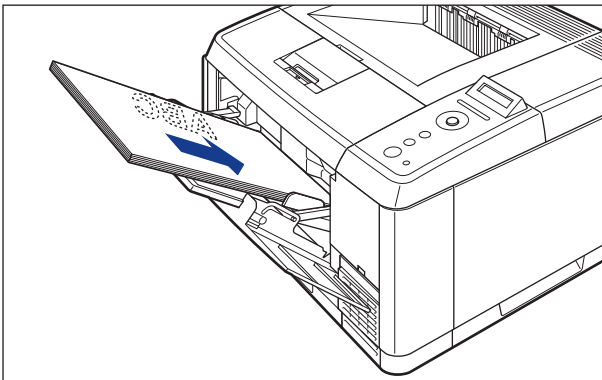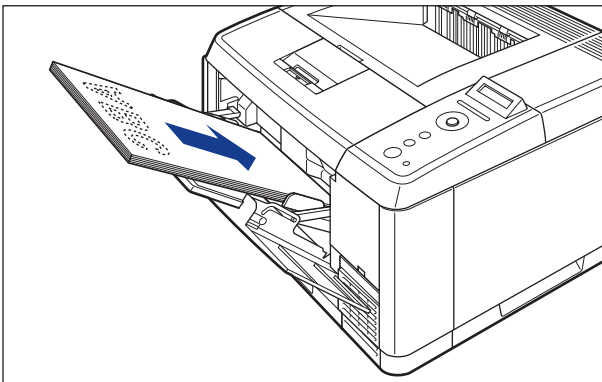
Loading Paper for Manual 2-sided Printing

Since this printer can print on the other side of previously printed paper, you can perform 2-sided printing on paper to which automatic 2-sided printing cannot be applied. When printing on the other side of previously printed paper from the multi-purpose tray, load the paper as shown in the following figures.

Load the paper so that the printing side is facing up as shown in the following figures.
(◀ : Feeding direction)
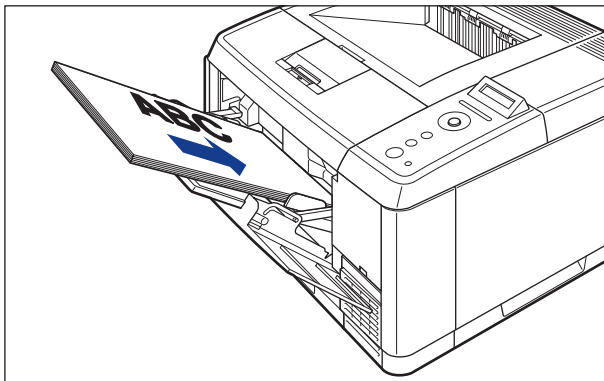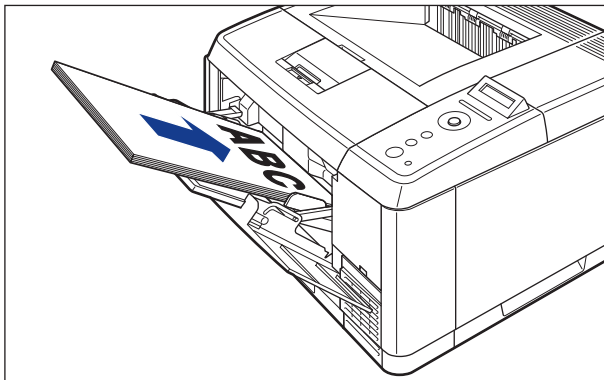
The Printing Environment

4

CHAPTER

This chapter describes the functions and categories of the menu displayed in the printer's control panel, how to use the operation keys, and how to view the display.

Menu Functions

This section describes the menu functions and their categories.

Menu Functions

Before printing, specify the total print pages, paper size, etc. Generally, these settings are specified in an application or printer driver.

This printer, however, is equipped with many functions as well as the settings for the total print pages and paper size, enabling printing for a wide array of uses. Some settings for this printer cannot be specified by application or printer driver. You can specify these settings using the "menu functions".

You can specify the settings using the menu functions easily because in the menu functions a variety of settings are classified by purpose.

There are the following two kinds of procedures for specifying the menu functions.

■ Settings Using the Printer's Control Panel
Specify the settings by pressing the keys while checking the display on the printer.

■ Settings Using the Remote UI
Some settings specified by the control panel can be specified by a web browser from your computer.

✎ NOTE
- For this section, this manual describes only the procedures for specifying the menu functions using the control panel. For details on specifying the settings using the Remote UI, see "Remote UI Guide".
- The settings for the menu functions are registered to the memory (NVRAM) in which data is not deleted normally even if the printer is turned OFF. Therefore, even after cycling the power of the printer, it starts with its settings unchanged from when the printer was turned OFF last time.

Setting Priority

When the setting values for the same option are different between an application or the printer driver and the menu functions, the setting specified in the application or printer driver is effective. When specifying a setting only in the menu functions using the control panel or the Remote UI, the most recently specified setting is effective.

Priority

High ◢◣ Low

| Application soft
Printer driver | Control panel
Remote UI |

The most resent
setting is effective
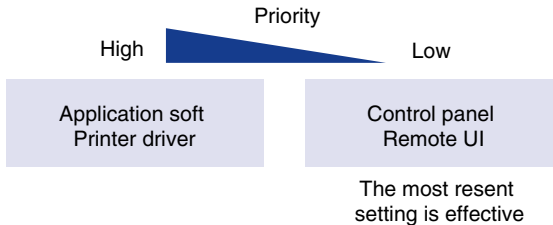
The printer driver and Remote UI are supplied with this printer. For details on using the printer driver or Remote UI, see Help of the printer driver, and "Remote UI Guide".

Depending on the settings, they become effective after cycling the power of the printer or performing a hard reset.

Menu Categories

There are the following six categories of the menu.

For the functions and operation procedures, see "Menu Functions and Menu Operation," on p. 4-9.

For details on each menu, see "Chapter 5 Printing Environment Settings".

JOB Menu
Prints the job logs.

SETTINGS Menu
Specifies the printing environment such as layout adjustment and print quality setting.

UTILITY Menu
Prints information about the current printer settings.

FEEDER SELECTION Menu
Specifies whether to feed paper from the paper cassette or multi-purpose tray and the paper size

RESET Menu
Resets the printer or outputs print data.

CANCEL JOB Menu
Cancels the job currently being received or processed.

Ready   Messag   Job

Job

Utility   OK   Settings

Reset

Feeder Selection

Cancel Job

Online

Printer Status to Enter the Menu Operation

You can enter each menu when the printer is in the following status.

O: The status that you can enter the menu
X: The status that you cannot enter the menu

	When the printer is ready to print *1		When an error is occurring *2
	When the printer is online	When the printer is offline	
SETUP Menu	○*3	○	○
SELECT FEEDER Menu	○	○	○
RESET Menu	○	○	○*4
Job Menu	○	x	x
UTILITY Menu	○	x	x

*1 The printer is ready to print when the Ready indicator is on.

*2 An error is occurring in the printer when the Message indicator is on.

*3 You cannot specify the settings in the USER MAIN. options when the printer is in the online status.

*4 You cannot specify the settings for FORM FEED.

How to Use the Operation Keys

Use the following keys for the menu operation.

Among the keys, [Setting], [Utility], [Job], [Reset], [Cancel Job], and [Feeder Selection] have the function to display a menu.

- Display
- UTILITY Menu
- JOB Menu
- SETUP Menu
- RESET Menu
- SELECT FEEDER Menu
- CANCEL JOB Menu
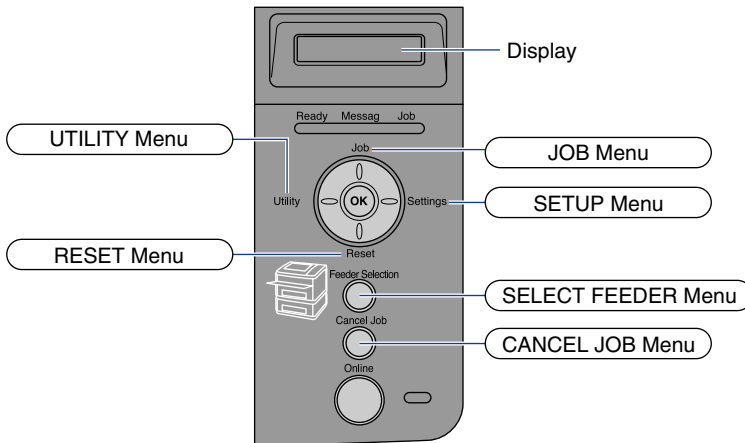
■ The functions of each key are as follows.

Key	Functions		
(Online)	Switches between online and offline. The printer is online when the indicator under the key is on and is offline when the indicator is off. Indicated as [Online] in the manuals.		
(Cancel Job)	**When the printer is online**	**Immediately after placing the printer online**	**While the menu is displayed**
	If pressed when the Job indicator is on or blinking (When data is being processed or received), cancels the job currently being processed. Indicated as [Cancel Job] in the manuals.		Does not function.

Key	Functions		
Feeder Selection (Feeder Selection)	Displays the SELECT FEEDER menu. Indicated as [Feeder Selection] in the manuals.		Does not function.
Utility (Utility)	Displays the UTILITY menu. Indicated as [Utility] in the manuals.	Does not function.	Displays the next left item in the same hierarchy. When the setting value is numeric, reduces the value. If you keep holding down the key, the speed of the value decreasing is increased depending on the setting value. Indicated as [◄] in the manuals.
Job (Job)	**When the printer is online**	**Immediately after placing the printer online**	**While the menu is displayed**
	Displays the JOB menu. Indicated as [Job] in the manuals.	Does not function.	Displays the item of the next upper hierarchy. Indicated as [▲] in the manuals.
Reset (Reset)	Displays the RESET menu. Indicated as [Reset] in the manuals.		Executes the selected item. Otherwise, goes down the hierarchy. Indicated as [▼] in the manuals. Has the same function as [OK].
Settings (Settings)	Displays the SETUP menu. Indicated as [Settings] in the manuals. However, the USER MAIN. options cannot be specified when the printer is online.		Displays the next right item in the same hierarchy. When the setting value is numeric, increases the value. If you keep holding down the key, the speed of the value increasing is increased depending on the setting value. Indicated as [►] in the manuals.
OK (OK)	Does not function.		Executes the selected item. Otherwise, goes down the hierarchy. Indicated as [OK] in the manuals. Has the same function as [▼].

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The Printing Environment

How to View the Display

This section describes the contents of the letters that appear in the display when specifying the menu functions.

Menu Structure

The menu structure looks like a chain (loop structure), and one of the menus on this chain is displayed in the display. Therefore, continuously pressing [◄] or [►] displays the first menu again.

The menus consist of individual loop structures in each hierarchy.

Moves the menu from side to side

....

......UFR II SETUP INITIALIZE MENU   CONTROL MENU   FEEDER MENU   LAYOUT MENU......
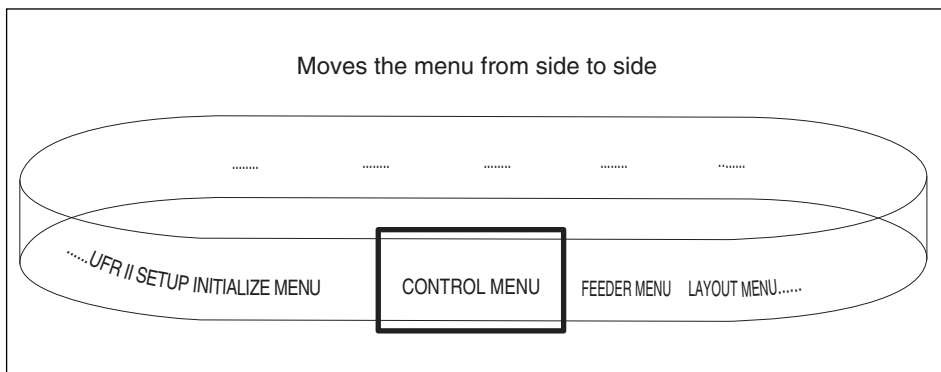
How to View the Display

Up to 16 characters appear in a line in the display.

After you display a menu by pressing a key, the item of the first hierarchy in the menu appears automatically.

If there is any selectable item in the same hierarchy, "→" appears on the right in the display.

SETUP

CONTROL MENU   →

If no action is taken after the lowest hierarchy in the menu is displayed, the item of the next upper hierarchy and that of the currently selected hierarchy are displayed alternately.

```
┌─────────────────────┐
│ POWER SAVE MODE     │
└─────────────────────┘
          ▼
┌─────────────────────┐
│ =PANEL OFF        → │
└─────────────────────┘
```

"=" is displayed on the left in the display for the currently selected setting.

Menu Functions and Menu Operation

This section describes the overview of the menus and operating procedures for them.

SETUP Menu

This section describes the function of the SETUP menu and the operating procedure for it.

SETUP Menu Functions

The SETUP menu allows you to configure a variety of printing environment such as printing position, type of character set, and the selection of the interface for connecting the printer to the computer.

Normally, you can configure a printing environment using an application or the printer driver in a computer connected to the printer. However, some settings such as interface configuration can be specified only in the SETUP menu of the printer. Also, you can print using an application in which you cannot specify the print settings or MS-DOS command directly. When you are printing using them, specify the printing environment using the SETUP menu in the printer.

✎ NOTE

For more details on the settings, see "SETUP Menu Settings," on p. 5-10.

Operating Procedure for the SETUP Menu

The SETUP menu consists of three hierarchies: "Option", "Setting", and "Setting Value". Select the target options in each hierarchy.

As an example of the setting procedure, this section describes the procedure for setting TRAY PAPER SIZE in the FEEDER MENU options to B5. Start the key operation from Step 1.

Operation Procedure	Key Operation
1 **Place the printer online.**	Press [Online].
	When the printer is online, the SETUP menu can be displayed, however, the USER MAIN. options cannot be specified.

2 Display the SETUP menu.	Press [Settings].
	The SETUP menu is displayed.

```
SETUP
   ▼
CONTROL MENU    →
```

3 Select the option.	Press [◄] or [►].
When the FEEDER MENU options are selected	The target option is displayed.

```
FEEDER MENU     →
```

4 Display the item.	Press [OK].
	The selected items are is displayed.

```
TRAY PAPER SIZE→
```

5 Select the setting.	Press [◄] or [►].
When TRAY PAPER SIZE is selected	The target item is displayed.

```
TRAY PAPER SIZE→
```

6 Determine the selected setting value.	Press [OK].
	The selected settings are displayed.

```
=A4             →
```

7 Select the setting value.	Press [◄] or [►].
When B5 is selected.	The target setting is displayed.

```
B5              →
```

8 Determine the selected setting value.	Press [OK].

9 Switch back to online state.	Press [Online].

✎ NOTE

- The printer can switch back to online when it is ready to print. The printer is ready to print when the Ready indicator is on.
- If you press [▲] during the setting, the display goes back up the hierarchy.
- If you press [Online] during the setting, the setting is canceled.
- In some options, the settings are divided into two different hierarchies.

4

The Printing Environment

UTILITY Menu

This section describes the function of the UTILITY menu and the operating procedure for it.

UTILITY Menu Functions

The UTILITY menu allows you to print the settings for the SETUP menu or perform cleaning.

✎ NOTE

For more details on the settings, see "UTILITY Menu Settings," on p. 5-43.

Operating Procedure for the UTILITY Menu

The UTILITY menu consists of two hierarchies: "Common Utilities" and "Exclusive Utilities". Select the target options in each hierarchy. Exclusive Utilities are displayed only when PCL UTILITY is displayed in the hierarchy of Common Utilities.

This section describes the procedure for printing FONT LIST in PCL UTILITY as an example. Start the key operation from Step 1.

Operation Procedure	Key Operation
1 Make sure that the printer is online.	If the printer is not online, press [Online].
2 Display the UTILITY menu. UTILITY MENU ▼ CONFIG.PAGE →	Press [Utility]. The UTILITY menu is displayed.
3 Select the Common Utility. When PCL UTILITY is selected PCL UTILITY →	Press [◄] or [►]. The target option is displayed.
4 Select Exclusive Utilities FONT LIST →	Press [OK]. The Exclusive Utilities are displayed.

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5	**Select the Exclusive Utility.**	Press [◄] or [►].

When FONT LIST is selected

```
FONT LIST        →
```

The target Exclusive Utility is displayed.

6	**Confirm the selected option.**	Press [OK].

A font list is printed.

📝 NOTE

- If you did not select the Exclusive Utility (PCL UTILITY), Step 4 to 5 are omitted.
- If you press [▲] during the setting, the display goes back up the hierarchy.
- If you press [Online] during the setting, the setting is canceled.

JOB Menu

This section describes the function of the JOB menu and the operating procedure for it.

JOB Menu Functions

The JOB menu allows you to print a variety of log lists.

📝 NOTE

For more details on the settings, see "JOB Menu Settings," on p. 5-45.

Operating Procedure for the JOB Menu

This section describes the procedure for printing JOB LOG LIST. Start the key operation from Step 1.

<div align="center">Operation Procedure   Key Operation</div>

1	**Make sure that the printer is online.**	If the printer is not online, press [Online].

2	**Display the JOB menu.**	Press [Job].

The JOB menu is displayed.

```
JOB
  ▼
JOB LOG LIST     →
```

3	**Select the item that you want to print.**	Press [◄] or [►].
	When JOB LOG LIST is selected	The target item is displayed.
	`JOB LOG LIST    →`	

4	**Print JOB LOG LIST.**	Press [OK].
		JOB LOG LIST is printed.

✐ NOTE
  If you press [Online] during the setting, the setting is canceled.

RESET Menu

This section describes the function of the RESET menu and the operating
procedure for it.

RESET Menu Functions

The RESET menu allows you to reset the printer (soft reset and hard reset) and
output any print data remaining in the printer memory.

✐ NOTE
  For more details on the settings, see "RESET Menu Settings," on p. 5-46.

Operating Procedure for the RESET Menu

This section describes the procedure for executing SOFT RESET as an example.
Start the key operation from Step 1.

Operation Procedure   Key Operation

1	**Display the RESET menu.**	Press [Reset].
	`RESET`	The RESET menu is displayed.
	▼	
	`SOFT RESET      →`	

2	**Select the item that you want to execute.**	Press [◄] or [►].
	When SOFT RESET is selected	The target item is displayed.
	`SOFT RESET      →`	

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| 3 | Determine the selected item. | Press [OK]. |

A soft reset is performed.

✎ NOTE

HARD RESET is displayed after you keep holding down [OK] 3 seconds or more when SOFT RESET is displayed in the display.

CANCEL JOB Menu

This section describes the function of the CANCEL JOB menu and the operating procedure for it.

CANCEL JOB Menu Functions

The CANCEL JOB menu allows you to cancel only the job currently being received or processed.

Pressing [Cancel Job] and [OK] on the control panel while the job you want to cancel is being processed starts the cancel job process.

🖑 IMPORTANT

- Cancel the job while the printer is processing the data (While the Job indicator is on or blinking). No job is canceled by pressing [Cancel Job] when the Job indicator is off.
- The data that has already been processed and is being printed (started to be fed) cannot be canceled. In this case, the next print data may be canceled.
- When there is any print data sent from a printer driver other than that for this printer, multiple data may be canceled.

✎ NOTE

When performing [Cancel Job], you may not be able to cancel the job even if <03 CANCELING JOB> is displayed.

Operating Procedure for the CANCEL JOB Menu

Pressing [Cancel Job] and [OK] on the control panel while the job you want to cancel is being processed displays <03 CANCELING JOB> starts the cancel job process. Start the key operation from Step 1.

Operation Procedure | Key Operation

| 1 | Cancel the job while the job is being processed. | Press [Cancel Job]. |

CANCEL?

| **2** | **Execute the job cancel process.** | Press [OK]. |

```
03 CANCELING JOB
```

Pressing [OK] starts the job cancel process. When not executing the cancel job process, press any key other than [OK]. After completing the job cancel, the printer is ready to print.

SELECT FEEDER Menu

This section describes the function of the SELECT FEEDER menu and the operating procedure for it.

SELECT FEEDER Menu Functions

The SELECT FEEDER menu allows you to select the paper source, paper size, etc. After a paper source is selected, the corresponding Paper Source indicator comes on.

NOTE

For more details on the settings, see "SELECT FEEDER Menu Settings," on p. 5-48.

Operating Procedure for the SELECT FEEDER Menu

The SELECT FEEDER menu consists of two hierarchies: "Setting" and "Setting Value". Select the target items in each hierarchy.

As an example of the setting procedure, this section describes the procedure for setting TRAY PAPER SIZE to B5. Start the key operation from Step 1.

<table>
<tr><th>Operation Procedure</th><th>Key Operation</th></tr>
<tr><td>1   Display the SELECT FEEDER menu.

<code>PAPER SOURCE →</code></td><td>Press [Feeder Selection].

The SELECT FEEDER menu is displayed.</td></tr>
<tr><td>2   Select the item.
When TRAY PAPER SIZE is selected

<code>TRAY PAPER SIZE→</code></td><td>Press [◄] or [►].

The target item is displayed.</td></tr>
<tr><td>3   Display the settings.

<code>=A4 →</code></td><td>Press [OK].

The selected settings are displayed.</td></tr>
</table>

The Printing Environment

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Menu Functions and Menu Operation   **4-15**

4	**Select the setting.**	Press [◄] or [►].

When B5 is selected.

The target setting is displayed.

B5	→

5	**Determine the selected setting.**	Press [OK].

Initializing the SETUP Menu

Initialization of the SETUP menu resets the settings specified in the SETUP menu to the default settings.

Initialize the menu by selecting INITIALIZE MENU in the hierarchy of [Options] in the [SETUP] menu. Start the key operation from Step 1.

Operation Procedure	Key Operation
1 **Display the SETUP menu.** SETUP ▼ CONTROL MENU →	Press [Settings]. The SETUP menu is displayed.
2 **Select INITIALIZE MENU.** INITIALIZE MENU→	Press [◄] or [►].
3 **Initialize the SETUP menu.** OK?	Press [OK]. A confirmation message is displayed.
4 **Confirm the message, then initialize the SETUP menu.**	Press [OK]. <INITIALIZING> is displayed during the initialization. DONE is displayed after the initialization is completed.

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The Printing Environment

✋ IMPORTANT

- If the message <INITIALIZE FAIL> appears when the initialization of the SETUP menu is executed, the SETUP menu is not initialized.
- Do not turn the printer OFF during the initialization. The printer memory may be damaged.
- Some settings do not become effective unless you cycle the power of the printer or perform a hard reset after initializing the SETUP menu.

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The Printing Environment

Printing Environment Settings

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CHAPTER

This chapter describes the options that you can specify on the printer's control panel.

Setting Items

SETUP Menu

■ CONTROL MENU Options

Item	Settings	Applicable Page
POWER SAVE MODE	PANEL OFF*, DEEP SLEEP, OFF	p. 5-10
PWR SAVE IN ERR	ON*, OFF	p. 5-11
POWER SAVE TIME	15 minutes*, 30 minutes, 60 minutes, 180 minutes, 5 minutes	p. 5-11
WARNING STEP	CHECK TONER: CONT.PRINTING*, STOP PRINTING	p. 5-11
AUTO ERROR SKIP	OFF*, ON	p. 5-12
PANEL LANGUAGE	ENGLISH*, FRENCH, GERMAN, ITALIAN, SPANISH	p. 5-12
SHOW WARNINGS	CHECK TONER: ON*, OFF CASSETTE EMPTY: ON*, OFF	p. 5-12
DATE AND TIME		
DATE SETTING	01/01/2001 to 31/12/2089	p. 5-13
TIME SETTING	00:00:00 to 23:59:59	p. 5-13
DAYLIGHT SAVING	DST SETTINGS: OFF*, ON START DATE: <MONTH>, <WEEK>, <DAY>, <TIME SETTING> END DATE: <MONTH>, <WEEK>, <DAY>, <TIME SETTING>	p. 5-14
TIME ZONE	GMT-12 to GMT+12	p. 5-14
TIMER SETTINGS		
WAKE UP TIME	00:00 to 23:59	p. 5-14
WAKE UP TIMER	OFF*, ON	p. 5-15

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POWER SAVE TIME	00:00 to 23:59	p. 5-15
POW. SAVE TIMER	OFF*, ON	p. 5-15
DEEP SLEEP TIME	00:00 to 23:59	p. 5-16
DEEPSLEEP TIMER	OFF*, ON	p. 5-16

An asterisk (*) indicates the default setting.

■ FEEDER MENU Options

Item	Settings	Applicable Page
TRAY PAPER SIZE	A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, ENV. ISO-C5, ENV. COM10, ENV. MONARCH, ENV. DL, ENV. ISO-B5, A5, B5	p. 5-17
CASSETTE1 SIZE	A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, A5, B5	p. 5-18
CASSETTE2 SIZE*[1]	A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, A5, B5	p. 5-18
STD PAPER SIZE	A4*, LTR, LGL, EXEC, ENV. ISO-C5, ENV. COM10, ENV. MONARCH, ENV. DL, ENV. ISO-B5, A5, B5	p. 5-19
TRAY PRIORITY	OFF*, ON	p. 5-19
INVLDPAPER TRAY	OFF*, ON	p. 5-20
AUTO SELECTION	TRAY: ON*, OFF CASSETTE 1: ON*, OFF CASSETTE 2*1: ON*, OFF	p. 5-21
STD PAPER TYPE	PLAIN PAPER*, PLAIN PAPER L, HEAVY PAPER 1, HEAVY PAPER 2, TRANSPARENCIES, ENVELOPE	p. 5-21
2-SIDED PRINT.	OFF*, ON	p. 5-22

An asterisk (*) indicates the default setting.

*1 May not be displayed depending on the availability of the optional accessories and other settings.

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Printing Environment Settings

■ LAYOUT MENU Options

Item	Settings	Applicable Page
COPIES	1 to 9999; 1*	p. 5-23
OFFSET Y	-50.0 to 50.0; 0.0* (mm)	p. 5-23
OFFSET X	-50.0 to 50.0; 0.0* (mm)	p. 5-23
BIND.LOCATION	LONG EDGE*, SHORT EDGE	p. 5-24
GUTTER	-50.0 to 50.0; 0.0* (mm)	p. 5-25
ALT.METHOD	ON*, OFF	p. 5-26

An asterisk (*) indicates the default setting.

■ QUALITY MENU Options

Item	Settings	Applicable Page
IMGE REFINEMENT	ON*, OFF	p. 5-27
GRADATION LEVEL	STANDARD*, HIGH	p. 5-27
TONER SAVE	OFF*, ON	p. 5-28
DENSITY	1 to 16; 3*	p. 5-28
HALFTONES	TEXT: 　RESOLUTION*, GRADATION, COLOR 　TONE, HIGH RESOL. GRAPHICS: 　COLOR TONE*, HIGH RESOL., 　RESOLUTION, GRADATION IMAGE: 　COLOR TONE*, HIGH RESOL., 　RESOLUTION, GRADATION	p. 5-28
QUALITY CHANGE	CONT.PRINTING*, STOP PRINTING	p. 5-29

An asterisk (*) indicates the default setting.

■ INTERFACE MENU Options

Item	Settings	Applicable Page
I/F CONNECTION	USB: ON*, OFF NETWORK: ON*, OFF	p. 5-30
MODE TIMEOUT	OFF, 5 to 300 seconds; 15 seconds*	p. 5-30

NETWORK MENU[1]			

TCP/IP SETTINGS	IP MODE:
	  MANUAL*, AUTO
	PROTOCOL[1]:
	  DHCP...OFF*, ON
	  BOOTP ....OFF*, ON
	  RARP ....OFF*, ON
	IP SETTINGS:
	  IP ADDRESS 0.0.0.0*
	  SUBNET MASK 0.0.0.0*
	  GATEWAY ADDRESS 0.0.0.0*
	DNS:
	  PRIMARY ADD. 0.0.0.0*
	  SECONDARY ADD. 0.0.0.0*
	WINS:
	  OFF*, ON
	ARP/PING:
	  ON*, OFF
	FTP:
	  FTP PRINT ....OFF*, ON
	  FTP SETTINGS ....ON*, OFF
	LPD PRINT:
	  ON*, OFF
	RAW PRINT:
	  ON*, OFF
	IPP PRINT:
	  ON*, OFF
	HTTP:
	  ON*, OFF
	SNTP:
	  OFF*, ON
	RESPONSE:
	  ON*, OFF
	IP ADD.RANGE:
	  REJECT RX/PRT...........................OFF*, ON
	  REJECT ADD.SET.[1] .... REJ IP 1 to 8
	  PERMIT RX/PRT ....OFF*, ON
	  PERMIT ADD.SET.[1] ....PER IP 1 to 8
	  REJ SET/BROWSE ....OFF*, ON
	  REJECT ADD.SET.[1] .... REJ IP 1 to 8
	  PMT SET/BROWSE ....OFF*, ON
	  PERMIT ADD.SET.[1] ....PER IP 1 to 8
	MAC ADDRESS SET:
	  PERMIT RECEIVE ....OFF*, ON
	  PERMIT ADD.SET.[1] .... PER.MAC ADD.1 to 50
		p. 5-31	

APPLETALK	OFF*, ON	p. 5-32	
SMB	SMB SERVER: OFF*, ON	p. 5-32	

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Printing Environment Settings

Setting Items   **5-5**

SNMP	ON*, OFF	p. 5-32
START WAIT TIME	0 to 300 seconds; 0 seconds*	p. 5-33
REMOTE UI SET.	REMOTE UI: ON*, OFF	p. 5-33

ETHERNET DRIVER	AUTO DETECT:
	  ON*, OFF
	COMM.MODE*1:
	  HALF DUPLEX*, FULL DUPLEX
	ETHERNET TYPE*1:
	  10 BASE-T*, 100 BASE-TX
	MAC ADDRESS:
	  (Display only)
		p. 5-33

INIT.N/W SET.	-	p. 5-33
CONNECT.RECOG.	ON*, OFF	p. 5-34
EXT.RX BUFFER*1	OFF*, ON	p. 5-34

An asterisk (*) indicates the default setting.

*1 May not be displayed depending on the availability of the optional accessories and other settings.

■ USER MAIN. Options

Item	Settings	Applicable Page
ADJ.START POS.	OFFSET Y(TRAY): -5.0 to 5.0; 0.0* (mm) OFFSET X(TRAY): -5.0 to 5.0; 0.0* (mm) OFFSET Y(CASS1): -5.0 to 5.0; 0.0* (mm) OFFSET X(CASS1): -5.0 to 5.0; 0.0* (mm) OFFSET Y(CASS2)*1: -5.0 to 5.0; 0.0* (mm) OFFSET X(CASS2)*1: -5.0 to 5.0; 0.0* (mm) OFFSET Y(DUP.): -5.0 to 5.0; 0.0* (mm) OFFSET X(DUP.): -5.0 to 5.0; 0.0* (mm)	p. 5-34
RECVRY PRINTING	ON*, OFF	p. 5-35
SPECIAL MODE J	OFF*, ON	p. 5-36
SUBSTITUTE SIZE	OFF*, ON	p. 5-36
FIX.UNIT OFFSET	IMAGE PRIOR.1*, IMAGE PRIOR.2, OFF	p. 5-37
SP.S-SIZE MODE	OFF*, ON	p. 5-37
SP.PRINT MODE	PLAIN PAPER: OFF*, ON	p. 5-37

An asterisk (*) indicates the default setting.

*1 May not be displayed depending on the availability of the optional accessories and other settings.

■ PCL SETUP Options

Item	Settings	Applicable Page
PAPER SAVE	OFF*, ON	p. 5-38
ORIENTATION	PORTRAIT*, LANDSCAPE	p. 5-38
FONT NUMBER	0 to 89; 0*	p. 5-39
POINT SIZE	4.00 to 999.75 point; 12.00 point*	p. 5-39
PITCH	0.44 to 99.99 cpi; 10.00 cpi*	p. 5-39
FORM LINES	5 to 128 lines; 64 lines*	p. 5-39
SYMBOL SET	PC8*, ROMAN8, ROMAN9, ISOL1, ISOL2, ISOL5, ISOL6, ISOL9, PC775, PC8DN, PC850, PC852, PC858, PC8TK, PC1004, WINL1, WINL2, WINL5, WINBALT, DESKTOP, PSTEXT, LEGAL, ISO4, ISO6, ISO11, ISO15, ISO17, ISO21, ISO60, ISO69, WIN 30, MCTEXT	p. 5-39
CUSTOM SIZE	SET*, DO NOT SET	p. 5-39
UNIT OF MEASURE*[1]	Millimeters*, Inches	p. 5-40
X DIMENSION*[1]	76.2 to 215.9 mm; 215.9 mm* (3.00 to 8.50 inches; 8.50 inches*)	p. 5-40
Y DIMENSION*[1]	127.0 to 355.6 mm; 355.6 mm* (5.00 to 14.00 inches; 14.00 inches*)	p. 5-40
APPEND CR TO LF	NO*, YES	p. 5-41
ENLRG A4 WIDTH	OFF*, ON	p. 5-41

An asterisk (*) indicates the default setting.

*1 May not be displayed depending on the availability of the optional accessories and other settings.

■ UFR II SETUP Options

Item	Settings	Applicable Page
PAPER SAVE	ON*, OFF	p. 5-42

An asterisk (*) indicates the default setting.

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Printing Environment Settings

UTILITY Menu

Item	Settings	Applicable Page
CONFIG.PAGE	-	p. 5-43
PCL UTILITY	FONTS LIST	p. 5-43
CLEANING	-	p. 5-43
N/W STATUS PRINT	-	p. 5-44
PRNTPOSNPRINT	-	p. 5-44

JOB Menu

Item	Settings	Applicable Page
JOB LOG LIST	-	p. 5-45
REPORTLOG LST	-	p. 5-45

RESET Menu

Item	Settings	Applicable Page
SOFT RESET/HARD RESET	-	p. 5-46
FORM FEED	-	p. 5-46

SELECT FEEDER Menu

Item	Settings	Applicable Page
PAPER SOURCE	AUTO*, CASSETTE 1, CASSETTE 2*[1], TRAY	p. 5-48
TRAY PAPER SIZE	A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, ENV. ISO-C5, ENV. COM10, ENV. MONARCH, ENV. DL, ENV. ISO-B5, A5, B5	p. 5-48
CASSETTE1 SIZE	A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, A5, B5	p. 5-49
CASSETTE2 SIZE*[1]	A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, A5, B5	p. 5-49
2-SIDED PRINT.	OFF*, ON	p. 5-49

An asterisk (*) indicates the default setting.

*1 May not be displayed depending on the availability of the optional accessories and other settings.

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Printing Environment Settings

SETUP Menu Settings

CONTROL MENU Options

POWER SAVE MODE

PANEL OFF*, DEEP SLEEP, OFF

Specifies whether the printer should use Power Save Mode.

There are three types of Power Save Mode, and the type of the mode the printer enters depends on the setting for this item.

Setting	Power Save Mode the Printer Can Enter
PANEL OFF	Power Save Mode 1 (the Panel Off mode) *1
DEEP SLEEP	Power Save Mode 1 (the Panel Off mode) Power Save Mode 2 (the Deep Sleep mode)
OFF	The printer does not enter Power Save Mode. *2

*1 When "DEEPSLEEP TIMER" (See p. 5-16) in TIMER SETTINGS is set to ON, and the time specified in "DEEP SLEEP TIME" (See p. 5-16) in TIMER SETTINGS has elapsed, the printer enters Power Save Mode 2 (the Deep Sleep mode).

*2 Even if OFF is specified for this item, the printer enters Power Save Mode 2 (the Deep Sleep mode) when [Deep Sleep] is executed in the Remote UI ([Device Manager] → [Status] → [Device Control] → [Deep Sleep]).

Power Save Mode consumes less power during the sleep state. While the printer is in Power Save Mode, the display on the control panel is off, and the following indicators are on.

Power Save Mode Type	Indicator that Comes On
Power Save Mode 1 (the Panel Off mode)	When the printer is online: Ready Indicator When the printer is offline: Message Indicator
Power Save Mode 2 (the Deep Sleep mode)	Power Indicator

PWR SAVE IN ERR

ON*, OFF

Specifies whether the printer should enter Power Save Mode when an error is occurring in the printer (when the Message indicator is on, or the number in the message blinks).

If this item is set to ON, the printer enters Power Save Mode even when an error is occurring in the printer.

If this item is set to OFF, the printer does not enter Power Save Mode when an error is occurring in the printer.

POWER SAVE TIME

15 minutes*, 30 minutes, 60 minutes, 180 minutes, 5 minutes

Specifies the time interval until the printer enters Power Save Mode 1 (the Panel Off mode).

✎ NOTE

If the printer is in any of the following status, the printer does not enter Power Save Mode (the Panel Off mode) even when the specified time has elapsed.
- An error is occurring in the printer (when the Message indicator is on, or the number in the message blinks), and PWR SAVE IN ERR is set to OFF.
- During the printer's startup

WARNING STEP

CHECK TONER ....CONT.PRINTING*, STOP PRINTING

Specifies whether the printer should continue or stop printing when the following message appears.

Warning Message	Printer Status
<16 PREPARE TONER>	The toner cartridge needs to be replaced soon.

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Printing Environment Settings

If CONT.PRINTING is specified, the printer continues printing, displaying the above message. If STOP PRINTING is specified, the printer stops printing. Then, the printer resumes printing after you release the printer from the Warning status according to the displayed message.

✎ NOTE
- If <16 CHECK TONER> appears, and the printer stops printing, replace the toner cartridge, and then print again.
- If STOP PRINTING is specified for this item, the message <16 PREPARE TONER> changes to <16 CHECK TONER>, and the printer stops printing.

AUTO ERROR SKIP

OFF*, ON

Specifies whether the printer should automatically use the function that, when an error has occurred, releases the printer from the error temporarily (Error Skip) and continues the job.

If OFF is specified, you need to skip the error by pressing [Online].

If ON is specified, the printer skips the error automatically without you pressing [Online].

✎ NOTE
- The Error Skip function is only for skipping an error temporarily. Therefore, the data may not be printed properly.
- For the types of error from which the printer can be released temporarily, see "Message List," on p. 7-22.
- If ON is specified for this item, the printer automatically skips all the errors it can skip automatically even when multiple errors are occurring.

PANEL LANGUAGE

ENGLISH*, FRENCH, GERMAN, ITALIAN, SPANISH

Confirm the language that is displayed in the display.

SHOW WARNINGS

CHECK TONER .... ON*, OFF
CASSETTE EMPTY............. ON*, OFF

A Warning status is a status in which the printer requires some remedy although the job is not affected. When the printer is in this status, a message appears in the display, or an indicator blinks.

This item allows you to specify whether a message should appear or any indicator should blink when the printer is in either of the following Warning status.

Setting	Status	Message/Indicator Blink
CHECK TONER	When a toner cartridge needs to be replaced soon	<16 PREPARE TONER>
CASSETTE EMPTY	When the paper cassette has run out of paper	The Paper Source indicator for the paper source that has run out of paper blinks.

NOTE

The printer prints when either ON or OFF is specified.

DATE AND TIME

■ DATE SETTING

01/01/2001 to 31/12/2089

This printer has a clock function. This clock is used for the printer maintenance and job history management. Specify date in this item when the clock is not keeping correct date.

NOTE

- Date is set before shipment.
- Enter date using the following keys on the control panel.
  - Increases/decreases number ....[▲] [▼]
  - Moves digits ....[◄] [►]
  - Determines the entered date.........[OK]
- If you do not change the date, press [Online].

■ TIME SETTING

00:00:00 to 23:59:59

This printer has a clock function. This clock is used for the printer maintenance and job history management. Specify time in this item when the clock is not keeping correct time.

NOTE

- Time is set before shipment.
- The clock in the printer should be accurate within ± 60 seconds per month. Adjust the clock periodically in this item.
- Enter time using the following keys on the control panel.
  - Increases/decreases number ....[▲] [▼]
  - Moves digits ....[◄] [►]
  - Determines the entered time.........[OK]
- If you do not change the time, press [Online].

■ DAYLIGHT SAVING

DST SETTINGS...................	OFF*, ON
START DATE........................	<MONTH>, <WEEK>, <DAY>, <TIME SETTING>
END DATE...........................	<MONTH>, <WEEK>, <DAY>, <TIME SETTING>

Specifies whether to set the daylight saving time in DST SETTINGS and its time duration in START DATE and END DATE.

IMPORTANT

After changing the settings for this item, cycle the power of the printer or perform a hard reset to make the settings effective.

NOTE

In some countries and regions, time is advanced throughout the summer season. The period in which this is applied is called "Daylight Saving Time".

■ TIME ZONE

GMT-12 to GMT+12

Specifies the time zone according to the region where the printer is being used.

IMPORTANT

After changing the settings for this item, cycle the power of the printer or perform a hard reset to make the settings effective.

NOTE

The standard time zones of the world are expressed globally in terms of the difference in hours (up to 12 hours) from GMT (0 hours). A time zone is a region throughout which this time difference is the same. An area which shares the same-time zone difference is called a time zone.

* The time at the Greenwich Observatory in England is called GMT (Greenwich Mean Time).

TIMER SETTINGS

■ WAKE UP TIME

00:00 to 23:59

If WAKE UP TIMER (See the next item) is set to ON, Power Save Mode (the Panel Off mode and the Deep Sleep mode) is released when the time specified in this item has elapsed.

This item is convenient if you want to release the printer from Power Save Mode (the Panel Off mode and the Deep Sleep mode) on the same time everyday.

■ WAKE UP TIMER

OFF*, ON

Specifies whether the printer should use the Wake Up function that releases Power Save Mode (the Panel Off mode and the Deep Sleep mode).

If ON is specified, Power Save Mode (the Panel Off mode and the Deep Sleep mode) is released when the time specified in WAKE UP TIME (See the previous item) has elapsed.

If OFF is specified, the printer does not use the Wake Up function.

🖉 NOTE

The Wake Up function is for releasing the printer from Power Save Mode (the Panel Off mode and the Deep Sleep mode). When the printer is OFF, the Wake Up function does not function.

■ POWER SAVE TIME (TIMER SETTINGS)

00:00 to 23:59

If POW. SAVE TIMER (See the next item) is set to ON, the printer enters Power Save Mode 1 (the Panel Off mode) when the time specified in this item has elapsed.

This item is convenient if you want to set the printer to Power Save Mode 1 (the Panel Off mode) on the same time everyday.

■ POW. SAVE TIMER

OFF*, ON

Specifies whether the printer should enter Power Save Mode 1 (the Panel Off mode) when the time specified in POWER SAVE TIME (See the previous item) has elapsed.

If ON is specified, the printer enters Power Save Mode 1 (the Panel Off mode) when the time specified in POWER SAVE TIME has elapsed.

If OFF is specified, the printer does not enter Power Save Mode 1 (the Panel Off mode) even when the time specified in POWER SAVE TIME has elapsed.

While the printer is in Power Save Mode 1 (the Panel Off mode), the display on the control panel is off, and the following indicators are on.

When the printer is online	Ready Indicator
When the printer is offline	Message Indicator

■ DEEP SLEEP TIME

00:00 to 23:59

If DEEPSLEEP TIMER (See the next item) is set to ON, the printer enters Power Save Mode 2 (the Deep Sleep mode) when the time specified in this item has elapsed.

This item is convenient if you want to set the printer to Power Save Mode 2 (the Deep Sleep mode) on the same time everyday.

NOTE

For details on Power Save Mode, see "Power Saving (Power Save Mode)," on p. 2-4.

■ DEEPSLEEP TIMER

OFF*, ON

Specifies whether the printer should enter Power Save Mode 2 (the Deep Sleep mode) when the time specified in DEEP SLEEP TIME (See the previous item) has elapsed.

If ON is specified, the printer enters Power Save Mode 2 (the Deep Sleep mode) when the time specified in DEEP SLEEP TIME has elapsed.

If OFF is specified, the printer does not enter Power Save Mode 2 (the Deep Sleep mode) even when the time specified in DEEP SLEEP TIME has elapsed.

NOTE

For details on Power Save Mode, see "Power Saving (Power Save Mode)," on p. 2-4.

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Printing Environment Settings

TRAY PAPER SIZE

A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, ENV. ISO-C5, ENV. COM10, ENV. MONARCH, ENV. DL, ENV. ISO-B5, A5, B5

Specifies the size of the paper loaded in the multi-purpose tray.

📫 IMPORTANT

When you change the paper loaded in the multi-purpose tray frequently, it is convenient if TRAY PAPER SIZE is set to MIXED SIZES. If TRAY PAPER SIZE is set to MIXED SIZES, you do not need to specify the setting for TRAY PAPER SIZE each time you load the different size paper. However, observe the following when specifying MIXED SIZES.

- Make sure that the size of the paper loaded in the multi-purpose tray matches the paper size specified in the printer driver before printing. If they do not match, the printer may stop printing, displaying the message <41 CHK PAPER SZE>, or a paper jam may occur. Be sure to check if the paper size specified in the printer driver matches the size of the paper loaded in the multi-purpose tray before using the printer. However, if SPECIAL MODE J (See p. 5-36) is set to ON, the printer prints without checking the paper size even when the paper size specified in the printer driver and the size of the paper loaded in the multi-purpose tray do not match.
- When printing from UFR II Printer Driver, you can load paper either in portrait or landscape orientation. However, when printing custom size paper of its long edges 215.9 mm or less, load the paper in landscape orientation. When you are not using UFR II Printer Driver, load the paper in portrait orientation.

📝 NOTE

- Select CUSTOM SIZE or CUSTOM SIZER when you want to specify custom size paper using application and print it. If a message that prompts you to change the size of the paper appears during printing, press [Online] to clear the error before printing again.
- You cannot print on any area within 10 mm of the edges of an envelope. (If you have selected the [Print with Upper Left of Sheet as Starting Point] check box in [Finishing Details] in the printer driver, you can extend the printable area to near the edges of the paper. For more details, see Help of the printer driver.)
- You can obtain the same result by specifying the setting for TRAY PAPER SIZE in the SELECT FEEDER menu.

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Printing Environment Settings

CASSETTE1 SIZE

A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, A5, B5

Specifies the size of the paper loaded in the paper cassette in the printer unit (Cassette 1).

🖑 IMPORTANT

When you change the orientation of the custom size paper loaded in the paper cassette frequently, it is convenient if CASSETTE1 SIZE is set to MIXED SIZES. When CASSETTE1 SIZE is set to MIXED SIZES, you do not need to specify the setting for CASSETTE1 SIZE each time you change the paper orientation. However, observe the following when specifying MIXED SIZES.

- Make sure that the size of the paper loaded in the paper cassette matches the paper size specified in the printer driver before printing. If they do not match, the printer may stop printing, displaying the message <41 CHK PAPER SZE>, or a paper jam may occur. Be sure to check if the paper size specified in the printer driver matches the size of the paper loaded in the paper cassette before using the printer. However, if SPECIAL MODE J (See p. 5-36) is set to ON, the printer prints without checking the paper size even when the paper size specified in the printer driver and the size of the paper loaded in the paper cassette do not match.
- When printing from UFR II Printer Driver, you can load paper either in portrait or landscape orientation. However, when printing custom size paper of its long edges 215.9 mm or less, load the paper in landscape orientation. When you are not using UFR II Printer Driver, load the paper in portrait orientation.

✐ NOTE

- Select CUSTOM SIZE or CUSTOM SIZER when you want to specify custom size paper using application and print it. If a message that prompts you to change the size of the paper appears during printing, press [Online] to clear the error before printing again.
- You can obtain the same result by specifying the setting for CASSETTE1 SIZE in the SELECT FEEDER menu.

CASSETTE2 SIZE

A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, A5, B5

Specifies the size of the paper loaded in the paper cassette of the paper feeder (Cassette 2).

🖑 IMPORTANT

When you change the orientation of the custom size paper loaded in the paper cassette frequently, it is convenient if CASSETTE2 SIZE is set to MIXED SIZES. When CASSETTE2 SIZE is set to MIXED SIZES, you do not need to specify the setting for CASSETTE2 SIZE each time you change the paper orientation. However, observe the following when specifying MIXED SIZES.

- Make sure that the size of the paper loaded in the paper cassette matches the paper size specified in the printer driver before printing. If they do not match, the printer may stop printing, displaying the message <41 CHK PAPER SZE>, or a paper jam may occur. Be sure to check if the paper size specified in the printer driver matches the size of the paper loaded in the paper cassette before using the printer. However, if SPECIAL MODE J (See p. 5-36) is set to ON, the printer prints without checking the paper size even when the paper size specified in the printer driver and the size of the paper loaded in the paper cassette do not match.
- When printing from UFR II Printer Driver, you can load paper either in portrait or landscape orientation. However, when printing custom size paper of its long edges 215.9 mm or less, load the paper in landscape orientation. When you are not using UFR II Printer Driver, load the paper in portrait orientation.

✎ NOTE
• Select CUSTOM SIZE or CUSTOM SIZER when you want to specify custom size paper using application and print it. If a message that prompts you to change the size of the paper appears during printing, press [Online] to clear the error before printing again.
• You can obtain the same result by specifying the setting for CASSETTE2 SIZE in the SELECT FEEDER menu.
• This option is displayed only when the optional paper feeder is installed.

STD PAPER SIZE

A4*, LTR, LGL, EXEC, ENV. ISO-C5, ENV. COM10, ENV. MONARCH, ENV. DL, ENV. ISO-B5, A5, B5

Specifies a standard paper size for when the printer cannot determine the size of the paper to process, such as when using paper that you cannot specify its size in an application.

🖑 IMPORTANT
When printing from Windows or Macintosh, specify the paper size in the printer driver. When you want to print from a computer in which an operating system such as MS-DOS and UNIX is used and cannot specify the paper size, specify the size in this item.

TRAY PRIORITY

OFF*, ON

Specifies whether the printer should detect the paper source in order starting with the multi-purpose tray when AUTO is specified in the SELECT FEEDER menu.

If OFF is specified, the printer detects if the size of the paper in a paper source matches the paper size of the received data in the following order.

Cassette 1 → Cassette 2 * [1]→ Multi-purpose Tray

If ON is specified, the printer detects if the size of the paper in a paper source matches the paper size of the received data in the following order starting with the multi-purpose tray.

Multi-purpose Tray → Cassette 1 → Cassette 2 * [1]

*1: Only when the optional paper feeder is installed

✎ NOTE
- If INVLDPAPER TRAY (See the next item) is set to ON, the setting for this item is ignored, and the printer detects the paper source starting with the paper cassette. When paper that is the same size as the paper size of the received data is not loaded in the selected paper source, the printer feeds paper from the multi-purpose tray.
- Specify the setting for automatic paper selection in PAPER SOURCE (See p. 5-48) in the SELECT FEEDER menu.
- This item is effective only when PAPER SOURCE in the SELECT FEEDER menu is set to AUTO.
- Even if ON is specified for this item, the printer does not feed paper from the multi-purpose tray when the size of the paper in the multi-purpose tray is different from the paper size of the received data. However, if INVLDPAPER TRAY (See the next item) is set to ON, a message that prompts you to replace the paper in the multi-purpose tray appears when the paper that is the same size as the paper size of the received data is not loaded in the selected paper source.
- Even if ON is specified for this item, depending on the received data, paper may be fed not from the multi-purpose tray but from the paper cassette when the Paper Source indicator for the paper cassette for the paper size of the received data is on.

INVLDPAPER TRAY

OFF*, ON

Specifies what the printer does when paper that is the same size as the paper size of the received data is not loaded in the selected paper source.

If OFF is specified, a message that prompts you to replace the paper in the paper cassette appears, and the printer stops printing.

If ON is specified, the printer feeds paper from the multi-purpose tray. If the size of the paper loaded in the multi-purpose tray is different from the paper size of the received data, a message that prompts you to replace the paper in the multi-purpose tray appears, and the printer stops printing. When no paper is loaded in the multi-purpose tray, or the multi-purpose tray runs out of paper, a message that informs you of the tray's paper-out condition appears, and the printer stops printing.

✎ NOTE
If ON is specified for this item, the settings for TRAY in AUTO SELECTION (See the next item) and TRAY PRIORITY (See the previous item) are ignored, and the printer feeds paper from the multi-purpose tray when paper that is the same size as the paper size of the received data is not loaded in the selected paper source.

AUTO SELECTION

TRAY.....................................ON*, OFF
CASSETTE 1.........................ON*, OFF
CASSETTE 2*[1].....................ON*, OFF

*1 CASSETTE 2 is displayed only when the optional paper feeder is installed.

Specifies the paper source to be automatically selected when the automatic paper selection is specified in the SELECT FEEDER menu. Specify the setting for the multi-purpose tray and paper cassette individually.

If ON is specified, the printer selects the respective paper source as the paper source to be automatically selected. If OFF is specified, the printer does not select the respective paper source as the paper source to be automatically selected.

NOTE

- If INVLDPAPER TRAY (See the previous item) is set to ON, the setting for TRAY in this item is ignored, and the printer feeds paper from the multi-purpose tray when paper that is the same size as the paper size of the received data is not loaded in the selected paper source.
- Specify the setting for automatic paper selection in PAPER SOURCE (See p. 5-48) in the SELECT FEEDER menu.

STD PAPER TYPE

PLAIN PAPER*, PLAIN PAPER L, HEAVY PAPER 1, HEAVY PAPER 2, TRANSPARENCIES, ENVELOPE

Specifies the default paper type. This printer internally applies the optimum print mode for the paper type specified in this item.

Each print mode supports the following paper types.

- PLAIN PAPER L: Specify when the paper curls excessively on printing plain paper (64 - 80 g/m^2) with STD PAPER TYPE set to PLAIN PAPER.
- PLAIN PAPER: Plain Paper (64 - 80 g/m^2), Labels
- HEAVY PAPER 1: Heavy Paper (90 - 163 g/m^2)
- HEAVY PAPER 2: Heavy Paper (199 g/m^2)
- ENVELOPE: Envelopes
- TRANSPARENCIES: Transparencies

IMPORTANT

When printing from Windows or Macintosh, specify the paper type in the printer driver. When you want to print from a computer in which an operating system such as MS-DOS and UNIX is used and cannot specify the paper type, specify the paper type in this item.

2-SIDED PRINT.

OFF*, ON

Specifies whether the printer should print on one side or both sides of the paper.

If ON is specified, the printer prints on both sides of the paper.

🖐 IMPORTANT

When printing from Windows or Macintosh, specify 2-sided printing in the printer driver. When you want to print from a computer in which an operating system such as MS-DOS and UNIX is used and cannot specify 2-sided printing, specify the setting in this item.

✎ NOTE

- You can perform automatic 2-sided printing only on plain paper (64 to 80 g/m^2) and heavy paper (90 to 120 g/m^2) at sizes of A4, Legal, and Letter. For more details, see "Paper Requirements," on p. 3-2.
- When performing automatic 2-sided printing on paper with a logo, load the paper as the following.
  - When printing from the paper cassette, load the paper with the printing side of the first page facing up.
  - When printing from the multi-purpose tray, load the paper with the printing side of the first page facing down.
- You can obtain the same result by setting 2-SIDED PRINT. in the SELECT FEEDER menu.

LAYOUT MENU Options

COPIES

1 to 9999; 1*

Specifies the number of copies to be printed.

The printer prints the specified number of copies.

OFFSET Y/OFFSET X

-50.0 to 50.0; 0.0* (mm)

Adjusts the printing position in the vertical direction (Y) or the horizontal direction (X) by the specified value.

The printing position changes as follows according to the increase and decrease of the specified value.

OFFSET Y: As the value increases, the gutter width in the Y direction increases.
As the value decreases, the gutter width in the Y direction decreases.

OFFSET X: As the value increases, the gutter width in the X direction increases.
As the value decreases, the gutter width in the X direction decreases.
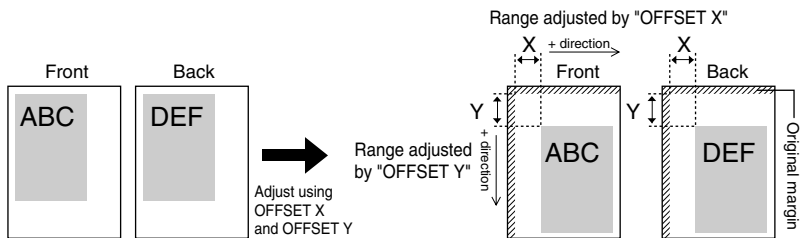
IMPORTANT

If any part of the print image lies outside the printable area after adjusting the printing position, the part will be missing in the print result.

NOTE

Each time you press [►], the value increases in 0.5 mm increments, and each time you press [◄], the value decreases in 0.5 mm increments. If you keep holding down [►] or [◄], the speed of the value changing is increased.

BIND.LOCATION

LONG EDGE*, SHORT EDGE

Specifies which edge of the paper, the long edge or short edge, is to be bound. When you want to bind paper on which 2-sided printing is performed, the printer adjusts the binding location automatically according to the paper surface.

Specify the binding location (top/bottom/left/right) and its width in GUTTER (See the next item).

If LONG EDGE is specified, the binding location is created on the long edge of the paper.

2-sided printing in portrait orientation	2-sided printing in landscape orientation
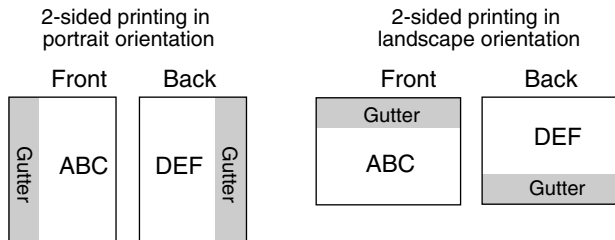
If SHORT EDGE is specified, the binding location is created on the short edge of the paper.

2-sided printing in portrait orientation	2-sided printing in landscape orientation
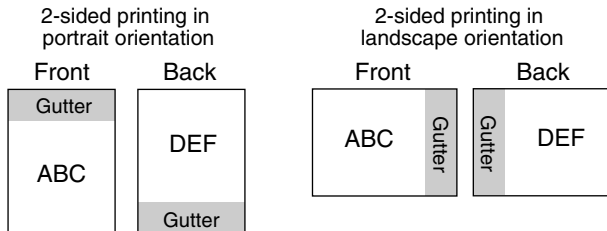
✎ **NOTE**

You cannot create a gutter only by specifying this item. A gutter can be created only after specifying this item in combination with the setting for GUTTER.

GUTTER

-50.0 to 50.0; 0.0* (mm)

Specifies the gutter width for printing with the binding location created. A gutter is created with the image shifted by the specified value. You can shift the image in the "+" direction with a positive value and in the "–" direction with a negative value.
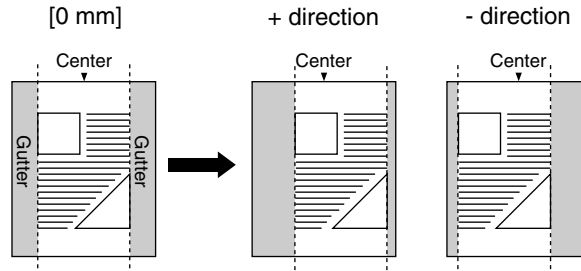
Specify on which edge of the paper, the long edge or short edge, the gutter is to be created in BIND.LOCATION (See the previous item). On which edge (top/bottom/left/right) of the paper the gutter is created depends on the setting for BIND.LOCATION and which value "+" or "-" is specified for this item.

IMPORTANT

If any part of the print image lies outside the printable area after creating a gutter, the part will be missing in the print result.

NOTE

• Each time you press [►], the value increases in 0.5 mm increments, and each time you press [◄], the value decreases in 0.5 mm increments. If you keep holding down [►] or [◄], the speed of the value changing is increased.

• If the settings for OFFSET Y and OFFSET X are specified at the same time as the setting for this item is specified, the settings for OFFSET Y and OFFSET X are processed first, and then the setting for this item is processed.

● **Settings for BIND.LOCATION and GUTTER**

Specify BIND.LOCATION and GUTTER referring to the following finishing image.

Binding location for when using paper in portrait orientation			Binding location for when using paper in landscape orientation	
Front	Back (2-sided printing)		Front	Back (2-sided printing)
ABC	DEF	BIND.LOCATION : LONG EDGE GUTTER : + direction	ABCDE	FGHIJK
ABC	DEF	BIND.LOCATION : LONG EDGE GUTTER : - direction	ABCDE	FGHIJK
ABC	DEF	BIND.LOCATION : SHORT EDGE GUTTER : + direction	ABCDE	FGHIJK
ABC	DEF	BIND.LOCATION : SHORT EDGE GUTTER : - direction	ABCDE	FGHIJK

Specify whether you print in portrait orientation or landscape orientation in an application.

ALT.METHOD

ON*, OFF

Specifies the printing side of the last page on a job with odd number of pages when 2-SIDED PRINT. (See p. 5-22) is set to ON.

The printing side of the last page varies depending on the setting for this item or paper source as the following.

• When printing from the paper cassette
  If ON is specified, the printer prints on the underside of the loaded paper.
  If OFF is specified, the printer prints on the upper side of the loaded paper.

- When printing from the multi-purpose tray
  If ON is specified, the printer prints on the upper side of the loaded paper.
  If OFF is specified, the printer prints on the underside of the loaded paper.

Specify OFF for this item when you want to match the setting of the orientation or printing side for the last page with those for its previous page, such as when you want to print previously printed paper etc. whose printing orientation or printing side is fixed.

NOTE

The setting is effective only when 2-SIDED PRINT. is set to ON.

QUALITY MENU Options

IMGE REFINEMENT

ON*, OFF

Specifies whether the printer should use Image Refinement that enables to print jagged outlines of text or graphics smoothly.

If ON is specified, the printer prints using Image Refinement.

If OFF is specified, the printer prints without using Image Refinement.

NOTE
- The effect of Image Refinement varies depending on the pattern of text or graphics (diagrams, charts, graphs, etc).
- If GRADATION LEVEL (See the next item) is set to HIGH, the setting for this item is ignored, and the printer prints in the same way as when OFF is specified.

GRADATION LEVEL

STANDARD*, HIGH

Specifies the gradation level for data.

STANDARD is suitable to print thin lines or data of low resolution.

HIGH is suitable to print data of high resolution with complex gradations, such as photographs and graded images. You print data more clearly than when STANDARD is specified.

NOTE

If this item is set to HIGH, the setting for IMGE REFINEMENT (See the previous item) is ignored even if ON is specified for it, and the printer prints in the same way as when OFF is specified.

TONER SAVE

OFF*, ON

The toner save mode is used to print a test page. If you use the toner save mode, you can print using less toner.

✎ NOTE

If ON is specified for this item, you can save toner, but print result may be faint and unclear. Parts to which gradation is applied in very light gray may appear denser in color.

DENSITY

1 to 16; 3*

Adjusts the print density for the print data. As the value increases, the print density becomes denser.

HALFTONES

TEXT ....RESOLUTION*, GRADATION, COLOR TONE, HIGH RESOL.
GRAPHICS ....COLOR TONE*, HIGH RESOL., RESOLUTION, GRADATION
IMAGE............COLOR TONE*, HIGH RESOL., RESOLUTION, GRADATION

This setting specifies how to express halftones in black and white data.

Print data is expressed in dots. Fine gradations, edges, and shades are expressed by using dither patterns, which are groups of dots. This is called halftone processing.

For example, using a pattern that sharpens character and line edges, or a pattern that smoothens image and graph gradation, enables you to obtain the most suitable texture.

If RESOLUTION is selected, you can print text with distinct outlines, which is best to print text and thin lines.

If GRADATION is selected, you can print with both smooth gradation and outlines, which is best to print graphs and graphics that use gradation.

If COLOR TONE is selected, you can print with sharp gradation and well-balanced texture, contrasting light and shade, which is best for printing images.

If HIGH RESOL. is selected, finer printing can be done than with RESOLUTION, although toner stability is somewhat weaker. This is suited to printing small characters and fine lines, and outlines (such as from CAD data) sharply.

QUALITY CHANGE

CONT.PRINTING*, STOP PRINTING

Specifies whether the printer should continue printing with the image quality level being lowered automatically or stop printing, displaying the following error message when the memory required for the process runs out.

Error Message	Setting
<38 LOW IMGE QLTY>	When the printer receives a large amount of data or complicated data, the memory required for the process may run out, and the printer may print with the image quality level being lowered automatically. Specify whether the printer should display an error message when the printer is in this status.

If CONT.PRINTING is specified, the printer prints with the image quality level being lowered automatically without displaying a message.

If STOP PRINTING is specified, the printer stops printing, displaying a message. In this case, the printer resumes printing with the image quality level being lowered by pressing [Online].

✎ NOTE

When the message <38 LOW IMGE QLTY> appears frequently by specifying STOP PRINTING for this item, perform the following procedure.

1. If GRADATION LEVEL is set to HIGH, set it to STANDARD. If you do so, however, the printer prints with the gradation level of the data being lowered.
2. When the message still appears after applying the Remedy 1, or when you want to print with the gradation level of the data as it is, install an optional expansion memory module (RAM).

I/F CONNECTION

USB...................................... ON*, OFF
NETWORK........................... ON*, OFF

Specifies the settings for the interfaces used for communication with the computer, etc.

You can specify ON or OFF for each interface.

Even if multiple interfaces are set to ON, the printer automatically switches to the one that received the data first. Therefore, you do not need to change the setting in the printer each time you connect the printer to different types of interfaces at the same time.

IMPORTANT

After changing the settings for this item, cycle the power of the printer or perform a hard reset to make the settings effective.

MODE TIMEOUT

OFF, 5 to 300 seconds; 15 seconds*

Specifies the function to finish a job automatically.

If you specify the time the printer times out in this item, the printer can finish a job automatically when the specified time has elapsed since no data is entered.

If this item is specified, the printer can output paper automatically when data is remaining in the printer because of an application not sending the command to output paper.

When OFF is specified, the printer does not use the function to finish a job automatically.

IMPORTANT

If the function to finish a job automatically is specified, the a job may be finished in the middle of the process when the computer takes a long time to process the data. In this case, adjust the time the printer times out.

NOTE
- The Job indicator on the control panel is on or blinking during a job.
- When the printer is offline, the printer does not use the function to finish a job automatically.

NETWORK MENU

■ TCP/IP SETTINGS

IP MODE...............................MANUAL*, AUTO
PROTOCOL*[1]
  DHCP..................................OFF*, ON
  BOOTP ....OFF*, ON
  RARP..................................OFF*, ON
IP SETTINGS
  IP ADDRESS 0.0.0.0*
  SUBNET MASK 0.0.0.0*
  GATEWAY ADDRESS 0.0.0.0*
DNS
  PRIMARY ADD. 0.0.0.0*
  SECONDARY ADD. 0.0.0.0*
WINS ....OFF*, ON
ARP/PING.............................ON*, OFF
FTP
  FTP PRINT ....OFF*, ON
  FTP SETTINGS ....ON*, OFF
LPD PRINT ....ON*, OFF
RAW PRINT...........................ON*, OFF
IPP PRINT ....ON*, OFF
HTTP ....ON*, OFF
SNTP ....OFF*, ON
RESPONSE...........................ON*, OFF
IP ADD.RANGE
  REJECT RX/PRT...............OFF*, ON
  REJECT ADD.SET.*[2]..........REJ IP 1 to 8
  PERMIT RX/PRT ....OFF*, ON
  PERMIT ADD.SET.*[2]..........PER IP 1 to 8
  REJ SET/BROWSE ....OFF*, ON
  REJECT ADD.SET.*[2]..........REJ IP 1 to 8
  PMT SET/BROWSE ....OFF*, ON
  PERMIT ADD.SET.*[2]..........PER IP 1 to 8
MAC ADDRESS SET
  PERMIT RECEIVE ....OFF*, ON
  PERMIT ADD.SET.*[2] ....PER.MAC ADD.1 to 50

*1 PROTOCOL is displayed only when IP MODE is set to AUTO.

*2 REJECT ADD.SET. and PERMIT ADD.SET. are displayed only when REJECT RX/PRT, PERMIT RX/
   PRT, REJ SET/BROWSE, PMT SET/BROWSE, or PERMIT RECEIVE is set to ON.

Specifies the TCP/IP setting for the print server equipped with this printer.

5

Printing Environment Settings

After changing the settings for this item, cycle the power of the printer or perform a
hard reset to make the settings effective.

✐ NOTE

- To enter a numeric value for IP ADDRESS, SUBNET MASK, or GATEWAY
  ADDRESS, press [◄] or [►] to move the cursor to each field (an area separated
  by periods to enter three-digit numbers) in which you want to enter respective
  values of the address. The numbers in the field blinks, allowing you to enter the
  value. Pressing [▲] increases the value and [▼] decreases the value. After
  entering values in all the fields, press [OK] to confirm the setting.
- For more details on the setting, see "Chapter 3 Using the Printer on a TCP/IP
  Network (Windows/UNIX)" in Network Guide.
- This item is displayed only when NETWORK in the I/F CONNECTION options is
  set to ON.

■ APPLETALK

OFF*, ON

Specifies whether the printer should use AppleTalk.

✐ NOTE

- For more details on AppleTalk, see "Chapter 4 Using the Printer on an AppleTalk
  Network (Macintosh)" in Network Guide.
- This item is displayed only when NETWORK in the I/F CONNECTION options is
  set to ON.

■ SMB

SMB SERVER...................... OFF*, ON

Specifies whether the printer should use the SMB protocol.

■ SNMP

ON*, OFF

Specifies whether the printer should use the SNMP protocol.

⏺ IMPORTANT

After changing the settings for this item, cycle the power of the printer or perform a
hard reset to make the settings effective.

✐ NOTE

For more details on SNMP, see "Chapter 2 Common Network Settings" in Network
Guide.

■ START WAIT TIME

0 to 300 seconds; 0 seconds*

Specifies the time interval from when the printer is turned ON to when the protocol starts.

NOTE

For more details on startup waiting time, see "Chapter 2 Common Network Settings" in Network Guide.

■ REMOTE UI SET.

REMOTE UI ....ON*, OFF

Specifies whether the printer should use the Remote UI.

■ ETHERNET DRIVER

AUTO DETECT ....ON*, OFF
COMM.MODE*1 ....HALF DUPLEX*, FULL DUPLEX
ETHERNET TYPE*1 ....10 BASE-T*, 100 BASE-TX
MAC ADDRESS...................(Display only)

*1 COMM.MODE and THERNET TYPE are displayed only when AUTO DETECT is set to OFF.
Configures the Ethernet driver.

NOTE

For more details on configuring the Ethernet driver, see "Chapter 2 Common Network Settings" in Network Guide.

■ INIT.N/W SET.

-

By the initialization in this item, you can reset the network settings to the default settings.

The network settings can be initialized using the following procedure.

1. Press [Settings].
2. Select INTERFACE MENU using [◄] and [►], then press [OK].
3. Select NETWORK MENU using [◄] and [►], then press [OK].
4. Select INIT.N/W SET. using [◄] and [►], then press [OK].
5. <OK?> is displayed. The initialization starts by pressing [OK].
* If you press [Online] without pressing [OK], the printer does not initialize the settings but becomes ready to print.

NOTE

This item is displayed only when NETWORK in the I/F CONNECTION options is set to ON.

CONNECT.RECOG.

ON*, OFF

When you print using a network, you may not obtain proper printout results (unreadable characters are printed, overlay print fails, etc.). In this case, specify OFF for this item.

 IMPORTANT

After changing the settings for this item, cycle the power of the printer or perform a hard reset to make the settings effective.

EXT.RX BUFFER

OFF*, ON

If this item is set to ON, the memory capacity of the printer's receive buffer that receives the data is increased. You can speed up the time the computer exits when you send a large amount of data or complicated data from the computer.

 IMPORTANT

After changing the settings for this item, cycle the power of the printer to make the settings effective.

 NOTE

This item is displayed only when an optional RAM module is installed.

USER MAIN. Options

ADJ.START POS.

OFFSET Y(TRAY) .... -5.0 to 5.0; 0.0* (mm)
OFFSET X(TRAY) .... -5.0 to 5.0; 0.0* (mm)
OFFSET Y(CASS1).............. -5.0 to 5.0; 0.0* (mm)
OFFSET X(CASS1) .... -5.0 to 5.0; 0.0* (mm)
OFFSET Y(CASS2)*1........... -5.0 to 5.0; 0.0* (mm)
OFFSET X(CASS2)*1 .... -5.0 to 5.0; 0.0* (mm)
OFFSET Y(DUP.).................. -5.0 to 5.0; 0.0* (mm)
OFFSET X(DUP.) .... -5.0 to 5.0; 0.0* (mm)

---

*1 OFFSET Y(CASS2) and OFFSET X(CASS2) are displayed only when the optional paper feeder is installed.

Specifies the printing position of the paper in the specified paper source. Adjusts the position in the vertical direction (Y) or the horizontal direction (X) by the specified value.

The setting values is indicated in millimeters (mm), and you can adjust the position in 0.1 mm increments using [►] and [◄].

If you do not adjust the printing position, specify "0.0" for this item.

OFFSET Y(DUP.) and OFFSET X(DUP.) allow you to specify the printing position of the first page of 2-sided printing. The second page of 2-sided printing follows the settings for each paper source.

IMPORTANT

If any part of the print image lies outside the printable area after adjusting the printing position, the part will be missing in the print result.

NOTE
- Each time you press [►], the value increases in 0.1 mm increments, and each time you press [◄], the value decreases in 0.1 mm increments.
- You can check the adjusted printing position in PRNTPOSNPRINT (See p. 5-44) in the UTILITY menu.
- For adjusting the printing position, see "Adjusting the Printing Position," on p. 6-19.
- Be aware that, when adjusting the printing position for 2-sided printing, the orientation of the images on the reverse pages varies depending on the printing orientation or setting for BIND.LOCATION (See p. 5-24).

RECVRY PRINTING

ON*, OFF

Specifies whether to print the partially printed page when the printer stops printing due to a paper jam or an error occurring.

If ON is specified for this item, the printer prints from the page in which a paper jam or error occurred.

If OFF is specified for this item, the printer does not print from the partially printed page but prints from the next page when a paper jam or error has occurred.

When the printer is performing 2-sided printing, it does not print the reverse page of the partially printed page. The printing starts from the front side of the next sheet.

SPECIAL MODE J

OFF*, ON

Specifies whether the printer should stop printing, displaying the message <41 CHK PAPER SZE> or continue printing when TRAY PAPER SIZE, CASSETTE1 SIZE, or CASSETTE2 SIZE is set to MIXED SIZES.

If OFF is specified, the printer may stop printing, displaying <41 CHK PAPER SZE>, when the paper size specified in the application is different from the size of the paper loaded in the multi-purpose tray or paper cassette. The paper on which the error occurred is output automatically. You can also continue printing by pressing [Online]. However, the data may not be printed properly, or a paper jam may occur.

If ON is specified, the printer prints without performing a print check even when the paper size specified in the application is different from the size of the paper loaded in the multi-purpose tray or paper cassette. However, the printing speed may drop. Also, because the paper is printed at the paper size specified in the application, blank areas may appear on the printed paper or part of the images may be missing when the size of the paper loaded in the multi-purpose tray or paper cassette is different from the paper size specified in the application.

🖐 IMPORTANT

For automatic 2-sided printing, <41 CHK PAPER SZE> always appears and the printer stops printing regardless of the setting for this item.

SUBSTITUTE SIZE

OFF*, ON

When the paper cassette for the paper size to be used is not set in the printer, the printer switches the paper source to the following paper cassettes and prints.

Printer Driver Setting		Size of the Paper to Be Printed
A4	→	Letter
Letter	→	A4

If ON is specified, the printer switches the paper size.

If OFF is specified, the printer does not switch the paper size but stops printing, displaying an error message.

✐ NOTE

Even if ON is specified, the printer does not switch the paper size when the paper source for the paper size is empty.

FIX.UNIT OFFSET

IMAGE PRIOR.1*, IMAGE PRIOR.2, OFF

Specifies whether the printer gives priority to the image quality or printing speed when printing after the paper is changed from narrower one to wider one.

If IMAGE PRIOR.1 is specified, the printer prints giving priority to the image quality. However, the printing speed drops because this lengthens the waiting time before the operation begins.

If IMAGE PRIOR.2 is specified, the waiting time becomes shorter than when IMAGE PRIOR.1 is specified.

If OFF is specified, the waiting time is eliminated, and the printer prints giving priority to the printing speed.

IMPORTANT

If the printing speed is given priority, residual images of the printed text or images may appear on both sides of the paper.

SP.S-SIZE MODE

OFF*, ON

Specifies the waiting time before the print operation begins when printing paper with a narrower width (A5 size etc.) continuously.

Specify ON when you want to shorten the waiting time giving priority to the printing speed. However, if you print wider paper immediately after printing narrower one, residual images of the printed text or images may appear on both sides of the paper. Therefore, specify ON only when you print paper with a narrower width continuously.

SP.PRINT MODE

PLAIN PAPER......................OFF*, ON

Specifies whether to apply Special Print Mode when printing plain paper.

- OFF: Does not apply Special Print Mode.
- ON: Specify when the paper curls excessively on printing plain paper.

PCL SETUP Options

PAPER SAVE (PCL SETUP)

OFF*, ON

Specifies whether the printer outputs the blank page that can be created due to no data existing between two Form Feed codes sent from an application.

If ON is specified, the printer does not output the blank page. If OFF is specified, the printer outputs the blank page.

If you use this function, you can save paper because the blank pages are not output.

ORIENTATION

PORTRAIT*, LANDSCAPE

Enables you to set the paper orientation.

If PORTRAIT is selected, the print image is printed in portrait orientation regardless of the orientation of the paper in the paper drawers.
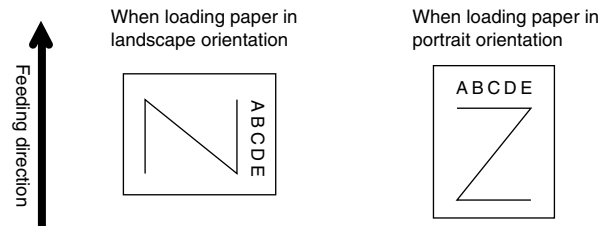
If LANDSCAPE is selected, the print image is printed in landscape orientation regardless of the orientation of the paper in the paper drawers.
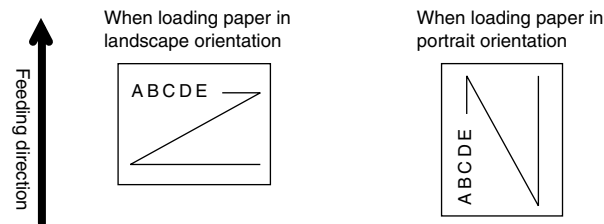
FONT NUMBER

0 to 89; 0*

Eables you to set the default font typeface for this printer function using the corresponding font numbers. Valid font numbers are from 0 to 89.

POINT SIZE

4.00 to 999.75 point; 12.00 point*

If the number selected in FONT NUMBER is that of a proportionally spaced scalable font, this option appears in the PCL SETUP. It enables you to specify a point size for the default font. The point size can be adjusted in increments of 0.25 pts.

PITCH

0.44 to 99.99 cpi; 10.00 cpi*

If the number selected in FONT NUMBER is that of a fixed pitch scalable font, Pitch appears in the PCL SETUP. It enables you to specify the pitch for the default font. The pitch can be adjusted in increments of 0.01 cpi (characters per inch).

FORM LINES

5 to 128 lines; 64 lines*

Enables you to specify the number of lines to be printed on a page. You can specify from 5 to 128 lines.

SYMBOL SET

PC8*, ROMAN8, ROMAN9, ISOL1, ISOL2, ISOL5, ISOL6, ISOL9, PC775, PC8DN, PC850, PC852, PC858, PC8TK, PC1004, WINL1, WINL2, WINL5, WINBALT, DESKTOP, PS TEXT, LEGAL, ISO4, ISO6, ISO11, ISO15, ISO17, ISO21, ISO60, ISO69, WIN 30, MCTEXT

Enables you to select the symbol set most suited to the needs of the host computer.

CUSTOM SIZE

SET*, DO NOT SET

Enables you to specify a custom paper size. If SET is selected, you can enter a custom size.

5

Printing Environment Settings

$\mathscr{D}$ **NOTE**

You can only select the custom paper size entered with settings from the printer driver.

UNIT OF MEASURE

Millimeters*, Inches

Enables you to specify the unit of measurement you would like to use to specify your custom paper size.

$\mathscr{D}$ **NOTE**

This item is displayed only when CUSTOM SIZE is set to SET.

X DIMENSION

76.2 to 215.9 mm; 215.9 mm*(3.00 to 8.50 inches; 8.50 inches*)

Enables you to specify the X dimension of the custom paper. The X dimension can be adjusted between 76.2 mm (3.00") and 215.9 mm (8.50") in increments of 0.1 mm (0.01").

This function can be very useful when part of the printed image is cut off. Increasing this dimension may allow some of the missing text to be correctly printed. Make sure you do not increase the X dimension beyond the actual size of the paper you are using for printing.

$\mathscr{D}$ **NOTE**

This item is displayed only when CUSTOM SIZE is set to SET.

Y DIMENSION

127.0 to 355.6 mm; 355.6 mm*(5.00 to 14.00 inches; 14.00 inches*)

Enables you to specify the Y dimension of the custom paper. The Y dimension can be adjusted between 127.0 mm (5.00") and 355.6 mm (14.00") in increments of 0.1 mm (0.01").

This function can be very useful when part of the printed image is cut off. Increasing this dimension may allow some of the missing text to be correctly printed. Make sure you do not increase the Y dimension beyond the actual size of the paper you are using for printing.

$\mathscr{D}$ **NOTE**

This item is displayed only when CUSTOM SIZE is set to SET.

APPEND CR TO LF

NO*, YES

Enables you to specify whether to append a carriage return (CR) when line feed code (LF) is received.

If YES is selected, the print head moves to the beginning of the next line when line feed code is received.

If NO is selected, the print head moves down to the next line when line feed code is received, and the margin does not change (such as to the beginning of the next line).

```
ABCDE⬇FGHIJ
```

LF code (⬇) only

```
ABCDE
FGHIJ
```
Append CR to LF 'YES'

```
ABCDE
          FGHIJ
```
Append CR to LF 'NO'
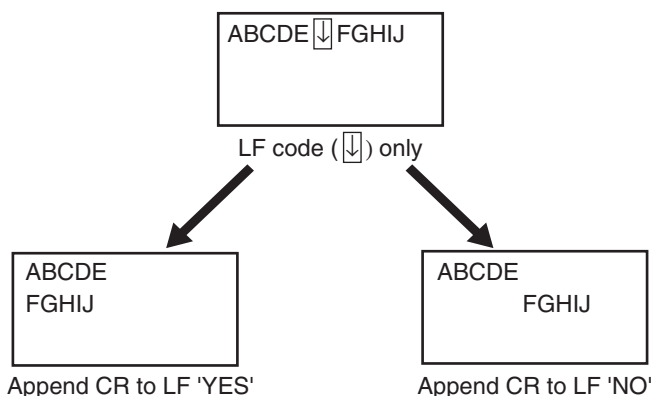
ENLRG A4 WIDTH

OFF*, ON

Determines whether to expand the printable area of A4 size paper to that of Letter size in width.

If ON is selected, all the area on a page 4.23 mm (1/6") from the top and bottom edges and 1.28 mm (1/20") from the left and right edges is available for printing on A4 paper. Only the width increases.

If OFF is selected, all the area on a page 4.23 mm (1/6") from the top, bottom, left, and right edges is available for printing on A4 paper.

Printable area
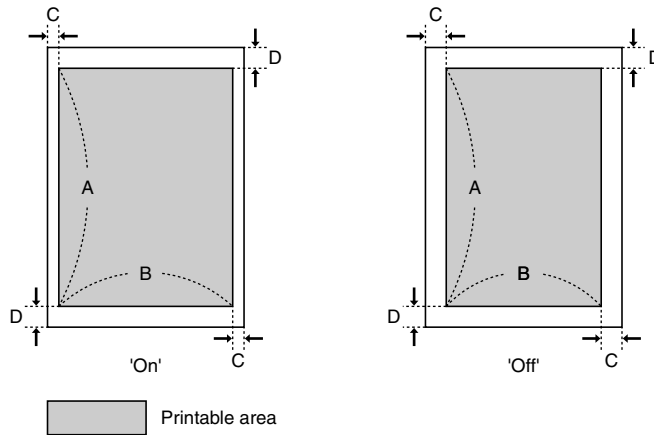
Settings	ON	OFF
A: Length	288.54 mm (11 1/3")	
B: Width	207.44 mm (8 1/6")	201.54 mm (7 7/8")
C: Left and right edges	1.28 mm (1/20")	4.23 mm (1/6")
D: Top and bottom edges	4.23 mm (1/6")	

✐ NOTE

• This setting is applicable for A4 paper only.
• This setting is applicable for portrait orientation only.

UFR II SETUP Options

PAPER SAVE (UFR II SETUP)

ON*, OFF

Specifies whether the printer outputs the blank page that can be created due to no data existing between two Form Feed codes sent from an application.

If ON is specified, the printer does not output the blank page. If OFF is specified, the printer outputs the blank page.

If you use this function, you can save paper because the blank pages are not output.

UTILITY Menu Settings

CONFIG.PAGE

-

Prints the capacity of the built-in memory (RAM) or the contents specified in the SETUP menu. You can select this item regardless of the setting for the operation mode.

✎ NOTE

CONFIG.PAGE is designed to be printed on A4 size paper. Load a sheet of A4 size paper in the paper cassette or multi-purpose tray.

PCL UTILITY

FONTS LIST

Prints internal information of the printer in the PCL mode.

FONTS LIST

A list of the fonts that can be used in the PCL mode is printed.

CLEANING

-

The printer cleans the fixing roller by printing a cleaning page.

If CLEANING is executed, <CLEANING1 PAPER> is displayed. Load a sheet of A4 size paper in the multi-purpose tray, then press [Online].

A cleaning paper is printed. Load the cleaning paper with the printed side facing down in the multi-purpose tray, then press [Online]. The loaded cleaning paper is fed, cleaning inside fixing roller.

N/W STATUS PRINT

-

Prints the version number and the settings of the print server equipped with this printer.

PRNTPOSNPRINT

-

The printing position adjusted in ADJ.START POS. (See p. 5-34) is printed. Check the printout results to confirm the setting for ADJ.START POS.

5

Printing Environment Settings

JOB Menu Settings

JOB LOG LIST

-

Prints the job logs printed from the computer.

File names and print dates are printed on the job log list.

✎ NOTE
• If the printer has no job log, nothing is printed.
• Up to 48 job logs are printed on the job log list.

REPORTLOG LST

-

Prints the job logs of the printed CONFIG.PAGE or N/W STATUS PRINT.

Print dates, etc are printed on the report log list.

✎ NOTE
• If the printer has no job log, nothing is printed.
• Up to 16 job logs are printed on the report log list.

RESET Menu Settings

SOFT RESET / HARD RESET

-

Resets the printer when a problem has occurred or you want to cancel printing.

If you perform a soft reset, the printer stops the current process and deletes the jobs in the printer memory, received print data, and the job being processed. If you perform a hard reset, the printer cancels all the process and deletes the jobs.

To perform a soft reset, select SOFT RESET in the RESET menu, and then press [OK].

To perform a hard reset, select SOFT RESET in the RESET menu, hold down [OK] for 3 seconds or more to display HARD RESET, and then release the button.

IMPORTANT

• Be sure to cancel printing from the computer before performing a soft reset.

• When the soft reset or hard reset is performed, the data being printed and the data being received by all the interfaces is deleted. Therefore, perform printing from the computer again as needed.

• If you perform a soft reset or hard reset, the data that has been already sent to the memory are all deleted even if it is the data of other interface. If you are using the printer on a network, be careful so that this operation does not affect the data from other computers when resetting the printer.

• If you perform a hard reset while the printer is receiving data, the data that has not yet been sent to the memory will be sent after the reset. However, the data may not be printed properly.

FORM FEED

-

When a job is canceled from the computer or the data is less than one page, the data may remain in the printer memory, and the job may not be completed properly. As long as the printer remains in this status, you cannot print the next job because the printer cannot receive the next data. In this case, force the printer to output the print data using the procedure for this item.

IMPORTANT

If you have output data, the data being printed is deleted. Print the data from the computer again.

✐ NOTE

- The Job indicator is on when any print data remains in the printer memory or when no print data remains in the printer but a job has not yet been completed.
- If MODE TIMEOUT for a job is specified, data less than one page is also output automatically when the specified time has elapsed. MODE TIMEOUT for a job is set to 15 seconds in the default settings.
- If the Job indicator does not go off even after outputting the data, perform a soft reset. (See the previous item)

SELECT FEEDER Menu Settings

PAPER SOURCE

AUTO*, CASSETTE 1, CASSETTE 2*[1], TRAY

*1 CASSETTE 2 is displayed only when the optional paper feeder is installed.

Selects the paper cassette or multi-purpose tray from which the printer feed paper. After a paper source is selected, the corresponding Paper Source indicator comes on.
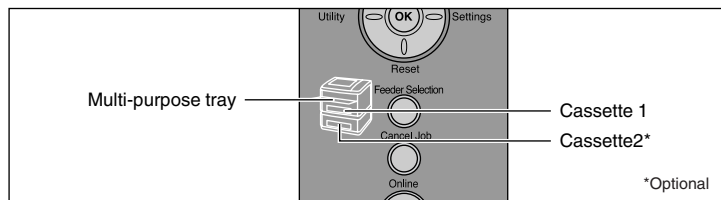
NOTE

- The installed paper cassettes and multi-purpose tray usually become the target paper source when the printer feeds paper automatically. However, you can except them from the target paper source.
- If paper of the same size is loaded in 2 or more paper sources when the paper source setting is specified to be selected automatically, paper is fed from the upper paper source regardless of the status of the paper source indicators. When the paper source runs out of paper, the paper source switches to other one in which paper of the same size is loaded.
- If INVLDPAPER TRAY (See p. 5-20) is set to ON, the setting for this item is ignored, and the printer feeds paper from the multi-purpose tray when paper that is the same size as the paper size of the received data is not loaded in the selected paper source.
- When feeding paper from the multi-purpose tray, you need to specify the size of the loaded paper previously. The default value is "A4".

TRAY PAPER SIZE

A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, ENV. ISO-C5, ENV. COM10, ENV. MONARCH, ENV. DL, ENV. ISO-B5, A5, B5

Specifies the size of the paper loaded in the multi-purpose tray.

You can obtain the same result by specifying the setting for TRAY PAPER SIZE in the FEEDER MENU options in the SETUP menu. For more details, see "TRAY PAPER SIZE," on p. 5-17.

CASSETTE1 SIZE

A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, A5, B5

Specifies the size of the paper loaded in the paper cassette in the printer unit (Cassette 1).

You can specify the same setting in CASSETTE1 SIZE in the FEEDER MENU options in the SETUP menu. For more details, see "CASSETTE1 SIZE," on p. 5-18.

CASSETTE2 SIZE

A4*, LTR, LGL, EXEC, MIXED SIZES, CUSTOM SIZE, CUSTOM SIZER, A5, B5

Specifies the size of the paper loaded in the paper cassette of the paper feeder (Cassette 2).

You can specify the same setting in CASSETTE2 SIZE in the FEEDER MENU options in the SETUP menu. For more details, see "CASSETTE2 SIZE," on p. 5-18.

📝 NOTE

This option is displayed only when the optional paper feeder is installed.

2-SIDED PRINT.

OFF*, ON

Specifies whether the printer should print on one side or both sides of the paper.

You can specify the same setting in 2-SIDED PRINT. in the FEEDER MENU options in the SETUP menu. For more details, see "2-SIDED PRINT.," on p. 5-22.

Routine Maintenance

6
CHAPTER

This chapter describes the procedures for maintaining the printer such as replacing the cartridges and cleaning the printer.

Replacing the Toner Cartridge

This section describes how to replace or handle the toner cartridges and precautions on storing them.

Contact the store where you purchased the printer to obtain replacement toner cartridges.

When <PREPARE TONER>/<CHECK TONER> Appears

Toner cartridges are consumable products. If the toner is running out during printing, a message appears in the display.

Message	When it is Displayed	Contents and Remedies
16 PREPARE TONER	When a toner cartridge needs to be replaced soon	- You can continue to print. - Have a new toner cartridge available. - It is recommended that you replace the toner cartridge before printing a large amount of data.
16 CHECK TONER	When a toner cartridge needs to be replaced soon	- The printer stops printing. - Pressing [Online] continues the job. - Have a new toner cartridge available. - It is recommended that you replace the toner cartridge before printing a large amount of data.
9F CHECK TONER	When there is a possibility that the toner cartridge has reached the end of its life	- You can continue to print. - You can continue printing for a while, however, as this may result in damage to the printer, it is recommended to replace the toner cartridge with a new one.
1G CHECK TONER	When the toner cartridge has reached the end of its life or when there is a possibility that a toner cartridge whose life has once reached the end is installed	- You can continue to print. - You can continue printing for a while, however, as this may result in damage to the printer, it is recommended to replace the toner cartridge with a new one.

* Whether <16 PREPARE TONER> or <16 CHECK TONER> appears when lifetime of a toner cartridge has reached depends on the setting for WARNING STEP (See p. 5-11) in the SETUP menu. The printer is set to display <16 PREPARE TONER> in the default settings.

IMPORTANT

If the printing appears faint or inconsistent even when <16 PREPARE TONER> or <16 CHECK TONER> does not appear, this may be due to any toner cartridge reaching the end of its life. Do not continue to use the toner cartridge and replace it with new a one when there is deterioration in print quality. When you replace a toner cartridge, be sure to use a toner cartridge designed for this printer.

NOTE

- Two types of toner cartridge that have different lifetime (Canon Genuine Cartridges) are available for this printer.
- The lifetime of the toner cartridges (Canon Genuine Cartridges) designed for this printer is approximately 6,000 pages or 12,000 pages. The page counts are on the basis of "ISO/IEC 19752"* when printing A4 size paper with the default print density setting. The level of toner consumption varies depending on the type of documents printed. If your average document contains a lot of diagrams, charts, or graphs, the life of the toner cartridge will be shorter as they consume more toner.
  * "ISO/IEC 19752" is the global standard related to "Method for the determination of toner cartridge yield for monochromatic electrophotographic printers and multi-function devices that may contain printer components" issued by ISO (International Organization for Standardization).
- This section describes the procedure, taking the toner cartridge with its lifetime of approximately 6,000 pages (Canon Genuine Cartridges) as an example.

Replacing the Toner Cartridge

Replace the toner cartridge with a new one using the following procedure.

⚠ WARNING

Do not throw a used toner cartridge into open flames, as this may cause the toner remaining inside the cartridge to ignite, resulting in burns or a fire.

⚠ CAUTION

Take care not to allow the toner to come into contact with your hands or clothing, as this will dirty your hands or clothing. If they become dirty, wash them immediately with cold water. Washing with warm water will set the toner and make it impossible to remove the toner stains.

IMPORTANT

- Dispose of the packing materials according to local regulations.
- Be sure to use only the toner cartridges designed for this printer.

NOTE

For details on handling toner cartridges, see "Precautions for Handling Toner Cartridges," on p. 6-12.

1 Open the front cover.

While pressing the lever on the top of the front cover, open it gently.
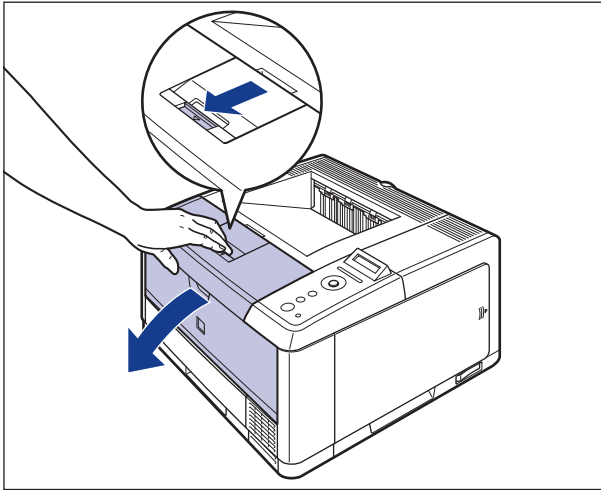
2 Remove the toner cartridge from the printer.
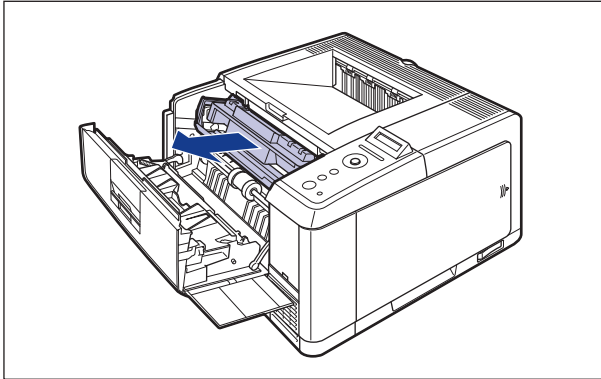
• Be sure not to touch the high-voltage contacts (A) or electrical contact (B) shown in the figure, as this may result in damage to the printer.
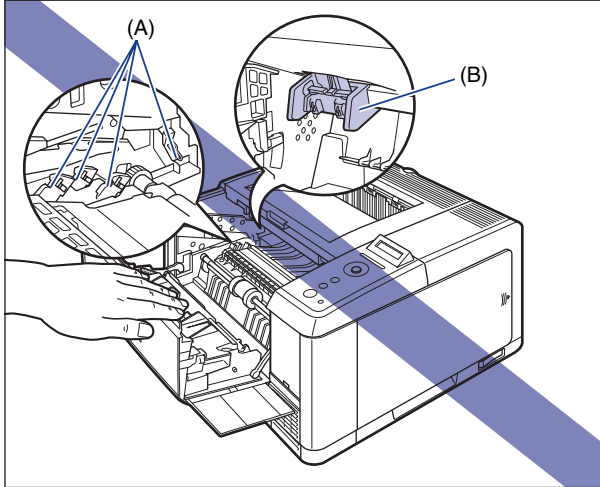
3 If chipped paper or toner accumulates on the transport guide, clean the transport guide.

❑ Raise the transport guide.

Holding the green tab, raise the transport guide.
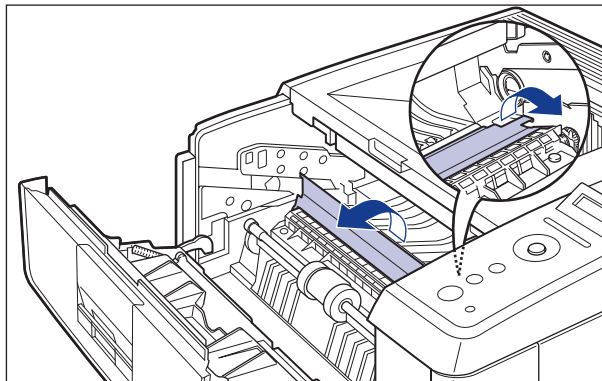
⚠ CAUTION

Do not take your hands off the transport guide. The transport guide may snap back to its original position, and this may result in personal injury.

❑ Using a slightly dampened cloth with water, wipe off chipped paper and toner that are attached to the transport guide.
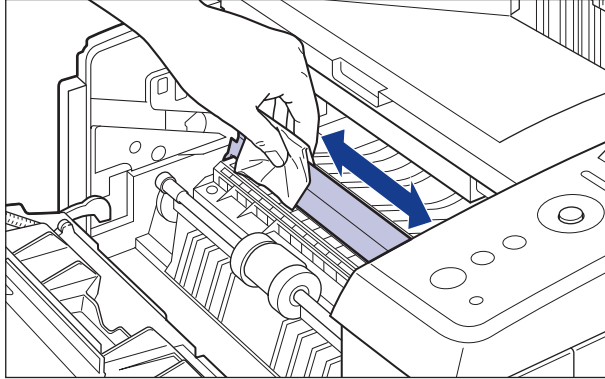
After wiping off the dirt, wipe the area with a soft, dry cloth.

🖐 IMPORTANT

- Do not use a cleaning agent such as mild detergent.
- Be sure not to touch the feed roller (A). This may result in damage to the printer or printer error.

(A)
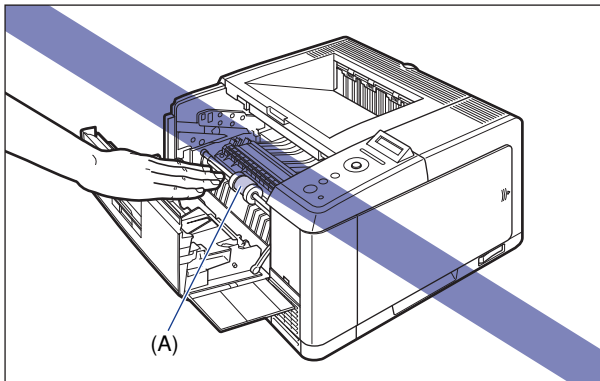
- Be sure that no water or chipped paper is remaining on the transport guide.
- Be sure to finish with wiping with a dry cloth. Water remaining inside the printer may result in damage to the printer.

❑ Gently move the transport guide back to its original position.
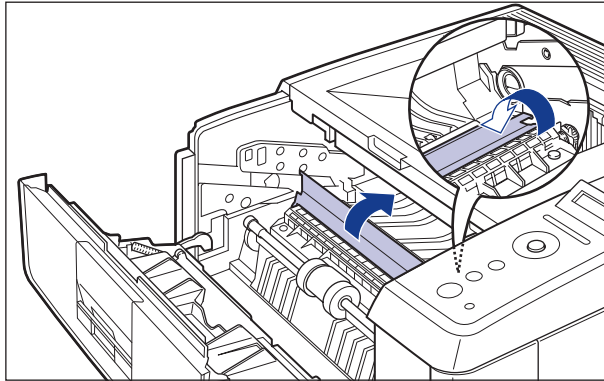
⚠ CAUTION

Do not take your hands off the transport guide until the transport guide returns to its original position. The transport guide may snap back to its original position, and this may result in personal injury.

4 **Take the new toner cartridge out of the protective bag after taking it out of the package.**

Use scissors to open the protective bag so as not to damage the toner cartridge.
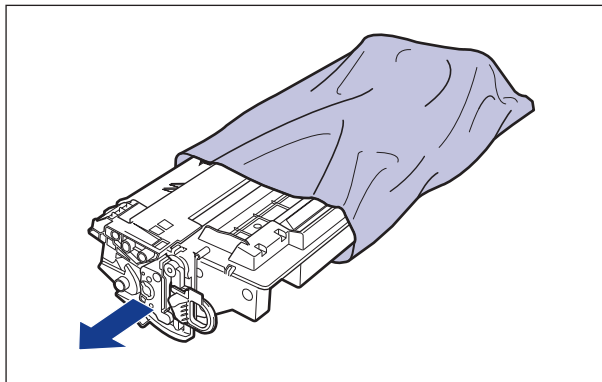
🖐 IMPORTANT

Keep the protective bag for the toner cartridge. It may be required after taking out the toner cartridge for printer maintenance.

5 Hold the toner cartridge as shown in the figure, and shake it gently 5 or 6 times to evenly distribute the toner inside the cartridge.
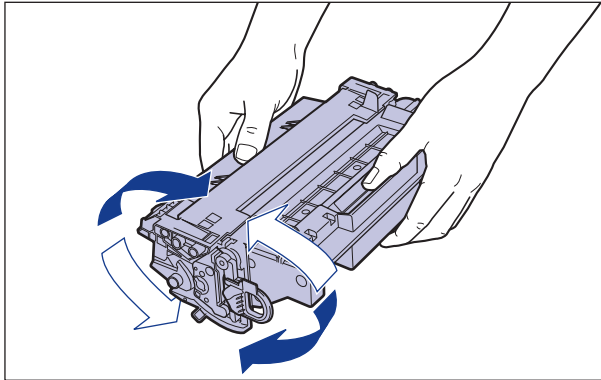
⚠️ IMPORTANT

• If toner is not distributed evenly, this may result in deterioration in print quality. Be sure to carry out this procedure properly.
• Be sure to shake the toner cartridge gently. If you do not shake the cartridge gently, toner may spill out.

6 Place the toner cartridge on a flat surface, fold back the tab of the sealing tape ①, and then pull out the sealing tape (approx. 52 cm long) gently ② while supporting the toner cartridge.

Remove the sealing tape by hooking your fingers into the tab and pulling it out straight in the direction of the arrow.
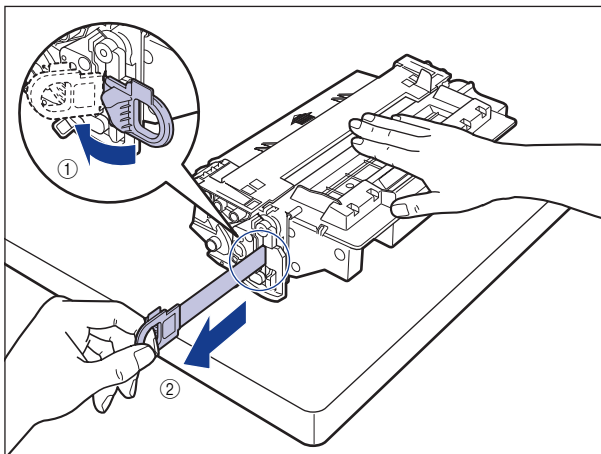
⚠ CAUTION

If the sealing tape is pulled out forcefully or stopped at midpoint, toner may spill out. If the toner gets into your eyes or mouth, wash them immediately with cold water and immediately consult a physician.

🖐 IMPORTANT

- Do not pull the sealing tape diagonally, upwards, or downwards. If the tape is severed, it may become difficult to pull out completely.
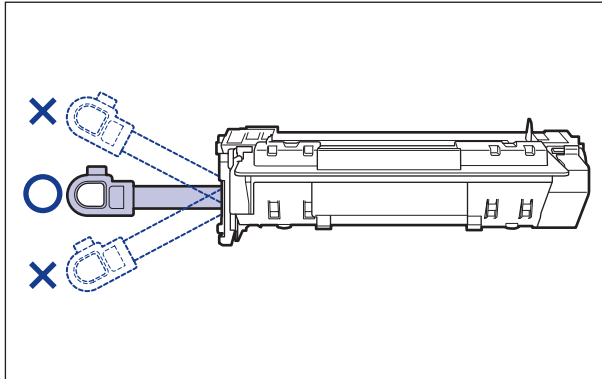
- Pull out the sealing tape completely from the toner cartridge. If any tape remains in the toner cartridge, this may result in poor print quality.
- When pulling out the sealing tape, be careful not to touch the toner cartridge memory (A) or hold the drum protective shutter (B) with your hands.
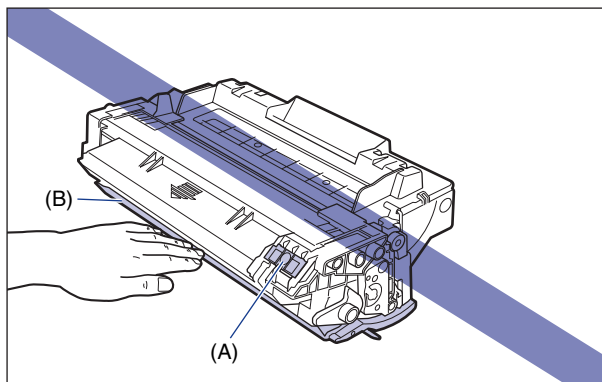
7 Hold the toner cartridge properly with the arrowed side facing up as shown in the figure.
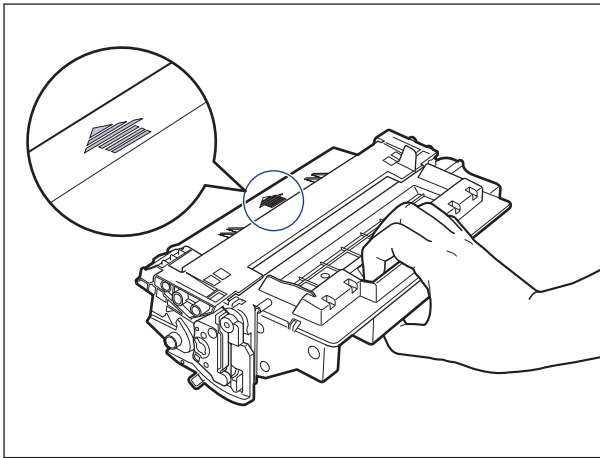
🖐 IMPORTANT

Do not hold the toner cartridge in a manner that is not directed in this procedure.
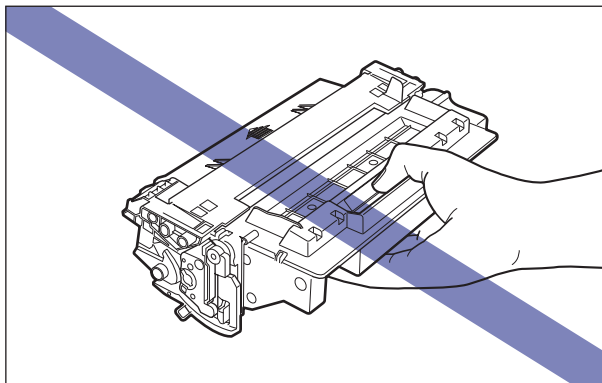
8 Push the toner cartridge into the printer until it touches the back of the printer while aligning (A) on both sides of the toner cartridge with the toner cartridge guides inside the printer.
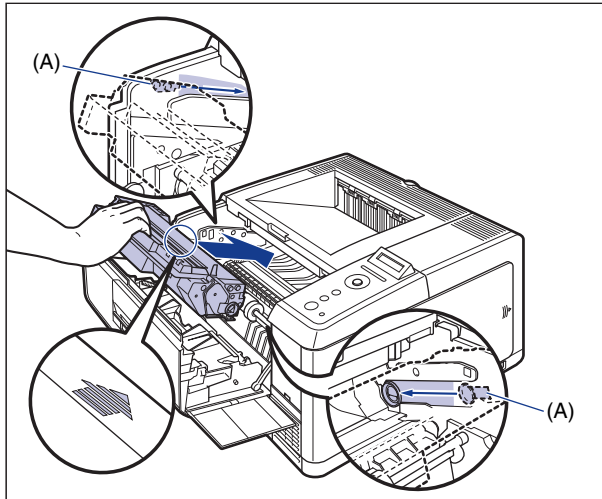
9 Close the front cover.

Close the front cover completely until it clicks.
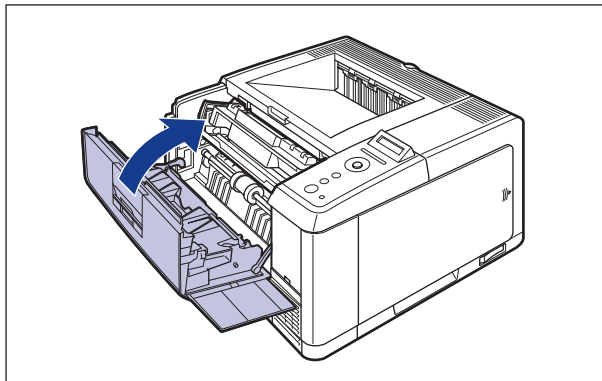
IMPORTANT

- If you cannot close the front cover, check if the toner cartridge is installed properly. If you try to close the front cover forcefully, this may result in damage to the printer or toner cartridge.
- Do not leave the front cover open for a long time after installing the toner cartridge.

Precautions for Handling Toner Cartridges

A toner cartridge consists of light-sensitive components and intricate mechanical components. Handling the toner cartridge without due care may lead to damage to the toner cartridge or deterioration in print quality. Be careful of the following points when removing or installing the toner cartridge.

⚠ **WARNING**

Do not throw a used toner cartridge into open flames, as this may cause the toner remaining inside the cartridge to ignite, resulting in burns or a fire.

⚠ **CAUTION**

Take care not to allow the toner to come into contact with your hands or clothing, as this will dirty your hands or clothing. If they become dirty, wash them immediately with cold water. Washing with warm water will set the toner and make it impossible to remove the toner stains.

🖐 IMPORTANT

- When you take the toner cartridge out of the printer for servicing the printer, place the toner cartridge into the original protective bag, or wrap it with a thick cloth immediately.
- Do not expose the toner cartridge to direct sunlight or strong light.
- Do not jolt the toner cartridge memory (A) or bring it near a magnetic field. This may result in damage to the cartridge. Print quality may deteriorate if you touch or damage the photosensitive drum inside the toner cartridge. Be sure not to touch or open the drum protective shutter (B).
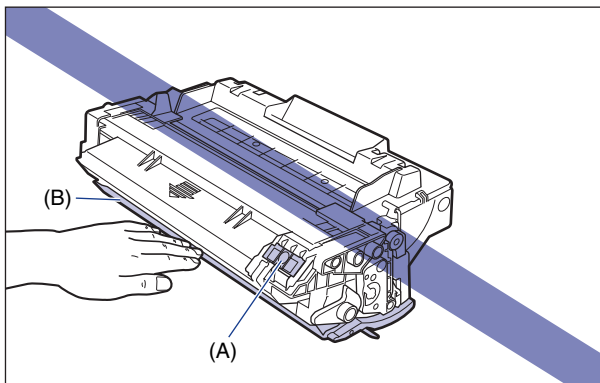
- Be careful not to hold or touch areas that are not specified in this procedure, such as the electrical contacts (C). This may result in damage to the cartridge.
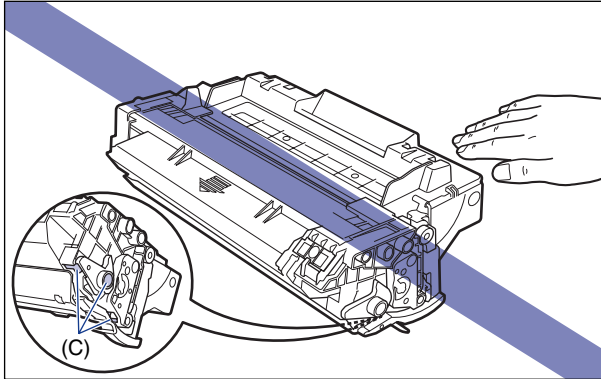
- When handling a toner cartridge, hold it properly as shown in the figure and handle it with the arrowed side facing up. Do not place it vertically or upside-down.
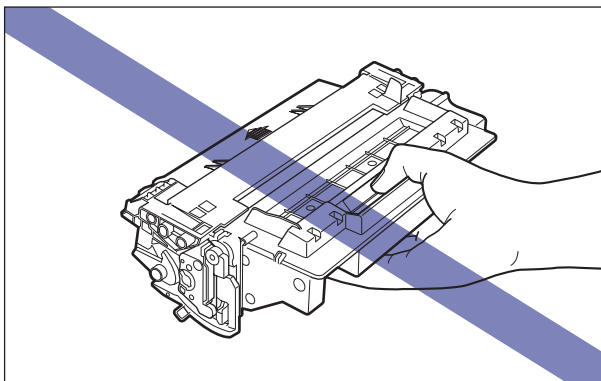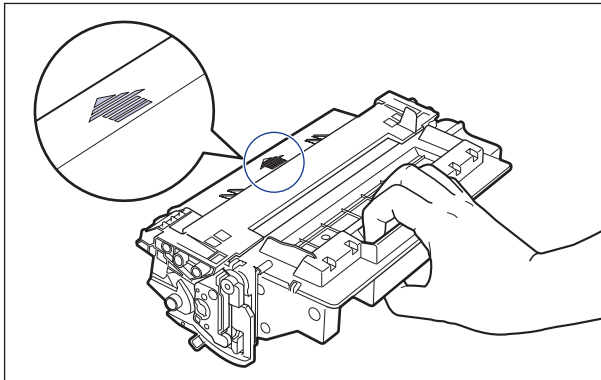
- Do not attempt to disassemble or modify the toner cartridge.

- Condensation may form in and on a toner cartridge if it is brought into an environment that exposes it to sudden changes in temperature and/or humidity. If you move the toner cartridge to a location that is warmer or has higher humidity, leave the cartridge in the new location for 2 hours or longer without opening the protective bag to allow it to adjust to the new temperature.
- Be sure to use a new toner cartridge before the expiration date indicated on the package.
- Keep the toner cartridge away from products that generate magnetic waves, such as a display or computer.
- A toner cartridge is a magnetic product. Keep the toner cartridge away from products that may be damaged by magnetic waves, such as a floppy disk or disk drive. This may lead to damage to data.

Storing Toner Cartridges

Be careful of the following points when storing a new toner cartridge or handling a toner cartridge that has been taken out of the printer for maintenance or moving the printer.

🖐 IMPORTANT
- Do not take a new toner cartridge out of the protective bag until it is ready to be used.
- When you take the toner cartridge out of the printer for servicing the printer or other purposes, place the toner cartridge into the original protective bag, or wrap it with a thick cloth immediately.
- Do not place it vertically or upside-down. Store the toner cartridge in the same orientation as when installed in the printer.
- Do not store the toner cartridge in a place exposed to direct sunlight.
- Do not store cartridges in a hot or humid place, or a place where the temperature and humidity can change significantly.
    Storing environment temperature: 0 to 35°C (32 to 95°F)
    Storing humidity range: 35 to 85% RH (no condensation)
- Do not store the toner cartridge in a place where corrosive gases, such as ammonia, are generated, or where a considerable amount of salt is contained in the air, or where there is a lot of dust.
- Keep the toner cartridge out of the reach of small children.
- Keep the toner cartridge away from products that may be damaged by magnetic waves, such as a floppy disk or disk drive.

■ Condensation
Even within the storable humidity range, water droplets may develop both inside and outside of the toner cartridge due to the difference in temperature. The development of water droplets is called condensation. Condensation will adversely affect the quality of the toner cartridge.

Adjusting the Print Density

Adjust the print density using the following procedure when the printout result is too dense or too light in color. The toner density is set to the standard density (3) before shipment. You can adjust the toner density between 1 and 16.

1 Press [Settings].

```
SETUP
```
▼
```
CONTROL MENU       →
```

2 Select QUALITY MENU using [◄] and [►], then press [OK].

```
QUALITY MENU       →
```
▼
```
IMGE REFINEMENT→
```

The options for QUALITY MENU are displayed.

3 Select DENSITY using [◄] and [►], then press [OK].

```
DENSITY            →
```
▼
```
=3                 →
```

The settings for DENSITY are displayed.

4 Specify the target numeric value using [◄] and [►], then press [OK].

Pressing [◄] decreases the value, and the print density becomes lighter.
Pressing [►] increases the value, and the print density becomes denser.

```
6                  →
```
▼
```
=6                 →
```

"=" is displayed on the left of the value, and the density is specified.

6

Routine Maintenance

Cleaning the Fixing Roller

When the front or back of the printed paper has smudge marks, clean the fixing roller using the following procedure. Print quality deterioration can be prevented by cleaning the fixing roller.

IMPORTANT

- The cleaning paper cannot be printed on any paper other than A4. Be sure to use A4 size paper.
- To print a cleaning paper, load a sheet of A4 size paper in the multi-purpose tray.

1 **Make sure that the printer is online.**

If the printer is not online, press [Online].

2 **Press [Utility].**

    UTILITY MENU

    CONFIG.PAGE   →

3 **Select CLEANING using [◄] and [►], then press [OK].**

    CLEANING   →

    EXECUTING
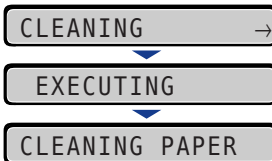
    CLEANING PAPER

<CLEANING PAPER> appears in the display, and the printer waits to print the cleaning paper.

Online

4 **Load a sheet of A4 size paper in the multi-purpose tray, then press [Online].**

```
CLEANING PAPER
```
▼
```
01 CLEANING
```
▼
```
00 PROCESSING A4
```
▼
```
CLEANING
```

The cleaning paper is printed.

Load this side face down on the multi-purpose tray, and then perform cleaning.

6

Routine Maintenance

Cleaning the Fixing Roller   **6-17**
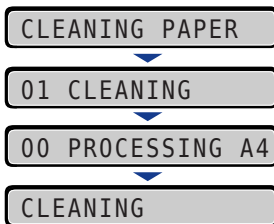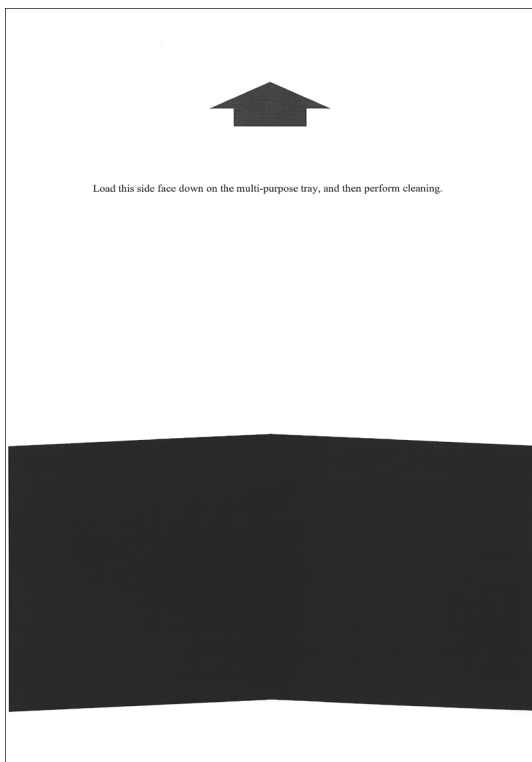
5 Load the cleaning page with the printed side facing down and the arrow mark going into the multi-purpose tray first.

6 Press [Online].

```
CLEANING
```
▼
```
01 CLEANING
```
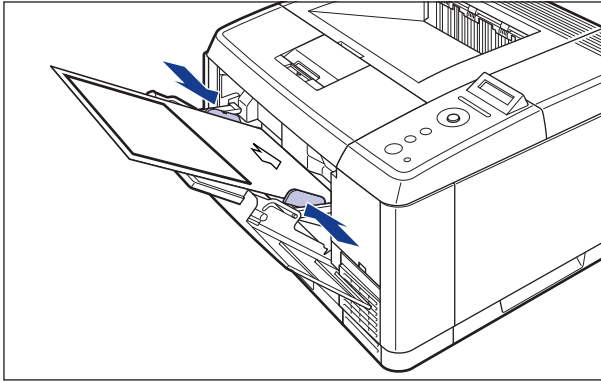
The paper is fed into the printer slowly, and the printer starts cleaning the fixing roller.

✎ NOTE

• Cleaning takes approximately 90 seconds.

• The cleaning process cannot be canceled. Please wait until it is completed.

• When the front or back of the printed paper has smudge marks even after performing the procedure above, perform the cleaning again. When doing so, do not use the cleaning paper output in Step 4 above but load A4-size blank paper in the multi-purposes tray, and then perform the cleaning.

Adjusting the Printing Position

If the printing position is skewed when printing from a certain paper source, you can adjust the position from the control panel.

🖐 **IMPORTANT**

If any part of the print image lies outside the printable area after adjusting the printing position, the part will be missing in the print result.

✐ **NOTE**

Be aware that, when adjusting the printing position for 2-sided printing, the orientation of the images on the reverse pages varies depending on the printing orientation or setting for BIND.LOCATION.

Checking the Printing Position

Perform the Printing Position Adjustment Print and check the position and direction to be adjusted.

🖐 **IMPORTANT**

When adjusting the printing position for 2-sided printing, set 2-SIDED PRINT. (See p. 5-22) to ON previously.

1 **Press [Feeder Selection].**

When adjusting the printing position for 2-sided printing, select the desired paper source.

```
SELECT FEEDER
        ▼
PAPER SOURCE     →
```

2 **Select PAPER SOURCE using [◄] and [►], then press [OK].**
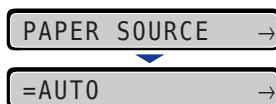
```
PAPER SOURCE     →
        ▼
=AUTO            →
```

3 **Select the paper source that you want to check the printing position using [◄] and [►], then press [OK].**

```
 CASSETTE 1       →
```
▼
```
=CASSETTE 1       →
```
▼
```
00 READY        A4
```

4 **Make sure that the printer is online.**

If the printer is not online, press [Online].

5 **Press [Utility].**

```
 UTILITY MENU
```
▼
```
 CONFIG.PAGE      →
```

6 **Select PRNTPOSNPRINT using [◄] and [►], then press [OK].**

```
 PRNTPOSNPRINT    →
```
▼
```
 EXECUTING
```
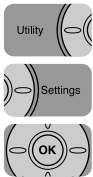
The Printing Position Adjustment Print is printed as shown in the following. The top of the output paper is the top of the Printing Position Adjustment Print.

Top

Feeding direction
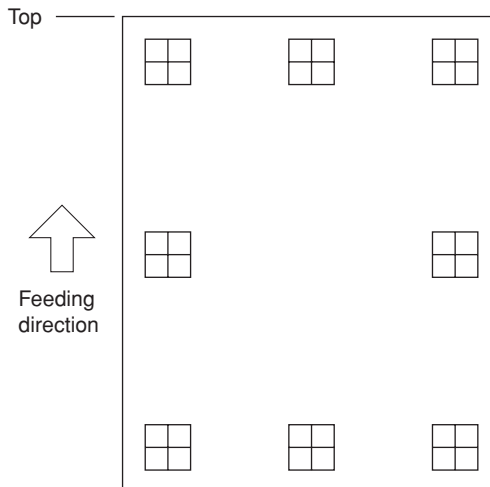
Next, check the printout results and specify the direction and position to be adjusted in "Adjusting the Printing Position" (See the next item).

Adjusting the Printing Position

The measurements of "⊞" printed on paper are as the following:
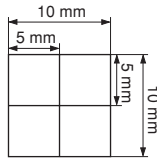
10 mm
5 mm
5 mm
10 mm

* 5 mm from each edge of paper (10 mm for envelopes)

This section describes the setting procedure for the following Printing Position Adjustment Print printed with Cassette 1 specified, as an example.

In this case, adjust the printing position by -5.0 mm upward.

Top

Feeding direction
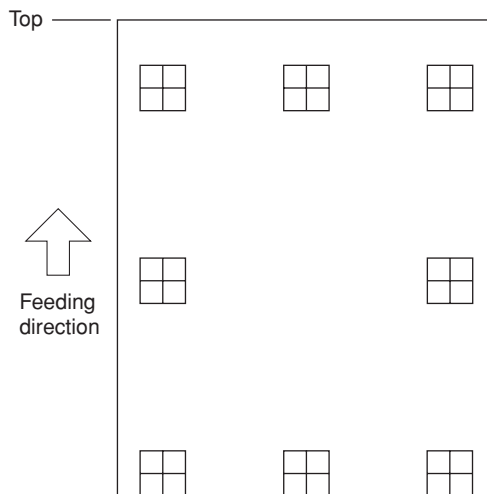
🖐 **IMPORTANT**

OFFSET Y (DUP.) and OFFSET X (DUP.) allow you to specify the printing position of the first page of 2-sided printing. The second page of 2-sided printing follows the settings for each paper source.

✐ **NOTE**

The printing position can be adjusted within a range from + 5.0 to - 5.0 mm.

1 Press [Online].

The Online indicator goes off, allowing you to specify the settings on the control panel.

2 Press [Settings].

```
SETUP
```
▼
```
CONTROL MENU    →
```
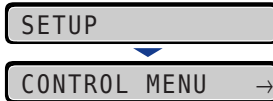
3 Select USER MAIN. using [◄] and [►], then press [OK].

```
USER MAIN.      →
```
▼
```
ADJ.START POS. →
```
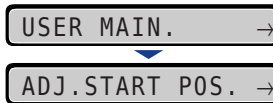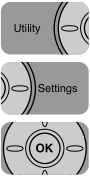
The options for USER MAIN. are displayed.

4 Select ADJ.START POS. using [◄] and [►], then press [OK].

```
ADJ.START POS. →
```
▼
```
OFFSET Y(TRAY) →
```
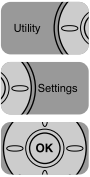
The settings for the printing position are displayed.

5 Select the paper source that you want to check the printing position using [◄] and [►], then press [OK].

```
OFFSET Y(CASS1)→
```
▼
```
=0.0            →
```
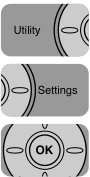
6 Specify the target numeric value using [◄] and [►], then press [OK].
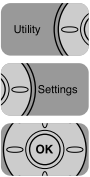
Next, check the printout results of the Printing Position Adjustment Print and select the numerical value to adjust the position.

Each time you press [►], the value increases in +0.1 mm increments, and each time you press [◄], the value decreases in -0.1 mm increments. If you keep holding down [►] or [◄], the speed of the value changing is increased.

```
-5.0              →
```
▼
```
=-5.0             →
```
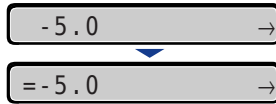
"=" is displayed on the left of the value, and the printing position is specified.

7 Press [Online] to place the printer online.

8 Press [Utility].

```
UTILITY MENU
```
▼
```
CONFIG.PAGE       →
```

9 Select PRNTPOSNPRINT using [◄] and [►], then press [OK].

```
PRNTPOSNPRINT     →
```
▼
```
EXECUTING
```

The printing position adjustment print in which the setting is changed is printed. Check the printout results to confirm the printing position.

To make further adjustment, repeat Step 1 to 9.

6

Routine Maintenance

Cleaning the Outside of the Printer

Periodically clean the outer surfaces and ventilation slots of the printer to maintain the optimal printing quality. When cleaning the printer, be careful of the following points in order to prevent an electrical shock or printer malfunctions.

⚠ WARNING

- **When cleaning the printer, turn OFF the main power switch, and then unplug the power plug. Failure to observe these steps may result in a fire or electrical shock.**
- **Do not use alcohol, benzene, paint thinner, or other flammable substances. If flammable substances come into contact with electrical parts inside the printer, it may result in a fire or electrical shock.**

✋ IMPORTANT

- Be careful not to use a cleaning agent other than water or a mild detergent diluted with water, as this may deform or crack the plastic materials in the printer.
- When using a mild detergent, be sure to dilute it with water.
- Grease or oil does not have to be applied to this printer. Be sure not to apply grease or oil.

6

Routine Maintenance

1 Turn the printer and computer OFF ①, remove the USB cable ②, and then disconnect the power plug from the AC power outlet ③.
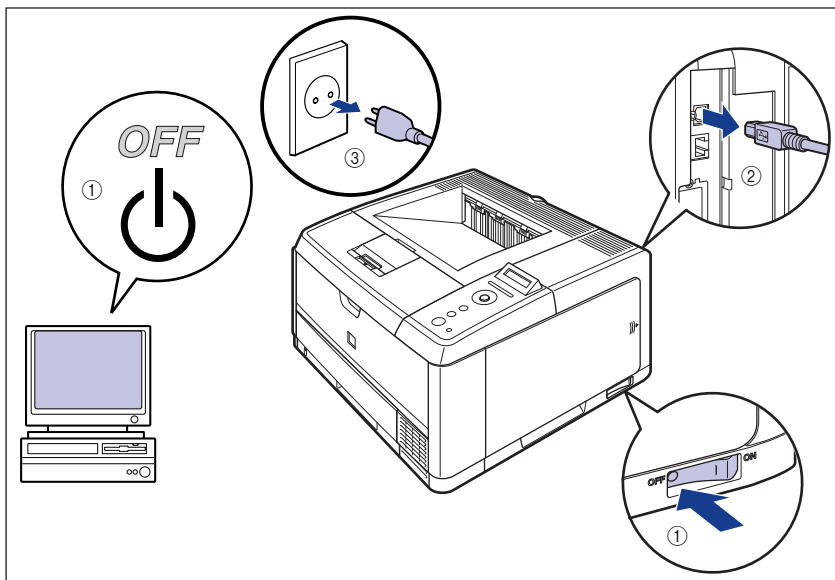
2 Firmly wring a soft cloth dampened with water or a mild detergent diluted with water, and wipe off the dirt.

If you use a mild detergent for cleaning, be sure to wipe away the detergent with a soft cloth dampened with water.

6

Routine Maintenance

Cleaning the Outside of the Printer   **6-25**
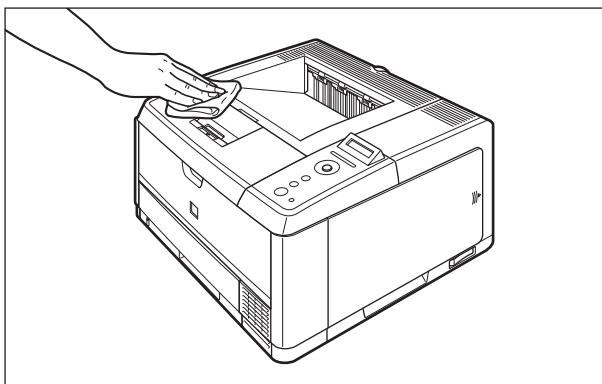
3 **After wiping off the dirt, wipe the printer with a dry cloth.**

4 **When the printer is completely dry, plug the power plug into the AC power outlet, and then connect the USB cable.**

Moving the Printer

When changing the location of the printer or moving the printer for maintenance, be sure to perform the following procedure.

IMPORTANT

Make sure that the front cover and face-up output tray are closed before carrying the printer.

NOTE

For details on the installation site, see "Getting Started Guide".

1 Turn the printer and computer OFF ①, remove the USB cable ②, and then disconnect the power plug from the AC power outlet ③.
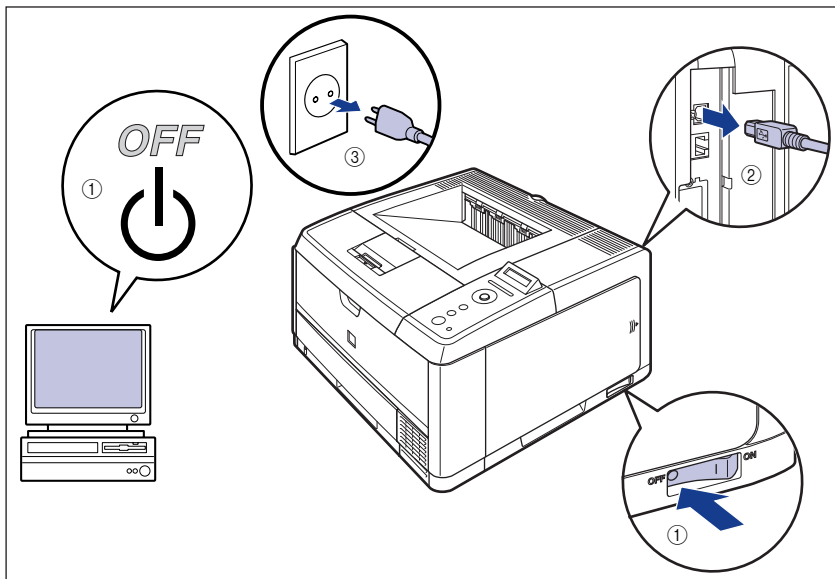
⚠ WARNING

Be sure to turn the printer and computer OFF, unplug the power plug, and then disconnect all the interface cables from the printer before moving the printer. Otherwise, the power cord or interface cables may be damaged, resulting in a fire or electrical shock.

2 **Remove all the interface cables and the power cord from the printer.**

3 **Pull out the paper cassette.**
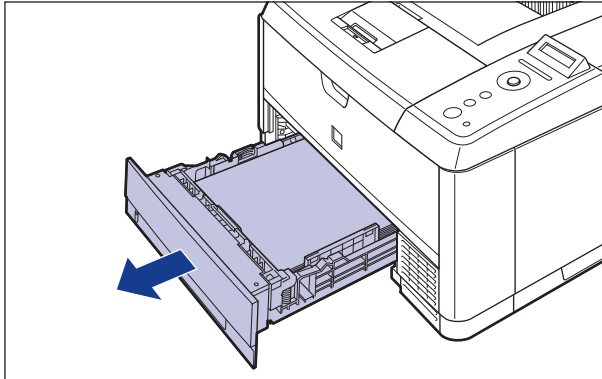
4 Move the printer unit from the installation site.

From the front side, securely hold the printer by the lift handles located on the lower portion of the printer with both hands.
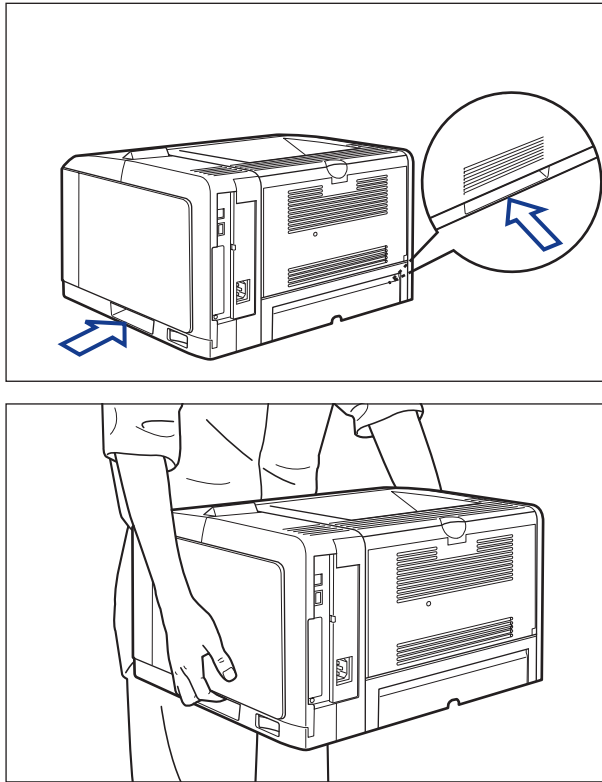
⚠ CAUTION

- **This printer weighs approximately 16.2 kg without the paper cassette installed. Please be careful not to hurt your back or other portions of your body when carrying the printer.**

• **Be sure not to hold the printer by the front portion, back portion, or any portions other than the lift handles. If you do so, you may drop the printer, resulting in personal injury.**
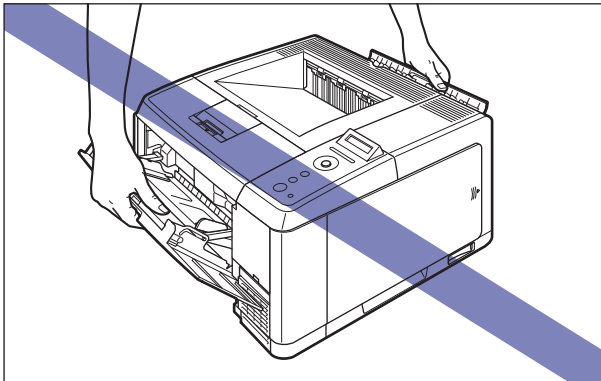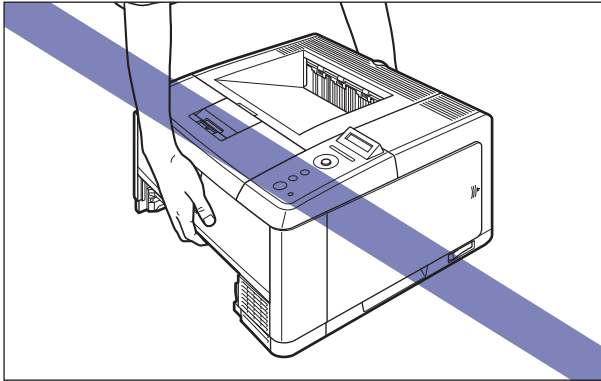
• **Be sure to hold the printer from the front side when carrying it. If you hold the printer from the rear side, you may get off-balanced and drop the printer, resulting in personal injury.**
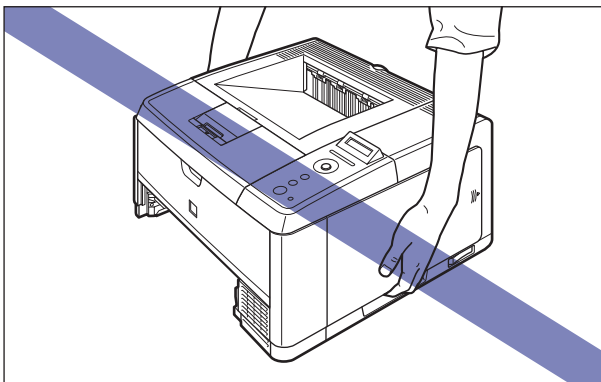
• **Do not carry the printer with the paper cassette attached. If you do so, the paper cassette may drop resulting in personal injury.**

• **Do not carry the printer with the paper feeder installed. If you do so, the paper feeder may drop resulting in personal injury.**
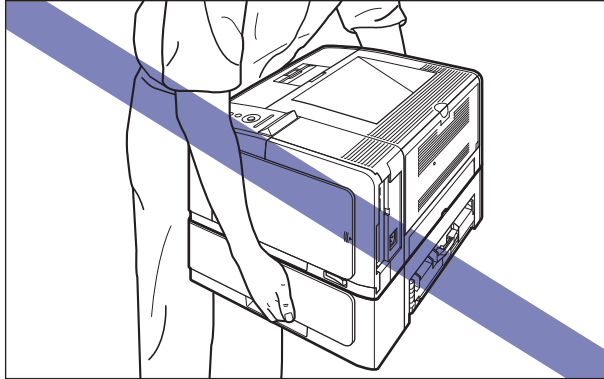
📝 NOTE

If the optional paper feeder was previously installed in the printer, place the paper feeder on the new installation site before carrying the printer to the site. For details on the procedure for installing the paper feeder, see "Getting Started Guide".

5 Put the printer down carefully at the new installation site.

⚠ **CAUTION**

Put the printer down slowly and carefully. Be careful not to hurt your hands.

🖑 IMPORTANT

Secure sufficient space around the printer at the installation site so that you can install the optional accessories and connect cables.

6 Set the paper cassette in the printer.

Push the paper cassette into the printer firmly until the front side of the paper cassette is flush with the front surface of the printer.
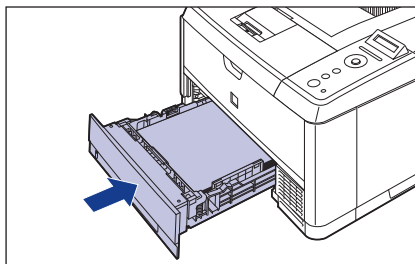
Cassette 1

Cassette 2
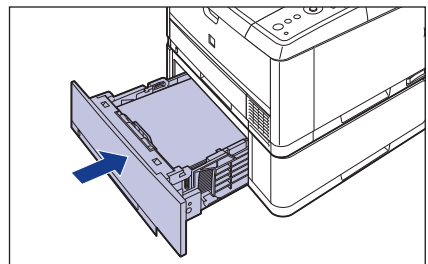
7 Connect the interface cables except for the USB cable, and connect the power cord.

8 Connect the USB cable.

● **Transporting the Printer**

When transporting the printer for reasons such as relocating, remove the toner cartridge and store the printer and the parts in the package that they came in with the protective materials attached in order to prevent them from being damaged while being transported.

If the original package and packing materials are not available, find an appropriate box and packing materials and pack the printer and the parts appropriately.

Handling the Printer

This printer consists of various electronic and precise optical parts. Read the following section so that you can handle the printer properly.

IMPORTANT

- For details on how to handle the printer, also read "Important Safety Instructions" (See p. xvi).
- Do not place any heavy objects on the printer, trays, or covers. This may result in damage to the printer.
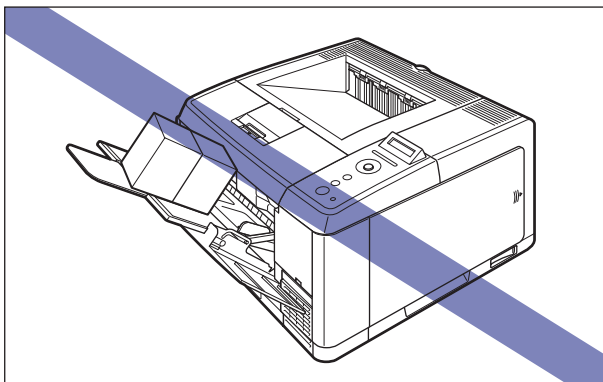
- Do not leave the front cover open longer than required. Exposing the printer to direct sunlight or strong light may result in deterioration in print quality.
- Avoid vibration while the printer is printing. This may result in deterioration in print quality.
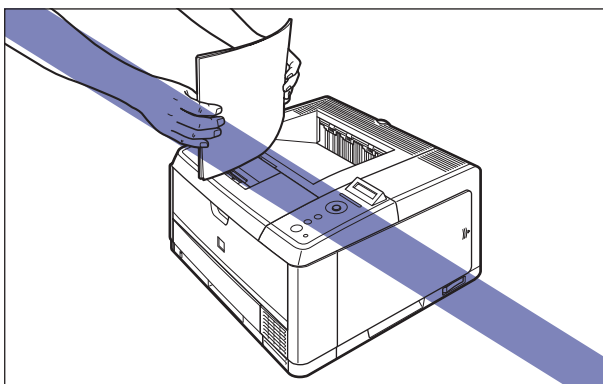
- Be sure not to open the covers on the printer during printing. This may result in damage to the printer.

- Handle the front cover and face-up output tray gently when opening or closing them. Failure to do so may result in damage to the printer.
- If you want to spread a blanket on the printer to prevent dust from entering the printer, turn the power OFF and allow the printer to cool down sufficiently before covering the printer.
- If you do not plan to use the printer for a long period of time, unplug the power plug from the AC power outlet.
- Do not use or store the printer in a room where chemicals are used.
- The surroundings of the face-down output tray and face-up output tray are hot during printing or immediately after printing. When taking out of the paper or removing jammed paper, be careful not to touch the surroundings of the face-down output tray or face-up output tray.
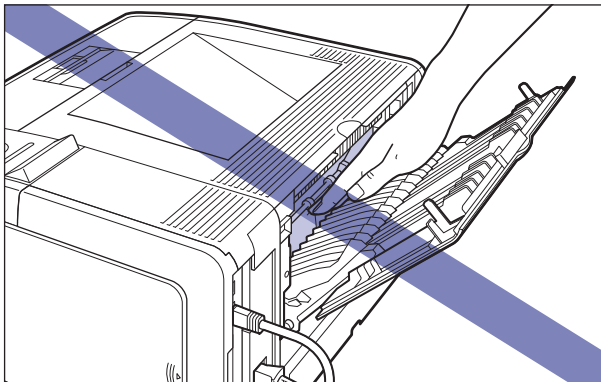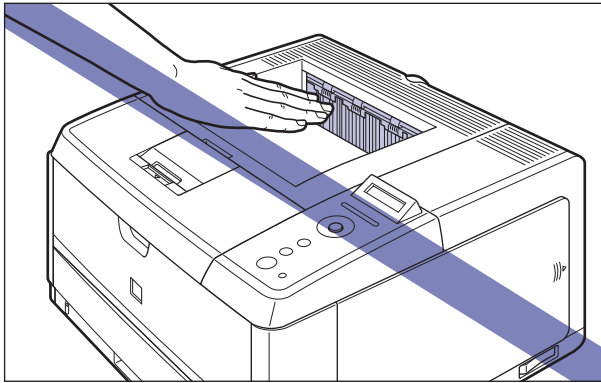
Troubleshooting

7

This chapter describes the remedies for problems such as a paper jam or an error message appearing.

When You Have Trouble Printing

Printing is impossible. → **Yes**

↓ **No**

The layout is skewed. → **Yes** →

- The paper setting is inappropriate.
  See Help of the printer driver
- The print setting in the application is inappropriate.
  See the instruction manual supplied with your application
- The printing position is skewed.
  See "Adjusting the Printing Position" on p. 6-19

↓ **No**

The print quality is deteriorated. → **Yes** →

- The process has been changed due to insufficient memory.
  See "Message List" on p. 7-22
- Paper that cannot be used with this printer is being used.
  See "Paper Requirements" on p. 3-2
- The toner cartridge needs to be replaced soon.
  See "Replacing the Toner Cartridge" on p. 6-2

↓ **No**

Miscellaneous Problems
See "Message List" on p. 7-22
See "Service Call Display" on p. 7-34
See "When You Cannot Obtain Appropriate Printout Results" on p. 7-36

7

Troubleshooting

```
                  A message              No
             is being displayed  ───────────────▶   This printer is not selected for the printer destination.
                on the print
                  monitor.

                     │
                     │ Yes                                   The printer is OFF.
                     ▼                              ┌───▶   See "Turning the Printer ON/OFF" on p. 2-2
                                   Yes
            <Unable to get status.> is  ───────────┼───▶   The printer is offline.
                 displayed.                                 See "Online and Offline" on p. 2-7

                     │                              └───▶   The cable is not connected properly.
                     │ No                                   See Getting Started Guide
                     ▼

                                                    ┌───▶   <NO "size" PAPER> is being displayed.
                                                            See "Printing from the Paper Cassette" on p. 3-21
                                                            See "Printing from the Multi-purpose Tray" on p. 3-38
                  An error            Yes
             message is being  ─────────────────────┼───▶   <PAPER JAM> is being displayed.
                displayed.                                  See "Paper Jams" on p. 7-4

                     │                              ├───▶   <CHECK TONER> is being displayed.
                     │ No                                   See "Replacing the Toner Cartridge" on p. 6-2
                     ▼
                                                    ├───▶   A service call is being displayed.
                                                            See "Service Call Display" on p. 7-34

                                                    └───▶   Other error message is being displayed.
                  The Job                                   See "Message List" on p. 7-22
             indicator on the    Yes
                printer is  ────────────────────────────▶   Cannot print because of the previous job remaining.
                 blinking.                                  See "Canceling a Job" on p. 2-9

                     │
                     │ No
                     ▼

            The printer is processing
                 the print data.
             Please wait a moment.
```

7

Troubleshooting

Paper Jams

When a paper jam occurs, confirm the messages first, then remove the paper following the procedure.

⚠ **WARNING**

There are some areas inside the printer which are subject to high-voltages. When removing jammed paper or when inspecting the inside of the printer, do not allow necklaces, bracelets, or other metal objects to touch the inside of the printer, as this may result in burns or electrical shock.

⚠ **CAUTION**

- **The fixing unit and its surroundings inside the printer are hot during use. Make sure the fixing unit is completely cool before removing the jammed paper. Touching the fixing unit when it is still hot may result in burns.**
- **When removing jammed paper, take care not to allow the toner to come into contact with your hands or clothing, as this will dirty your hands or clothing. If they become dirty, wash them immediately with cold water. Washing with warm water will set the toner and make it impossible to remove the toner stains.**
- **When removing paper jammed inside the printer, remove the jammed paper gently to prevent the toner on the paper from scattering and getting into your eyes or mouth. If the toner gets into your eyes or mouth, wash them immediately with cold water and immediately consult a physician.**
- **When removing jammed paper, take care not to cut your hands with the edges of the paper.**
- **Keep your hands or clothing away from the roller in the output area after removing jammed paper completely. Even if the printer is not printing, sudden rotation of the roller may catch your hands or clothing, resulting in personal injury.**

🖐 IMPORTANT

- Remove jammed paper while the power of the printer is ON. If the power is turned OFF, the data being printed will be deleted.
- Applying excess force may result in tearing paper or damaging the parts in the printer. When removing jammed paper, pull out the paper in the most appropriate direction, judging from the position of the paper.
- If paper is torn, be sure to find and remove any remaining pieces of paper.
- The error message may remain if jammed paper is removed without opening the front cover. In this case, open and close the front cover once.

• Be sure not to touch the high-voltage contacts (A) or electrical contact (B) shown in the figure, as this may result in damage to the printer.
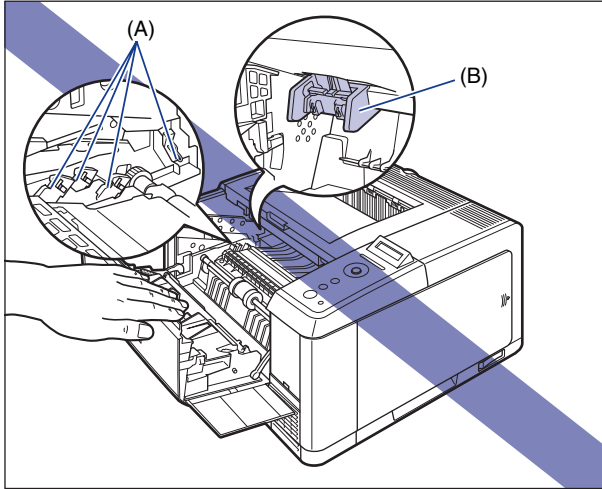
• Be sure not to touch the transfer roller (C). This may result in deterioration in print quality.
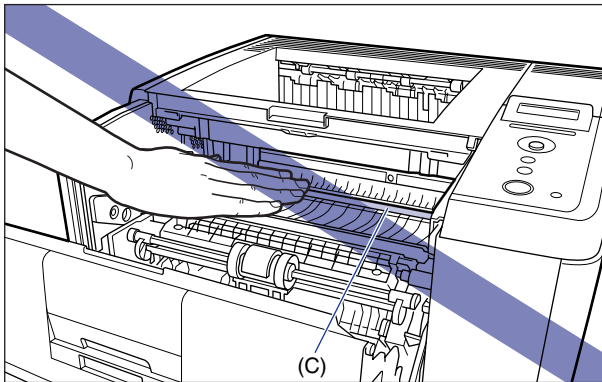
• The surroundings of the face-down output tray and face-up output tray are hot during printing or immediately after printing. When taking out of the paper or removing jammed paper, be careful not to touch the surroundings of the face-down output tray or face-up output tray.
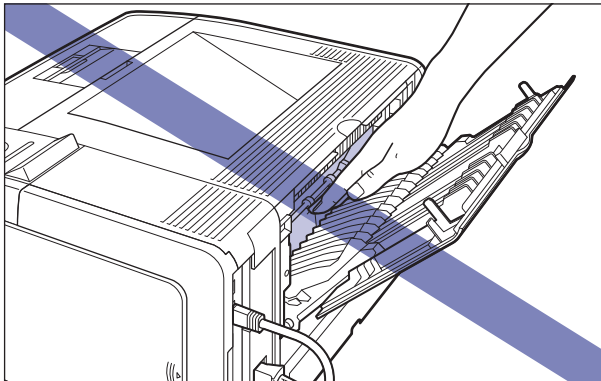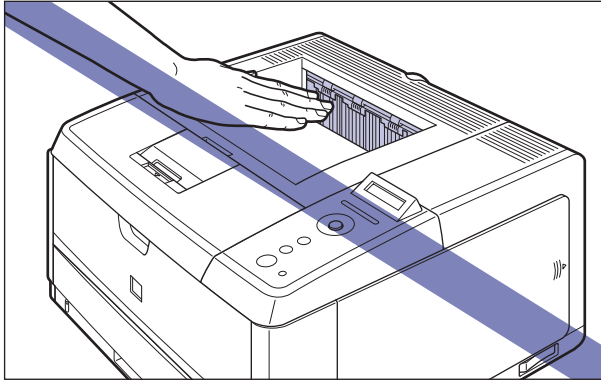
Procedure for Clearing Paper Jams

Remove the jammed paper using the following procedure.

1 Confirm all the messages that appear in the display.

Messages appear one at a time. Confirm all of them.

As the messages disappear when the cover is open, take a note of them if required.

```
13 PAPER JAM
```
⬦
```
FRONT COVER
```

The messages indicate where the paper is jammed, and there are the following kinds.

Displayed Message	Paper Jam Location
<DUPLEX UNIT>	Duplex print transport area
<OUTPUT AREA>	Face-up output tray or face-down output tray
<FRONT COVER>	Inside the front cover
<TRAY AREA>	Multi-purpose tray
<CASS.1 AREA>	Cassette 1
<CASS.2 AREA>	Cassette 2 (Only when the paper feeder is installed)

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Troubleshooting

2 If you are using the multi-purpose tray and see the jammed paper inside the multi-purpose tray, simply pull out the paper to remove it.
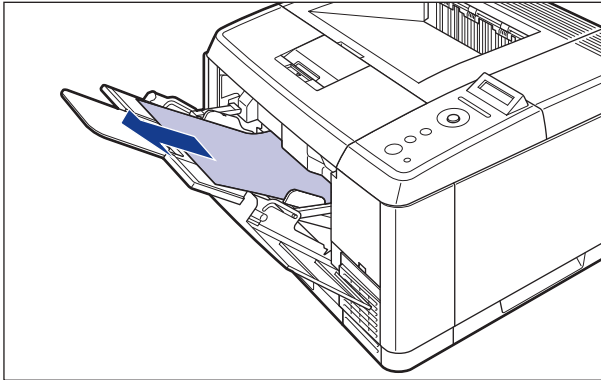
3 Close the multi-purpose tray.
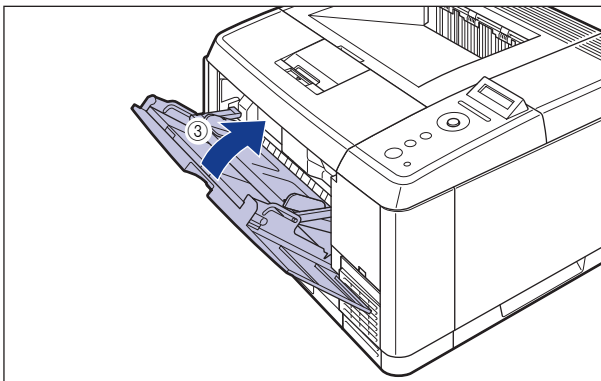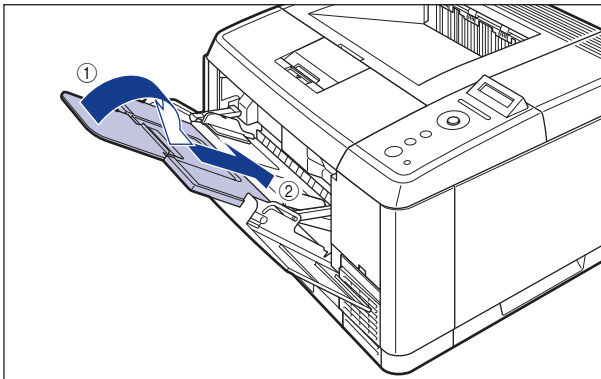
4 Open the front cover.

While pressing the lever on the top of the front cover, open it gently.
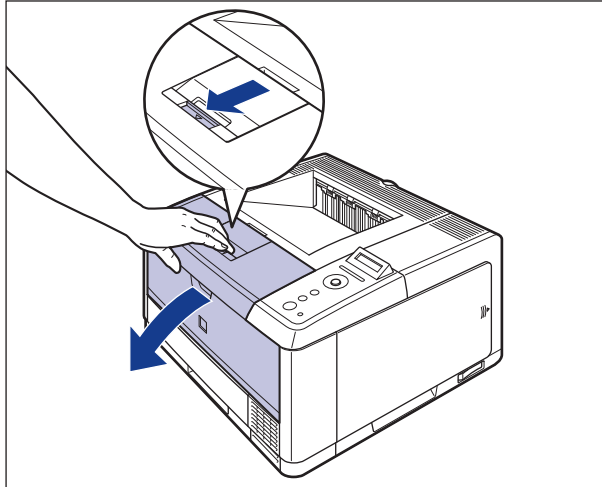
5 Remove the toner cartridge from the printer.
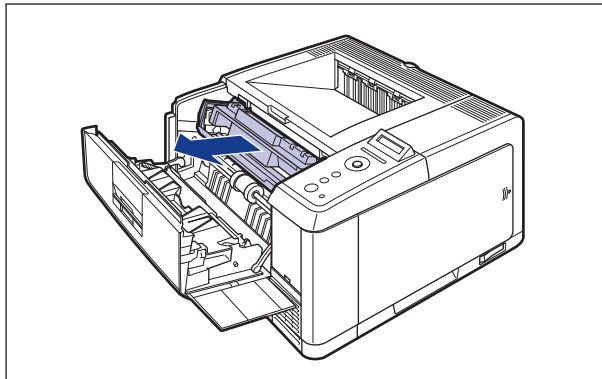
✐ NOTE

For details on handling toner cartridges, see "Precautions for Handling Toner Cartridges," on p. 6-12.

6 Place the toner cartridge into the protective bag.
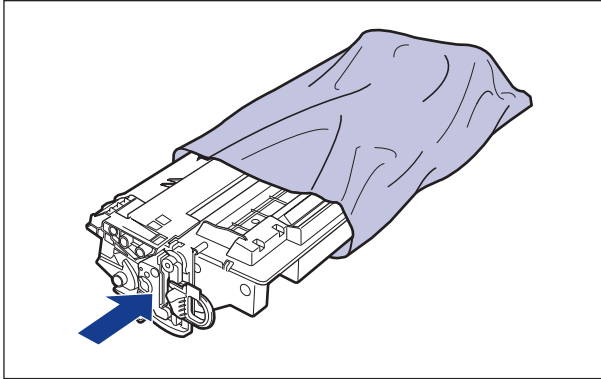
7 Raise the transport guide, then tilt it toward you.

Holding the green tab, raise the transport guide, then tilt it toward you.
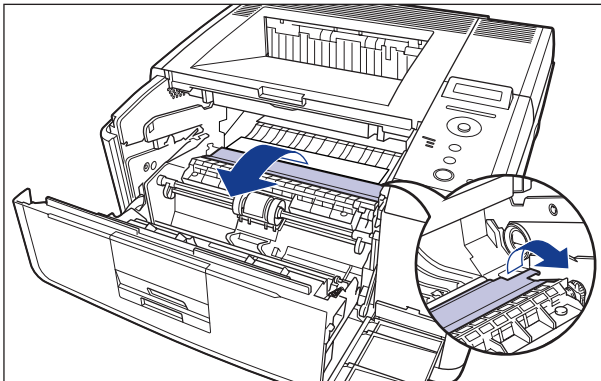
⚠ **CAUTION**

Do not take your hands off the transport guide. The transport guide may snap back to its original position, and this may result in personal injury.

8 **Remove any jammed paper by pulling it in the direction of the arrow.**

Remove the jammed paper gently to prevent unfixed toner from spilling.
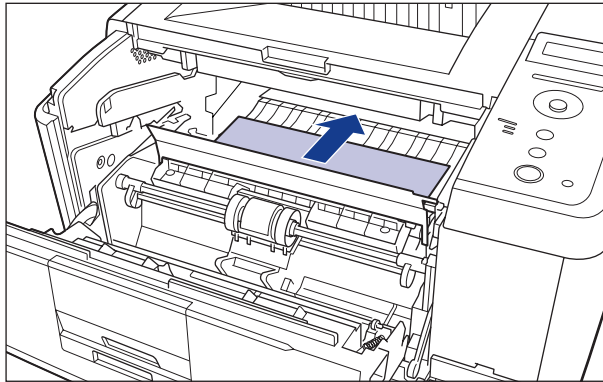
IMPORTANT

If the jammed paper cannot be removed easily, do not try to remove it forcefully but proceed to the next step.

9 **Gently move the transport guide back to its original position.**
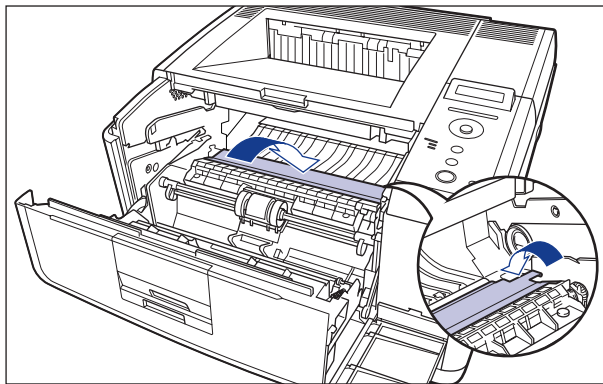
⚠ CAUTION

Do not take your hands off the transport guide until the transport guide moves back to its original position. The transport guide may snap back to its original position, and this may result in personal injury.

7

Troubleshooting

10 Check the face-down output tray and remove any jammed paper.
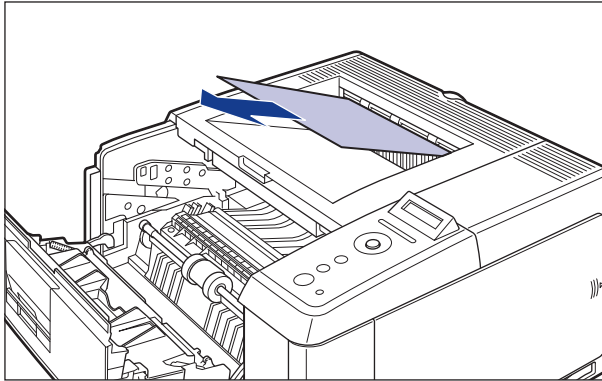
IMPORTANT

If the jammed paper cannot be removed easily, do not try to remove it forcefully but proceed to the next step.

NOTE

If no toner is on the removed paper, it may adhere to the paper to be printed next.

11 Open the face-up output tray.

Open the face-up output tray completely as shown in the figure.
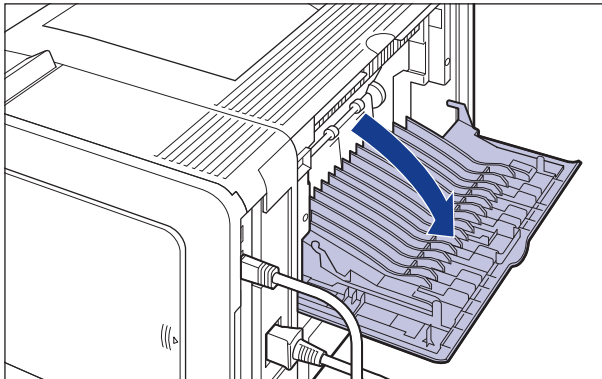
12 Turn the green dial in the face-up output tray in the direction of the arrow to send any jammed paper.
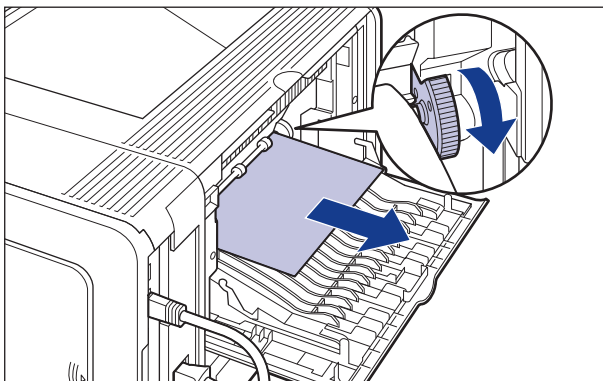
When you have been performing 2-sided printing
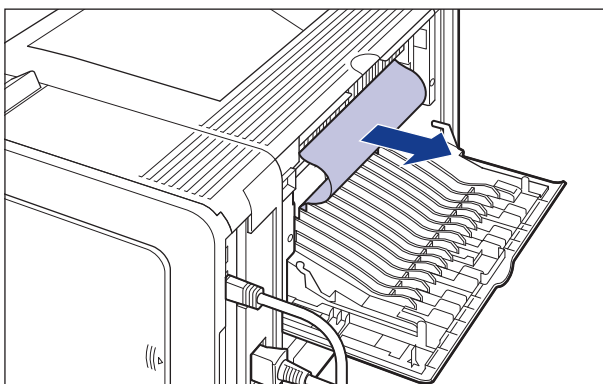
13 Close the face-up output tray.
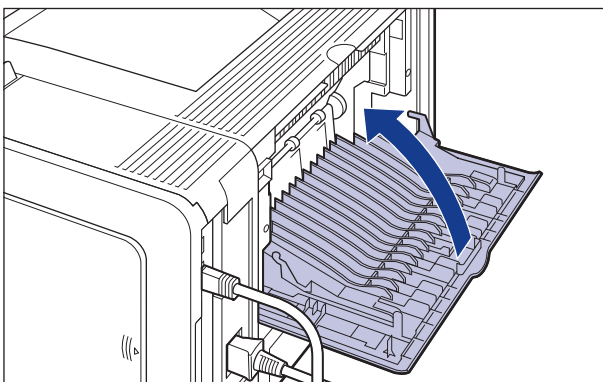
14 Close the front cover.

Close the front cover completely until it clicks.
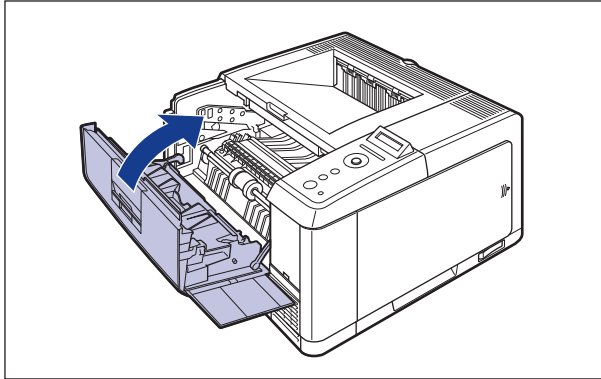
15 Pull out the paper cassette.
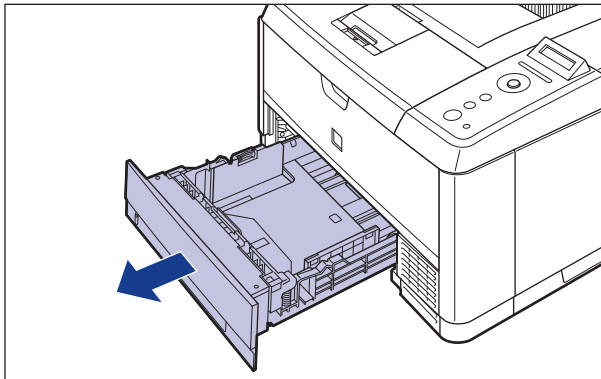
If the paper feeder is installed, pull out the paper cassette of the paper feeder also.
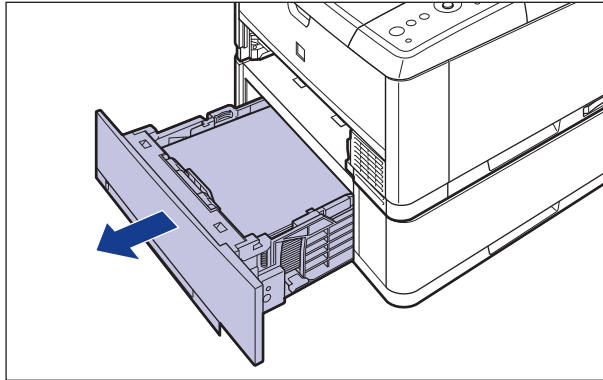
16 Push any jammed paper downward slowly and forcefully to remove it.

In case of the printer unit
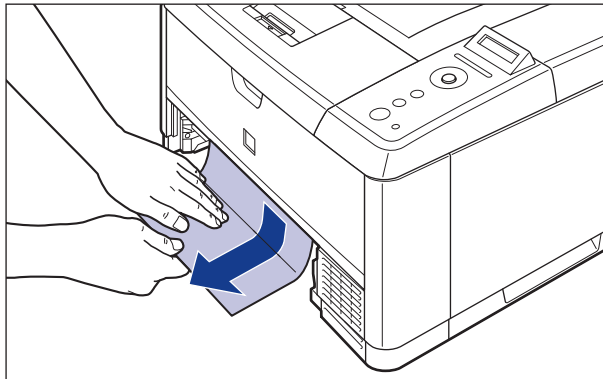
In case of the paper feeder
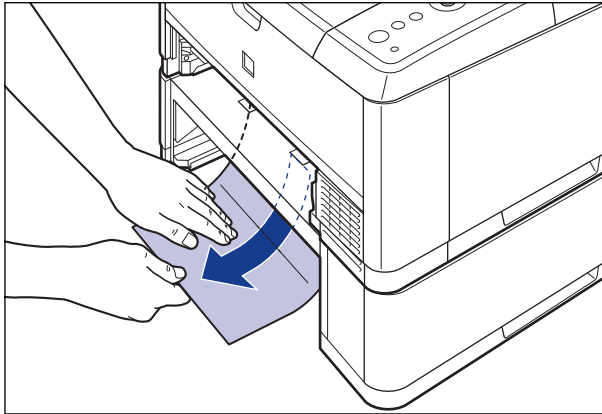
If you have not been performing 2-sided printing, proceed to Step 20.

IMPORTANT

Do not touch the feed rollers (A) in the printer unit and paper feeder. This may result in damage to the printer or printer error.
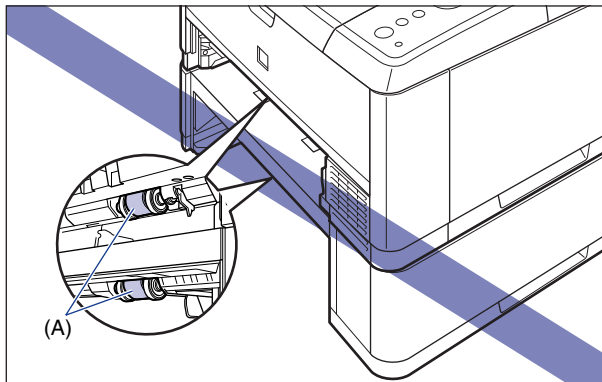
17 Open the duplex print transport guide.

Press the green toner cover release tab (A) as shown in the figure.
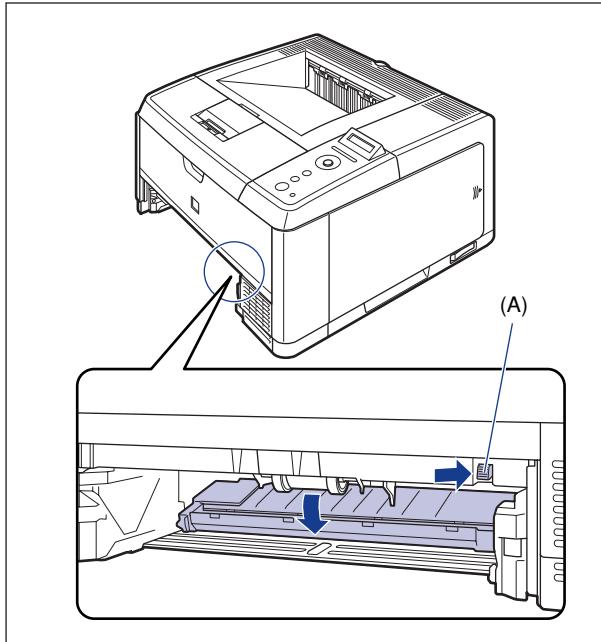
18 Remove any jammed paper by pulling it in the direction of the arrow.

Paper Jams   **7-17**
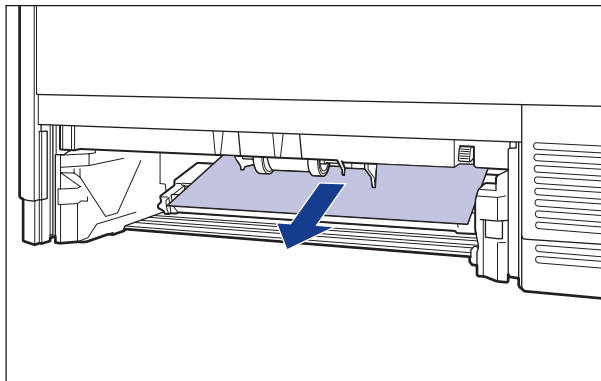
19 Close the duplex print transport guide.

Close both sides of the duplex print transport guide firmly.
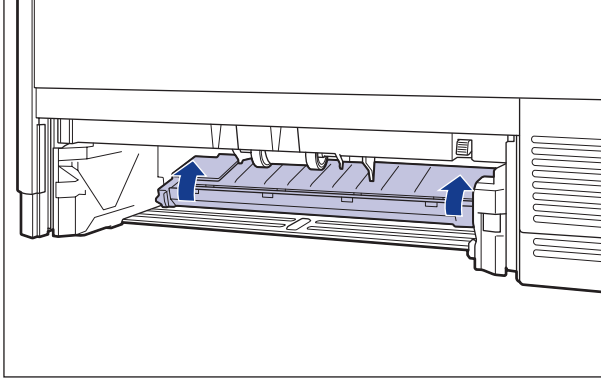
IMPORTANT

Make sure that the duplex print transport guide is closed completely. If the duplex print transport guide is not closed completely, this may result in misfeeds or paper jams.

20 Set the paper cassette in the printer.

Push the paper cassette into the printer firmly until the front side of the paper cassette is flush with the front surface of the printer.
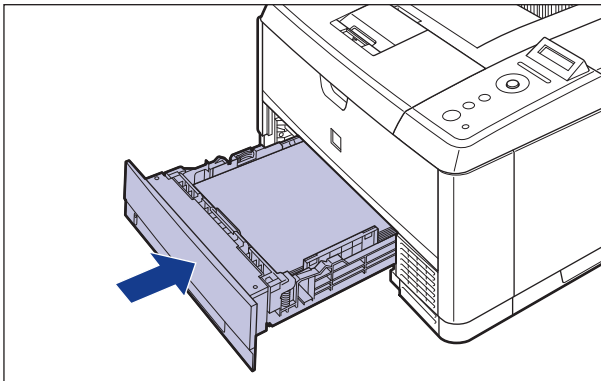
If the paper feeder is installed, set the paper cassette of the paper feeder also.
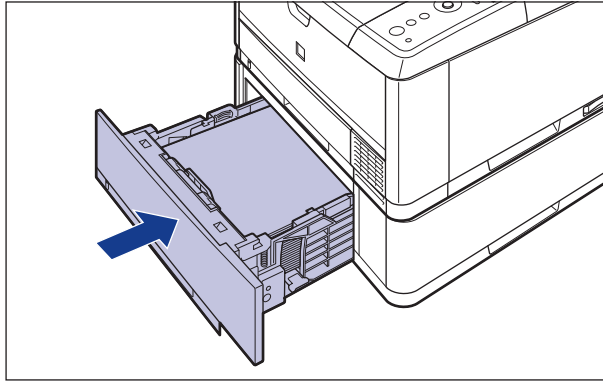
21 Open the front cover.

While pressing the lever on the top of the front cover, open it gently.
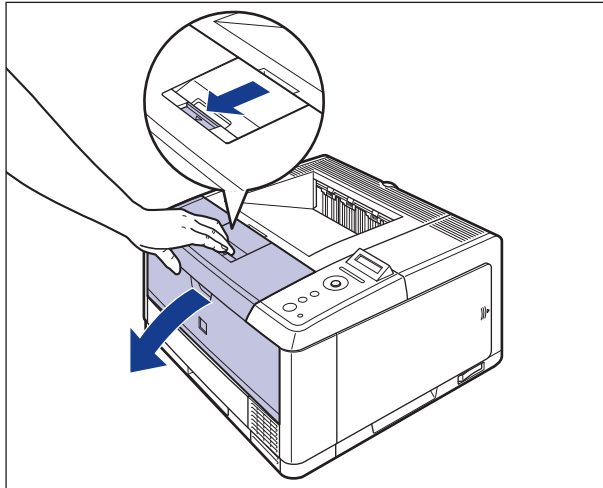
22 Take the toner cartridge out of the protective bag.
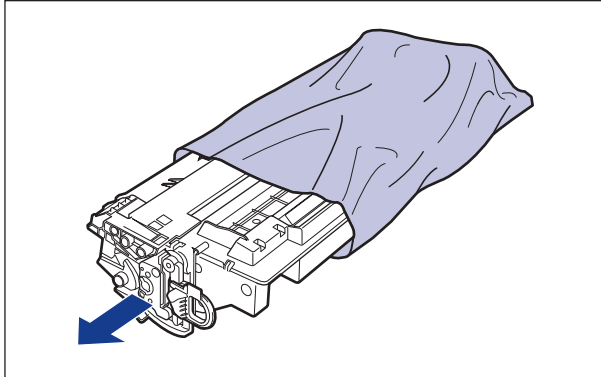
23 Push the toner cartridge into the printer until it touches the back of the printer while aligning (A) on both sides of the toner cartridge with the toner cartridge guides inside the printer.
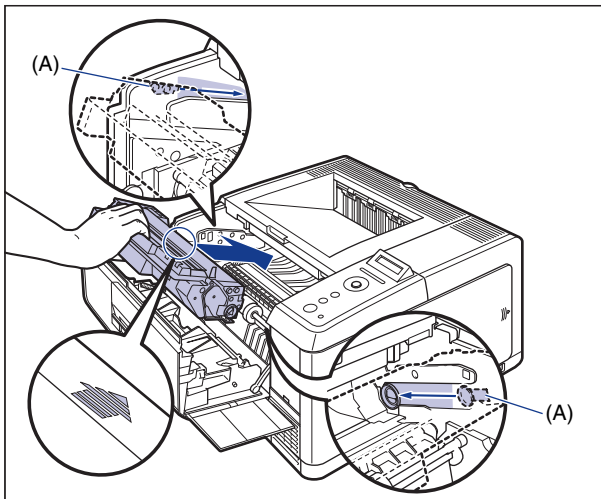
24 Close the front cover.

Close the front cover completely until it clicks.
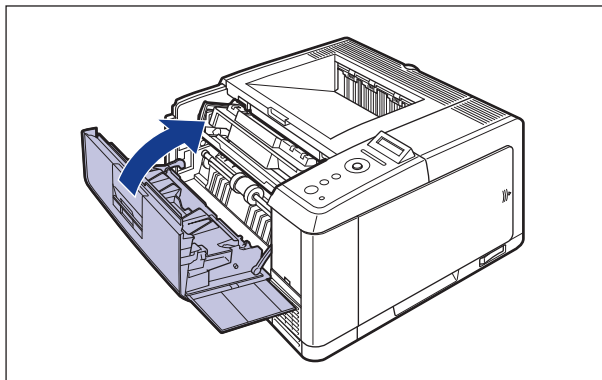
Message List

When the printer cannot continue printing for some reason (an error status), the printer beeps, the Message indicator comes on, and an error message that indicates the description of the error appears in the display. A Warning message appears in the display when the printer requires some remedy (a warning status) although the job is not affected.

If either of these messages appears, perform the following procedures according to the message.

📝 NOTE

- When multiple warnings are occurring at the same time, the Waning messages appear by rotation.
- When the printer is in error status and warning status at the same time, the Waning message does not appear.
- If WARNING STEP in the SETUP menu is set to OFF, a message with (Warning Message) does not appear even when the printer is in a warning status.
- For a message with the <Error Skip> mark, you can skip the error by pressing [Online] and continue printing. However, part of the print data may be missing or it may not be printed properly. When you want to stop the process, perform a soft reset to eliminate the cause of the error, press [Online], and then print again. Also, you can automatically skip the errors to which this mark is attached by setting AUTO ERROR SKIP in the SETUP menu to ON.

<E nnn-nnnn> ("n" represents a number)

Cause	A problem has occurred inside the printer.
Remedy	Solve the problem following the instructions in "Service Call Display" (See p. 7-34).

<02 COOLING>

Cause 1	The temperature of the fixing unit exceeded a fixed value after printing (especially paper with a narrower width) continuously.
Remedy	Please wait a moment. The printer cools down the fixing unit automatically. It resumes the job after finishing the cool down process.

Cause 2	When printing after the paper is changed from narrower one to wider one, the printer cools down the fixing unit so that the print quality is maintained.
Remedy	Please wait a moment. The printer cools down the fixing unit automatically. If the message appeared during printing, it resumes the job after finishing the cool down process. If the message appeared after the job, the message disappears and the printer stops operation after the cool down process, and the printer becomes ready to print.

<OF OPT.CONN.ERR.>

Cause 1	The optional paper feeder is not installed properly.
Remedy	Turn the power OFF, install the paper feeder properly, and then turn it ON again. (See Getting Started Guide)
Cause 2	The optional paper feeder is installed or removed when the printer is ON.
Remedy	Turn the power OFF, install or remove the paper feeder, then turn the printer ON again. (See Getting Started Guide)
Cause 3	The connector of the optional paper feeder is disconnected.
Remedy	Turn the printer OFF, unplug the power plug from the AC power outlet and contact your local authorized Canon dealer.
Cause 4	A paper feeder that is not for this printer is installed.
Remedy	Turn the power OFF, install the paper feeder for this printer, and then turn it ON again. (See Getting Started Guide)

<11 NO "size" PAPER>

Cause	Paper of the size specified in the application is not loaded in the paper source (in all the paper sources when PAPER SOURCE is set to AUTO; in the specified paper source when the setting is fixed).
Remedy 1	Refill or load paper.
Remedy 2	Press [Feeder Selection], then select other paper source for the same paper size or larger paper size. (See "Selecting a Paper Source," on p. 3-12)

<12 COVER OPEN>

Cause	The front cover is open.
Remedy	Close the front cover firmly. If the printer is not online, press [Online].

7

Troubleshooting

<13 PAPER JAM>

Cause   Paper is jammed inside the printer

Remedy   Remove the jammed paper and set the paper cassette and covers to the original position. If the printer is not online, press [Online]. (See "Paper Jams," on p. 7-4)

IMPORTANT
- If paper jams have occurred at multiple areas at the same time, the areas appear in the display by rotation.
- If you have removed the jammed paper without opening any cover, be sure to open and close the front cover once, and then press [Online].

<14 NO TONER CART>

Cause   The toner cartridge is not installed or installed improperly.

Remedy   Install the toner cartridge properly. (See "Replacing the Toner Cartridge," on p. 6-2)

<16 PREPARE TONER>   (Warning Message)

Cause   The toner cartridge needs to be replaced soon.

Remedy   You can continue printing for a while, however, have a new toner cartridge available. If you print a large amount of data or white patches appear on the images even after applying this remedy, replace the toner cartridge with a new one. If the printer is not online after closing the front cover, press [Online]. (See "Replacing the Toner Cartridge," on p. 6-2)

<16 CHECK TONER>

Cause   The toner cartridge needs to be replaced soon.

Remedy   Press [Online]. You can continue printing for a while, however, have a new toner cartridge available. If you print a large amount of data or white patches appear on the images even after applying this remedy, replace the toner cartridge with a new one. If the printer is not online after closing the front cover, press [Online]. (See "Replacing the Toner Cartridge," on p. 6-2)

NOTE
The message takes several seconds to disappear after the toner cartridge is installed.

<18 FEED ERROR>

Cause   Paper of the size or type that cannot be fed from the multi-purpose tray or paper cassette is specified.

Remedy 1   If a paper source is specified, press [Select Feeder], then set PAPER SOURCE to AUTO.

Remedy 2   Press [Select Feeder], select a paper source from which paper of the specified size or type can be fed, then load paper.

Remedy 3   Specify the settings for STD PAPER SIZE and STD PAPER TYPE in the FEEDER MENU options in the SETUP menu to the size or type of paper that can be loaded in the paper source.

Remedy 4   Press [Online], then print from the currently selected paper source. However, this may result in deterioration in print quality.

<1G CHECK TONER>   (Warning Message)

Cause   The toner cartridge has reached the end of its life, or there is a possibility that a toner cartridge whose life has once reached the end is installed.

Remedy 1   Check if there is any problem with the toner cartridge.

Remedy 2   If <9F CHECK TONER> appears and there is a problem with the print quality even after applying the Remedy 1, remove the toner cartridge and replace it with a new one. (See "Replacing the Toner Cartridge," on p. 6-2)

<1H CHK TNR CONN.>   (Warning Message)

Cause   There is a possibility that the toner cartridge is not installed properly.

Remedy 1   Remove the toner cartridge, then reinstall it properly.

Remedy 2   If <1H CHK TNR CONN.> appears and there is a problem with the print quality even after applying the Remedy 1, remove the toner cartridge and replace it with a new one. (See "Replacing the Toner Cartridge," on p. 6-2)

<23 DOWN.MEM.FULL>   <Error Skip>

Cause   The memory for registering overlay forms and custom characters has run out and overflowed.

Remedy 1   The printer continues printing by pressing [Online]. However, the overflowed data cannot be registered.

Remedy 2   Perform a soft reset using the RESET menu, increase the free space of RAM using the following procedure, register the data again, and then print again.

- Perform a hard reset or cycle the power of the printer (Be aware that all the data in the memory will be deleted).
- Install an optional expansion RAM module. (See Getting Started Guide)

<26 SYS.MEM.FULL>   **<Error Skip>**

Cause   The work memory required for the printer process has run out while the system is processing the data (mainly the graphics data and text data).

Remedy 1   The printer continues printing by pressing [Online]. However, the data with which an error has occurred is not printed properly.

Remedy 2   Perform a soft reset using the RESET menu, and then increase the free space of RAM using the following procedure.
- Perform a hard reset or cycle the power of the printer (Be aware that all the data in the memory will be deleted).
- Install an optional expansion RAM module. (See Getting Started Guide)

<27 JOB START ERR>   **<Error Skip>**

Cause   The specified emulation does not exist.

Remedy   Press [Online] to continue printing from the next data. However, the data with which an error has occurred is not printed.

<30 MEMORY FULL>   **<Error Skip>**

Cause 1   The work memory has run out while the system is processing the data.

Remedy   The printer continues printing by pressing [Online]. However, the data with which an error has occurred may not be printed properly.

Cause 2   (If this error has occurred while the printer is ON) The amount of memory specified in NVRAM could not be secured because the memory construction had been changed (The expansion RAM is removed).

Remedy 1   The printer continues printing by pressing [Online]. However, the data may not be printed properly due to the change of the memory construction.

🖐 **IMPORTANT**

The memory construction of NVRAM is rewrote to a securable value when <30 MEMORY FULL> appears.

Remedy 2   After turning the printer OFF, restore the memory to the original condition (install the removed RAM), and then print again. (See Getting Started Guide)

Remedy 3   Set EXT.RX BUFFER (See p. 5-34) in the INTERFACE MENU options in the SETUP menu to OFF and then print again.

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Troubleshooting

<32 2-SIDED ERROR> <Error Skip>

Cause 1 Paper on which automatic 2-sided printing cannot performed is selected.

Remedy Select a standard paper size for the paper source and paper size setting in the computer, and then print again.

Cause 2 The memory for performing 2-sided printing cannot be secured.

Remedy Increase the free space of RAM using the following procedure, then print again.
- Delete the registered data.
- Install an optional expansion RAM module. (See Getting Started Guide)

Cause 3 The printer received data for 2-sided printing on which the printer cannot perform automatic 2-sided printing.

Remedy 1 The printer continues printing by pressing [Online]. However, the data on each side is printed on two pages.

Remedy 2 Perform a soft reset in the RESET menu, change the paper size of the data to the one on which the printer can perform 2-sided printing, and then print again.

<33 WORK MEM.FULL> <Error Skip>

Cause The work memory for each operation mode cannot be secured.

Remedy 1 The printer continues printing by pressing [Online]. However, the data with which an error has occurred is not printed properly.

IMPORTANT
When you continue printing by pressing [Online], be aware that the data of overlay or macro that is already registered may be deleted.

Remedy 2 Perform a soft reset in the RESET menu, increase the free space of RAM using the following procedure, and then print again.
- Perform a hard reset or cycle the power of the printer (Be aware that all the data in the memory that the printer has received will be deleted).
- If you are using UFR II Printer Driver, install an optional expansion RAM module. However, the problem may not be solved even after the expansion RAM module is installed.

<35 TABLE FULL> <Error Skip>

Cause The number of the documents in a job has exceeded 16.

Remedy The printer continues printing by pressing [Online]. However, the job with which an error has occurred is not printed.

<38 LOW IMAGE QLTY>	<Error Skip>

Cause	The printer cannot process the data because it is too complicated.

Remedy 1	The printer continues printing by pressing [Online]. However, the printer prints with the image quality level being lowered.

Remedy 2	Perform a soft reset in the RESET menu, set GRADATION LEVEL (See p. 5-27) in the QUALITY MENU options in the SETUP menu to STANDARD, and then print again.

Remedy 3	If you want to print without the image quality level being lowered, install an optional expansion RAM module, and then print again. (See Getting Started Guide)

<39 SPL MEM.FULL>	<Error Skip>

Cause	Because spool memory has run out, the printer cannot print.

Remedy 1	The printer continues printing by pressing [Online]. However, the page with which an error has occurred are not printed.

Remedy 2	Perform a soft reset in the RESET menu, specify the paper size smaller, and then print again.

Remedy 3	Perform a soft reset in the RESET menu, set GRADATION LEVEL (See p. 5-27) in the QUALITY MENU options in the SETUP menu to STANDARD, and then print again.

Remedy 4	If 2-SIDED PRINT. in the FEEDER MENU options in the SETUP menu is set to ON, specify OFF, and then print again.

Remedy 5	Change the setting for HALFTONES (See p. 5-28) in the QUALITY MENU options in the SETUP menu, and then print again.

Remedy 6	Install an optional expansion RAM module, then print again. (See Getting Started Guide)

<41 CHK PAPER SZE>

Cause 1	The size of the paper loaded in the multi-purpose tray or paper cassette is different from the setting for TRAY PAPER SIZE, CASSETTE1 SIZE, or CASSETTE2 SIZE specified from the computer or control panel.

Remedy	Match the size specified in "TRAY PAPER SIZE" (See p. 5-17) and the size of the loaded paper, and then press [Online].

Cause 2	You are using UFR II Printer Driver, and you loaded custom paper of its long edges 215.9 mm or less and printed when TRAY PAPER SIZE, CASSETTE1 SIZE, or CASSETTE2 SIZE in the FEEDER MENU options in the SETUP menu was set to MIXED SIZE.
Remedy	Load the paper in landscape orientation, then print again.
Cause 3	SPECIAL MODE J in the USER MAIN. options in the SETUP is set to OFF.
Remedy	Set "SPECIAL MODE J" (See p. 5-36) to ON, then print again.

<52 RAST.MODE ERR> <Error Skip>

Cause	The printer received data in format that it does not support during printing in the Raster mode.
Remedy 1	The printer continues printing by pressing [Online]. However, the data may not be printed properly.
Remedy 2	Print again using a printer driver that supports image data formats.

<58 JOB MEM.FULL> <Error Skip>

Cause	There is not sufficient free RAM space to process jobs.
Remedy 1	If you are processing multiple jobs at once, press [Online] to cancel printing, wait for other jobs complete, and then print again.
Remedy 2	If the job data is too large, divide the job and print again.

<59 JOB RX ERROR> <Error Skip>

Cause	The printer received any unanalyzable data while it is receiving a job, or it timed out.
Remedy 1	Press [Online] to cancel printing, then print again.
Remedy 2	A problem may be occurring in the network you are using. Check the status of the network that your are using.

<96 CHK SUBOUTPUT>/<CLOSE TRAY>

Cause	Paper was to be output with the printed side facing up during automatic 2-sided printing.
Remedy	Close the face-up output tray. The printer resumes printing, and the paper is output to the face-down output tray.

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Troubleshooting

<9F CHECK TONER>   (Warning Message)

Cause   There is a possibility that a toner cartridge whose life has once reached the end
           is installed.

Remedy 1   Check if there is any problem with the toner cartridge.

Remedy 2   If <9F CHECK TONER> appears and there is a problem with the print quality
           even after applying the Remedy 1, remove the toner cartridge and replace it
           with a new one. (See "Replacing the Toner Cartridge," on p. 6-2)

<A4 nn ERROR> ("nn" represents two-digit alphanumeric characters)

Cause   A problem has occurred and the printer does not operate properly.

Remedy   Cycle the power of the printer. If the message appears even after cycling the
           power of the printer, note down the message in the display, and contact your
           local authorized Canon dealer.

<A5 nn ERROR> ("nn" represents two-digit alphanumeric characters)

Cause   A problem has occurred and the printer does not operate properly.

Remedy   Cycle the power of the printer. If the message appears even after cycling the
           power of the printer, note down the message in the display, and contact your
           local authorized Canon dealer.

<A7 nn ERROR> ("nn" represents two-digit alphanumeric characters)

Cause   A problem has occurred and the printer does not operate properly.

Remedy   Cycle the power of the printer. If the message appears even after cycling the
           power of the printer, note down the message in the display, and contact your
           local authorized Canon dealer.

<D7 nn ERROR> ("nn" represents two-digit alphanumeric characters)

Cause   A problem has occurred and the printer does not operate properly.

Remedy   Cycle the power of the printer. If the message appears even after cycling the
           power of the printer, note down the message in the display, and contact your
           local authorized Canon dealer.

<D8 LAYOUT ERROR>

Cause	The page cannot be laid out because the memory has run out.
Remedy 1	Set [Graphics Mode] in UFR II Printer Driver to [Raster Mode], then print again. (See Help of UFR II Printer Driver)
Remedy 2	After performing a soft reset using the RESET menu, perform a hard reset to increase the free memory space or cycle the power of the printer, and then print again. (Be aware that all the data in the memory that the printer has received will be deleted.)
Remedy 3	Perform "Error Skip", then continue printing. However, the data with which an error has occurred is not printed properly.

<D8 VERSION ERROR>

Cause	Any job is sent from a UFR II Printer Driver that this printer does not support.
Remedy 1	Change the version of the UFR Printer Driver to that this printer supports, and then print again.
Remedy 2	Perform "Error Skip", then continue printing. However, the data with which an error has occurred is not printed properly.

<D8 SYNTAX ERROR>

Cause	Invalid data is sent when printing using UFR II Printer Driver.
Remedy 1	Press [Online] to continue printing from the next data. However, the page with which an error has occurred and its subsequent pages are not printed.
Remedy 2	Confirm the data to be printed, then print again.

<D8 nn ERROR> ("nn" represents two-digit alphanumeric characters)

Cause	A problem has occurred and the printer does not operate properly.
Remedy	Cycle the power of the printer. If the message appears even after cycling the power of the printer, note down the message in the display, and contact your local authorized Canon dealer.

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Troubleshooting

<F2 NO FONT>   <Error Skip>

| Cause | The registered fonts used for creating overlay forms had been deleted during printing. |

| Remedy 1 | The printer continues printing by pressing [Online]. However, unregistered fonts are not printed. |

| Remedy 2 | Register the fonts in the memory again or create a form using usable registered fonts, and then print again. |

<F9-nn PWR OFF>ON> ("nn" represents two-digit alphanumeric characters)

| Cause | A problem has occurred while the printer is processing print data. |

| Remedy | Cycle the power of the printer. If the message appears even after cycling the power of the printer, note down the message in the display, and contact your local authorized Canon dealer. |

<FF FONT FULL>   <Error Skip>

| Cause | Because of too many fonts to be registered, the field (font table) for registering font information has run out and overflowed. |

| Remedy | The printer continues printing by pressing [Online]. However, the page with which an error has occurred is not printed properly. |

<FM SIZE ERROR>   <Error Skip>

| Cause | There is some font with its size exceeds the pseudo-scalable font size. |

| Remedy | Perform "Error Skip", then continue printing. However, the characters with which an error has occurred are not printed properly. |

<FM SCALE ERROR>   <Error Skip>

| Cause | There is a character in which the number of coordinate points on the contour lines exceeds the limitation of a pseudo-scalable font. |

| Remedy | Perform "Error Skip", then continue printing. However, the characters with which an error has occurred are not printed properly. |

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Troubleshooting

<PC LOAD "size">

Cause	The paper of the size specified in the application is not loaded in the paper cassette or multi-purpose tray, or the paper source for the different paper size is selected.
Remedy 1	Load the paper of the size selected in the application (or the one specified by scaling factors). (See "Printing from the Paper Cassette," on p. 3-21)
Remedy 2	If you are using the multi-purpose tray, check the size of the paper in the multi-purpose tray, and when the size does not match the size specified in the application (or the one specified by scaling factors), specify the setting properly. (See "Printing from the Multi-purpose Tray," on p. 3-38)
Remedy 3	Press [Feeder Selection], then select the paper cassette in which the paper of the matched size is loaded. (See "Selecting a Paper Source," on p. 3-12)
Remedy 4	Press [Online], then print to the currently loaded paper forcibly. If you are using multi-purpose tray, the paper size setting for the multi-purpose tray automatically changes to the setting specified in the application.

🖐 IMPORTANT

If you open the front cover when the message <PC LOAD "size"> is displayed, the message may disappear. However, be sure to follow the directions in the displayed message to change the paper.

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Troubleshooting

Service Call Display

When a problem has occurred and the printer does not work properly, the service call shown in the figure appears:

Message	Cause	Remedy
`Ennn-nnnn` ("n" represents a number)	A problem has occurred inside the printer.	Cycle the power of the printer using the following procedure. If the message does not disappear after cycling the power of the printer several times, contact your local authorized Canon dealer.

`E001-nnnn`
`E003-nnnn`
 	
("n" represents a number)
	A problem has occurred with the fixing unit of the printer.	Perform the following procedures from the Step 2 to contact your local authorized Canon dealer.

`F9-nn PWR OFF>ON` ("nn" represents two-digit alphanumeric characters)	A problem has occurred while the printer is processing print data.	Cycle the power of the printer using the following procedure.

1 **Turn the power OFF, wait for 10 seconds or longer, and then turn it ON again.**
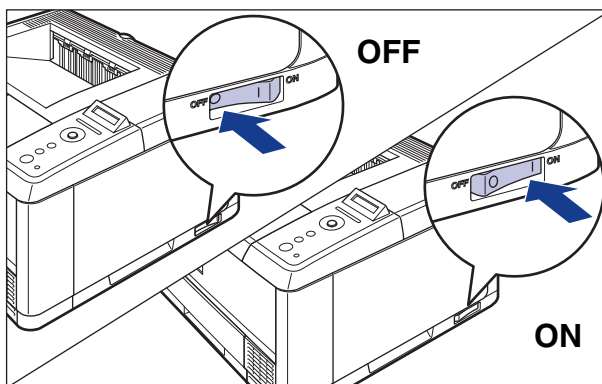
If the message does not reappear, the printer can be used as normal. If the error message still appears, proceed to the next step.

2 Note down the eight-digit alphanumeric characters and message in the display.

3 Turn the printer OFF ①, remove the USB cable ②, and then disconnect the power plug from the AC power outlet ③.
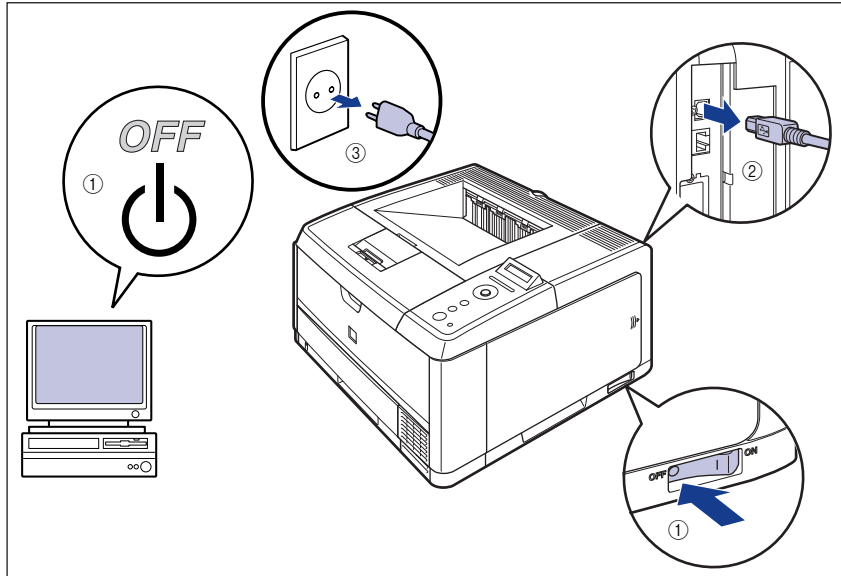
4 Contact your local authorized Canon dealer.

When contacting your Canon dealer, please report the problems and code number (eight-digit alphanumeric characters) that you have noted.

When You Cannot Obtain Appropriate Printout Results

If any problem occurs while you are using the printer, take the following measures depending on the symptoms.

🖐 IMPORTANT

- If the printer does not operate properly or an error message appears, see "Message List," on p. 7-22 and "Service Call Display," on p. 7-34.
- When a paper jam occurs, see "Paper Jams," on p. 7-4.
- If a symptom that is not indicated in this section occurs, if none of the indicated remedies do not solve the problem, or if you cannot determine the problem, contact your local authorized Canon dealer.

Problems with the Power or Printer Operation

The printer cannot be turned ON.

Cause	The power plug is unplugged from the AC power outlet.
Remedy	Plug the power plug into the AC power outlet.
Cause	The printer is plugged to an extension cord or multiple power strip.
Remedy	Plug the power plug of the printer directly into the AC power outlet on the wall.
Cause	The breakers have tripped.
Remedy	Reset the breakers on the switch board.
Cause	There is a break in the power cord.
Remedy	If the printer is turned ON after replacing the power cord with the one that is of the same type and is used for other device, there is a break in the power cord. In this case, purchase a new power cord and replace it with the broken one.

The printer does not operate.

Cause	The printer is offline.
Remedy	Press [Online] to turn on the Online indicator. (See "Online and Offline," on p. 2-7)

Cause	There is data remaining in the memory (the Job indicator is on).
Remedy	Press [Online] to place the printer offline, then select FORM FEED in the RESET menu to output all the data remaining in the memory. (See "Canceling a Job," on p. 2-9)
Cause	The interface cable is disconnected.
Remedy	Connect the interface cable firmly to the interface connectors on the computer and printer unit. (See Getting Started Guide)
Cause	This printer or any optional accessory is broken.
Remedy	Clear the problem referring to the message in the display. (See "Message List," on p. 7-22, "Service Call Display," on p. 7-34)

All the indicators on the print server are off.

Cause 1	The LAN cable is not connected properly or broken.
Remedy 1	Remove the LAN cable once, then connect it again.
Remedy 2	Replace the LAN cable with another one, then connect it.
Cause 2	The cable is connected to the UP-LINK (cascade) port on the hub.
Remedy 1	Connect the LAN cable to a port with a "X" mark.
Remedy 2	If the hub has a UP-LINK (cascade) switch, switch to "X".
Cause 3	A cross LAN cable is being used.
Remedy 1	Replace the cable with a straight LAN cable.
Remedy 2	Connect the cross LAN cable to the UP-LINK (cascade) port on the hub. If the hub has a UP-LINK (cascade) switch, switch to "=".

 NOTE
A cross LAN cable is a cable used to connect to a printer and computer directly.

Cause 4	Cannot communicate with the hub.
Remedy 1	Make sure that the power of the hub is on.
Remedy 2	Set network transmission setting for the print server according to the transmission speed of the connected hub. (See "ETHERNET DRIVER," on p. 5-33)
Remedy 3	Replace the hub.
Cause 5	The hardware of the print server is in an abnormal condition.
Remedy	Report the problems to your local authorized Canon dealer.

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Troubleshooting

When You Cannot Obtain Appropriate Printout Results   **7-37**

The printer stopped printing during a job.

Cause	There is data remaining in the memory (the Job indicator is on).
Remedy	Press [Online] to place the printer offline, then select FORM FEED in the RESET to output all the data remaining in the memory. (See "Canceling a Job," on p. 2-9)

The indicators on the control panel do not come on.

Cause 1	The printer is not ON.
Remedy	Turn the printer ON.
Cause 2	The printer is in Power Save Mode.
Remedy	The printer will be ready to print after you send print data or press any key on the control panel.

The keys on the control panel do not function.

Cause	There is data remaining in the memory (the Job indicator is on).
Remedy	Press [Online] to place the printer offline, then select FORM FEED in the RESET menu. (See "Canceling a Job," on p. 2-9)

A paper jam occurs each time you print.

Cause 1	The amount of the paper loaded in the paper cassette or multi-purpose tray exceeds the load limitation.
Remedy	Reduce the amount of paper to within the load limitation and print again. (See "Printing from the Paper Cassette," on p. 3-21, "Printing from the Multi-purpose Tray," on p. 3-38)
Cause 2	Paper is not loaded properly in the paper cassette or multi-purpose tray.
Remedy	Load the paper properly and print again. (See "Printing from the Paper Cassette," on p. 3-21, "Printing from the Multi-purpose Tray," on p. 3-38)
Cause 3	Unusable paper is loaded in the paper cassette or multi-purpose tray.
Remedy	Replace the paper with one that can be used and print again. (See "Paper Requirements," on p. 3-2)

Cause 4	You are using UFR II Printer Driver, and you loaded custom paper of its long edges 215.9 mm or less and printed when TRAY PAPER SIZE, CASSETTE1 SIZE, or CASSETTE2 SIZE in the FEEDER MENU options in the SETUP menu was set to MIXED SIZE.
Remedy	Load the paper in landscape orientation, then print again.
Cause 5	There is still jammed paper inside the printer.
Remedy	Remove any jammed paper and print again. (See "Paper Jams," on p. 7-4)

Problems with the Printout Results

Unreadable characters are printed.

Cause 1	The data is printed from Windows without the supplied printer driver installed for Windows.
Remedy	Install the supplied printer driver for Windows, then print again.
Cause 2	The printer setting in the DOS application is not appropriate.
Remedy	Specify the printer setting in the DOS application to the one that is compatible with this printer.

A blank page cannot be printed.

Cause	PAPER SAVE is set to ON.
Remedy	When printing a blank page, set PAPER SAVE (p. 5-38, p. 5-42) to OFF.

The last page cannot be printed.

Cause	The command that notifies of the end of the data is not sent from the computer (the Job indicator is on).
Remedy	Press [Online] to place the printer offline, then select FORM FEED in the RESET menu (If you print using an application that does not have a printing function, the last page in which data is less than one page remains in the memory). (See "Canceling a Job," on p. 2-9)

The data lies outside the paper.

Cause 1	You are using UFR II Printer Driver, and you loaded custom paper of its long edges 215.9 mm or less and printed when TRAY PAPER SIZE, CASSETTE1 SIZE, or CASSETTE2 SIZE in the FEEDER MENU options in the SETUP menu was set to MIXED SIZE.
Remedy	Load the paper in landscape orientation, then print again.
Cause 2	Paper of the size smaller than the data size is loaded.
Remedy	Load the paper of the size that matches the data size or print the data in the reduced size that matches the paper size.
Cause 3	The position of the paper is incorrect.
Remedy	Load the paper properly and print again. (See "Printing from the Paper Cassette," on p. 3-21, "Printing from the Multi-purpose Tray," on p. 3-38)
Cause 4	A document with no margins was printed.
Remedy 1	Secure a margin of 5 mm or more (10 mm or more for envelopes) around the data, then print again (Data cannot be printed within a 5 mm margin (10 mm for envelopes) on all sides of the paper). (See the instruction manual supplied with your application)
Remedy 2	If you select the [Print with Upper Left of Sheet as Starting Point] check box in the [Finishing Details] dialog box in the printer driver, the printer prints with its printable area expanded. However, data may be printed with the edges missing.

The printing position is skewed.

Cause 1	GUTTER, OFFSET Y, or OFFSET X in the LAYOUT MENU options in the SETUP menu is specified.
Remedy	Set GUTTER, OFFSET Y, or OFFSET X in the LAYOUT MENU options in the SETUP menu to "0", and then print again.
Cause 2	"Top Margin" and "Paper Position" in the application are not specified properly.
Remedy	Specify the settings for "Top Margin" and "Paper Position" in the application properly, and then print again. (See the instruction manual supplied with your application)

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Troubleshooting

The next page is printed from halfway across the previous page.

Cause	"Line Spacing" or "Lines/Page" in the application is not specified properly.
Remedy	Specify the settings for "Line Spacing" and "Lines/Page" in the application so that data fits in one page, and print again. (See the instruction manual supplied with your application)

Data is printed with its size reduced.

Cause	The printer is set to reduce the print size.
Remedy	Confirm the setting for [Manual Scaling] in the printer driver.

Paper comes out wrinkled.

Cause 1	Paper is loaded in the paper cassette or multi-purpose tray at an angle.
Remedy	Load the paper in the paper cassette or multi-purpose tray straight. (See "Loading Paper in the Paper Cassette," on p. 3-23, "Loading Paper in the Multi-purpose Tray," on p. 3-39)
Cause 2	Paper is damp since the paper has been stored in unsuitable condition.
Remedy	Replace the paper with new one and print again. (See "Paper Requirements," on p. 3-2)

Paper curls.

Cause 1	Paper is damp since the paper has been stored in unsuitable condition.
Remedy	Replace the paper with new one and print again. (See "Paper Requirements," on p. 3-2)
Cause 2	Paper is inappropriate.
Remedy	Replace the paper with one that can be used with this printer. (See "Paper Requirements," on p. 3-2)
Cause 3	The paper is too thin.
Remedy	Set [Paper Type] to [Plain L] in the printer driver. In order to specify the setting for [Paper Type], display the [Paper Source] sheet.
Cause 4	Paper that curls easily is output to the face-down output tray.
Remedy	When printing transparencies or envelopes that curl easily, switch an output tray to the face-up output tray. (See "Output Trays," on p. 3-15)

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Troubleshooting

Nothing is printed on the paper.

Cause 1	The toner cartridge was installed with the sealing tape still attached.
Remedy	Take the toner cartridge out of the printer, pull out the sealing tape, and reinstall the toner cartridge. (See "Replacing the Toner Cartridge," on p. 6-2)
Cause 2	Multiple sheets of paper were fed at a time.
Remedy	Align the paper stack in the paper cassette or multi-purpose tray properly and load it again. If you are using transparencies or labels, fan them thoroughly and load them again. (See "Printing from the Paper Cassette," on p. 3-21, "Printing from the Multi-purpose Tray," on p. 3-38)
Cause 3	A problem has occurred inside the printer.
Remedy 1	If <Ennn-nnnn> is displayed in the display, turn the power OFF, wait for 10 seconds or longer, and then turn the power ON again. This may clear the message.
Remedy 2	If the message does not disappear even after applying the Remedy 1, contact your local Canon dealer for servicing.

Print Quality Problems

White streaks appear.

Cause 1	The toner cartridge has run out of toner.
Remedy	Replace the toner cartridge with a new one. (See "Replacing the Toner Cartridge," on p. 6-2)
Cause 2	The drum in the toner cartridge has deteriorated.
Remedy	Replace the toner cartridge with a new one. (See "Replacing the Toner Cartridge," on p. 6-2)

Printed pages have white specks.

Cause 1	Appropriate paper is not being used.
Remedy	Replace the paper with one that can be used and print again. (See "Paper Requirements," on p. 3-2)
Cause 2	Paper is damp since the paper has been stored in unsuitable condition.
Remedy	Replace the paper with new one and print again. (See "Paper Requirements," on p. 3-2)

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Troubleshooting

| Cause 3 | The drum in the toner cartridge has deteriorated. |
| Remedy | Replace the toner cartridge with a new one. (See "Replacing the Toner Cartridge," on p. 6-2) |

The overall print result is faint.

Cause 1	The setting for the toner density is not appropriate.
Remedy	Adjust DENSITY (See p. 5-28) in the QUALITY MENU options in the SETUP menu.
Cause 2	TONER SAVE in the QUALITY MENU options in the SETUP is set to ON.
Remedy	Set TONER SAVE (See p. 5-28) in the QUALITY MENU options in the SETUP menu to OFF.

The overall print result is dark.

Cause 1	The setting for the toner density is not appropriate.
Remedy	Adjust DENSITY (See p. 5-28) in the QUALITY MENU options in the SETUP menu.
Cause 2	The printer is exposed to direct sunlight or strong light.
Remedy	Move the printer to a place where it will not be exposed to direct sunlight or strong light. Alternatively, move the strong light source away from the printer.

The print is uneven.

Cause 1	The toner cartridge has run out of toner.
Remedy	Replace the toner cartridge with a new one. (See "Replacing the Toner Cartridge," on p. 6-2)
Cause 2	Paper is too moist or too dry.
Remedy	Replace the paper with appropriate one and print again. (See "Paper Requirements," on p. 3-2)
Cause 3	The toner cartridge has deteriorated or is damaged.
Remedy	Replace the toner cartridge with a new one. (See "Replacing the Toner Cartridge," on p. 6-2)

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Troubleshooting

The front or back of the printed paper has smudge marks

Cause   The fixing roller is dirty.

Remedy   Clean the fixing roller. (See "Cleaning the Fixing Roller," on p. 6-16)

A portion of a page is not printed.

Cause 1   The scale factor is incorrect.

Remedy 1   Clear the [Manual Scaling] check box in the printer driver. If the check box is cleared, the scale factor will be set according to [Page Size] and [Output Size] automatically.
In order to specify the setting for [Manual Scaling], display the [Page Setup] sheet.

Remedy 2   Select the [Manual Scaling] check box in the printer driver, then specify an appropriate scale factor according to the paper size to be used.
In order to specify the setting for [Manual Scaling], display the [Page Setup] sheet.

Cause 2   The position of the paper is incorrect.

Remedy   Load the paper properly. (See "Loading Paper in the Paper Cassette," on p. 3-23, "Loading Paper in the Multi-purpose Tray," on p. 3-39)

Cause 3   A document with no margins was printed.

Remedy   The printable area for this printer is the area except for within a 5 mm margin (10 mm for envelopes) on all sides of the paper. Create a gutter around the print data.

🖑 IMPORTANT
You may not obtain the optimum print quality when printing envelope data with no margin. It is recommended that you specify the size of the data a little smaller than the printable area for the envelope size.

The paper is printed completely black.

Cause   The drum in the toner cartridge has deteriorated.

Remedy   Replace the toner cartridge with a new one. (See "Replacing the Toner Cartridge," on p. 6-2)

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Troubleshooting

Toner does not fix well.

Cause 1	Paper is inappropriate.

Remedy	Replace the paper with one that can be used with this printer. (See "Paper Requirements," on p. 3-2)

Cause 2	Toner does not fix onto paper completely.

Remedy	Select the appropriate fixing mode from [Fixing Mode] in the printer driver. In order to specify the setting for [Fixing Mode], display the [Advanced Settings] dialog box by clicking [Finishing Details] in the [Finishing] sheet, and then clicking [Advanced Settings] in the [Finishing Details] dialog box. [Mode 3] enhances the toner fixing the most, and [Mode 2] and [Mode 1] follow respectively. [Mode 4] enhances the toner fixing the least.

The back of the printed paper has smudge marks.

Cause	The size of the print data was larger than that of the loaded paper.

Remedy	Check if the size of the print data matches that of the loaded paper.

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Troubleshooting

Appendix

8
CHAPTER

This chapter describes the contents of the various lists, printer specifications, and index.

The Lists Common to All the Settings in the Operation Mode

This section describes the lists common to all the settings in the operation mode.

🖐 IMPORTANT

The following lists are samples. The contents may partially differ from the lists printed by your printer.

Configuration Page

The capacity of the built-in RAM and the settings for the common printing environment are printed.

1. Make sure that the printer is online.
2. Press [Utility] to display the UTILITY menu.
3. Press [▶] to display CONFIG.PAGE.
4. Press [OK] to output the page.

N/W Status Print

Prints the version number of the print server equipped with this printer and the settings.

1. Make sure that the printer is online.
2. Press [Utility] to display the UTILITY menu.
3. Press [►] to display N/W STATUS PRINT.
4. Press [OK] to output the page.

Printing Position Adjustment Print

Displays the current printing positions of each paper source. Adjust the printing positions referring to this print. For more details, see "Adjusting the Printing Position," on p. 6-19.

1. Press [Feeder Selection].
2. Select PAPER SOURCE using [◄] and [►], then press [OK].
3. Select the paper source that you want to check the printing position using [◄] and [►], then press [OK].
4. Make sure that the printer is online. If the printer is not online, press [Online].
5. Press [Utility] to display the UTILITY menu.
6. Display PRNTPOSNPRINT using [►].
7. Press [OK] to output the page.

The Lists Common to Certain Settings in the Operation Mode

This section describes the lists common to certain settings in the operation mode.

🖑 IMPORTANT

The following list is a sample. The contents may partially differ from the lists printed by your printer.

PCL Font List

A list of the fonts that can be used in the PCL mode is printed.

1. Make sure that the printer is online.
2. Press [Utility] to display the UTILITY menu.
3. Press [►] to display PCL UTILITY.
4. Press [OK] to display Exclusive Utilities for PCL.
5. Press [►] to display FONTS LIST.
6. Press [OK] to output the page.

Typeface Samples

The font lists printed from the UTILITY MENU are a comprehensive listing of all fonts currently available. The listing contains the names and print samples of the fonts stored on the printer.

Scalable Fonts (PCL)

Courier	ABCDEFGHIJKLMNOPQRSTUVWXYZ
CG Times	ABCDEFGHIJKLMNOPQRSTUVWXYZ
CG Times Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
CG Times Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
CG Times Bold Italic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
CG Omega	ABCDEFGHIJKLMNOPQRSTUVWXYZ
CG Omega Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
CG Omega Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
CG Omega Bold Italic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
Coronet	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Clarendon Condensed Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Univers Medium	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Univers Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Univers Medium Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Univers Bold Italic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
Univers Condensed Medium	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Univers Condensed Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Univers Condensed Medium Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Univers Condensed Bold Italic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
Antique Olive	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Antique Olive Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Antique Olive Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Garamond Antique	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Garamond Halbfeet	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Garamond Kursiv	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*

Typeface name	Sample
Garamond Kursiv Halbfeet	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Marigold	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Albertus Medium	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Albertus Extra Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Arial	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Arial Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Arial Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Arial Bold Italic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
Times New Roman	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Times New Roman Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Times New Roman Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Times New Roman Bold Italic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
Helvetica	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Helvetica Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Helvetica Oblique	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Helvetica Bold Oblique	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
Helvetica Narrow	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Helvetica Narrow Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Helvetica Narrow Oblique	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Helvetica Narrow Bold Oblique	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
Palatino Roman	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Palatino Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
Palatino Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
Palatino Bold Italic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
ITC Avant Garde Gothic Book	ABCDEFGHIJKLMNOPQRSTUVWXYZ
ITC Avant Garde Gothic Demi	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
ITC Avant Garde Gothic Book Oblique	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
ITC Avant Garde Gothic Demi Oblique	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
ITC Bookman Light	ABCDEFGHIJKLMNOPQRSTUVWXYZ
ITC Bookman Demi	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
ITC Bookman Light Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
ITC Bookman Demi Italic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
New Century Schoolbook Roman	ABCDEFGHIJKLMNOPQRSTUVWXYZ
New Century Schoolbook Bold	**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
New Century Schoolbook Italic	*ABCDEFGHIJKLMNOPQRSTUVWXYZ*
New Century Schoolbook Bold Italic	***ABCDEFGHIJKLMNOPQRSTUVWXYZ***
Times Roman	ABCDEFGHIJKLMNOPQRSTUVWXYZ

8-6 Typeface Samples

Times Bold	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Times Italic	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Times Bold Italic	ABCDEFGHIJKLMNOPQRSTUVWXYZ
ITC Zapf Chancery Medium Italic	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Symbol	ΑΒΧΔΕΦΓΗΙϑΚΛΜΝΟΠΘΡΣΤΥςΩΞΨΖ
SymbolPS	ΑΒΧΔΕΦΓΗΙϑΚΛΜΝΟΠΘΡΣΤΥςΩΞΨΖ
Wingdings	(wingdings symbols)
ITC Zapf Dingbats	(dingbats symbols)
Courier Bold	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Courier Italic	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Courier Bold Italic	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Letter Gothic	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Letter Gothic Bold	ABCDEFGHIJKLMNOPQRSTUVWXYZ
Letter Gothic Italic	ABCDEFGHIJKLMNOPQRSTUVWXYZ
CourierPS	ABCDEFGHIJKLMNOPQRSTUVWXYZ
CourierPS Bold	ABCDEFGHIJKLMNOPQRSTUVWXYZ
CourierPS Oblique	ABCDEFGHIJKLMNOPQRSTUVWXYZ
CourierPS Bold Oblique	ABCDEFGHIJKLMNOPQRSTUVWXYZ

Bitmapped Fonts (PCL)

Line Printer (10U)	ABCDEFGHIJKíóúñÑªº¿⌐¬½¼¡«»
Line Printer (8U)	ABCDEFGHIJKÀÂÈÊËÎÏ´`¨¸˘ÙÛ£
Line Printer (0N)	ABCDEFGHIJK¡¢£¤¥¦§¨©ª«¬-®¯
Line Printer (11U)	ABCDEFGHIJKíóúñÑõõ¿ãÃℓñ¡³¤
Line Printer (12U)	ABCDEFGHIJKíóúñÑªº¿®¬½¼¡«»
Line Printer (1U)	ABCDEFGHIJK
Line Printer (2N)	ABCDEFGHIJKĄ˝Łœĺ§š¨ŠŞŤŹ-ŽŻ
Line Printer (5N)	ABCDEFGHIJK¡¢£¤¥¦§¨©ª«¬-®¯
Line Printer (6N)	ABCDEFGHIJKĄĘĢĬĪĶ§ĻĐŠŤŽ-ŪŅ
Line Printer (9N)	ABCDEFGHIJK¡¢£€¥Š§š©ª«¬-®¯

Symbol Sets Supported

This section provides a list to the character code tables for the characters in each symbol set.

Character Code Tables

■ Roman-8 (8U)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p				‾	â	Å	Á	Þ
1			!	1	A	Q	a	q			À	Ý	ê	î	Ã	þ
2			"	2	B	R	b	r			Â	ý	ô	Ø	ã	·
3			#	3	C	S	c	s			È	°	û	Æ	Ð	µ
4			$	4	D	T	d	t			Ê	Ç	á	å	ð	¶
5			%	5	E	U	e	u			Ë	ç	é	í	Í	¾
6			&	6	F	V	f	v			Î	Ñ	ó	ø	Ì	—
7			'	7	G	W	g	w			Ï	ñ	ú	æ	Ó	¼
8			(	8	H	X	h	x			´	¡	à	Ä	Ò	½
9			)	9	I	Y	i	y			`	¿	è	ì	Õ	ª
A			*	:	J	Z	j	z			^	¤	ò	Ö	õ	º
B			+	;	K	[	k	{			¨	£	ù	Ü	Š	«
C			,	<	L	\	l	|			~	¥	ä	É	š	■
D			-	=	M	]	m	}			Ù	§	ë	ï	Ú	»
E			.	>	N	^	n	~			Û	ƒ	ö	ß	Ÿ	±
F			/	?	O	_	o	▓			£	ç	ü	Ô	ÿ	

■ Roman-9 (4U)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p				¯	â	Å	Á	Þ
1			!	1	A	Q	a	q			À	Ý	ê	î	Ã	þ
2			"	2	B	R	b	r			Â	ý	ô	Ø	ã	·
3			#	3	C	S	c	s			È	°	û	Æ	Ð	µ
4			$	4	D	T	d	t			Ê	Ç	á	å	ð	¶
5			%	5	E	U	e	u			Ë	ç	é	í	Í	¾
6			&	6	F	V	f	v			Î	Ñ	ó	ø	Ì	—
7			'	7	G	W	g	w			Ï	ñ	ú	æ	Ó	¼
8			(	8	H	X	h	x			´	¡	à	Ä	Ò	½
9			)	9	I	Y	i	y			`	¿	è	ì	Õ	ª
A			*	:	J	Z	j	z			^	€	ò	Ö	õ	º
B			+	;	K	[	k	{			¨	£	ù	Ü	Š	«
C			,	<	L	\	l	|			~	¥	ä	É	š	■
D			-	=	M	]	m	}			Ù	§	ë	ï	Ú	»
E			.	>	N	^	n	~			Û	ƒ	ö	ß	Ÿ	±
F			/	?	O	_	o	▒			£	¢	ü	Ô	ÿ	

■ ISO 8859/1 Latin 1 (0N)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p				°	À	Ð	à	ð
1			!	1	A	Q	a	q			¡	±	Á	Ñ	á	ñ
2			"	2	B	R	b	r			¢	²	Â	Ò	â	ò
3			#	3	C	S	c	s			£	³	Ã	Ó	ã	ó
4			$	4	D	T	d	t			¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u			¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v			¦	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w			§	·	Ç	×	ç	÷
8			(	8	H	X	h	x			¨	¸	È	Ø	è	ø
9			)	9	I	Y	i	y			©	¹	É	Ù	é	ù
A			*	:	J	Z	j	z			ª	º	Ê	Ú	ê	ú
B			+	;	K	[	k	{			«	»	Ë	Û	ë	û
C			,	<	L	\	l	|			¬	¼	Ì	Ü	ì	ü
D			-	=	M	]	m	}				½	Í	Ý	í	ý
E			.	>	N	^	n	~			®	¾	Î	Þ	î	þ
F			/	?	O	_	o	▒			¯	¿	Ï	ß	ï	ÿ

■ ISO 8859/2 Latin 2 (2N)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p				°	Ŕ	Đ	ŕ	đ
1			!	1	A	Q	a	q			Ą	ą	Á	Ń	á	ń
2			"	2	B	R	b	r			˘	˛	Â	Ň	â	ň
3			#	3	C	S	c	s			Ł	ł	Ă	Ó	ă	ó
4			$	4	D	T	d	t			¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u			Ľ	ľ	Ĺ	Ő	Í	ő
6			&	6	F	V	f	v			Ś	ś	Ć	Ö	ć	ö
7			'	7	G	W	g	w			§	ˇ	Ç	×	ç	÷
8			(	8	H	X	h	x			¨	¸	Č	Ř	č	ř
9			)	9	I	Y	i	y			Š	š	É	Ů	é	ů
A			*	:	J	Z	j	z			Ş	ş	Ę	Ú	ę	ú
B			+	;	K	[	k	{			Ť	ť	Ë	Ű	ë	ű
C			,	<	L	\	l	|			Ź	ź	Ě	Ü	ě	ü
D			-	=	M	]	m	}				˝	Í	Ý	í	ý
E			.	>	N	^	n	~			Ž	ž	Î	Ţ	î	ţ
F			/	?	O	_	o	▒			Ż	ż	Ď	ß	ď	˙

■ ISO 8859/9 Latin 5 (5N)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p				°	À	Ğ	à	ğ
1			!	1	A	Q	a	q			¡	±	Á	Ñ	á	ñ
2			"	2	B	R	b	r			¢	²	Â	Ò	â	ò
3			#	3	C	S	c	s			£	³	Ã	Ó	ã	ó
4			$	4	D	T	d	t			¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u			¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v			¦	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w			§	·	Ç	×	ç	÷
8			(	8	H	X	h	x			¨	¸	È	Ø	è	ø
9			)	9	I	Y	i	y			©	¹	É	Ù	é	ù
A			*	:	J	Z	j	z			ª	º	Ê	Ú	ê	ú
B			+	;	K	[	k	{			«	»	Ë	Û	ë	û
C			,	<	L	\	l	|			¬	¼	Ì	Ü	ì	ü
D			-	=	M	]	m	}				½	Í	İ	í	ı
E			.	>	N	^	n	~			®	¾	Î	Ş	î	ş
F			/	?	O	_	o	▒			¯	¿	Ï	ß	ï	ÿ

8

Appendix

■ ISO 8859/15 Latin 9 (9N)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p				°	À	Ð	à	ð
1			!	1	A	Q	a	q			¡	±	Á	Ñ	á	ñ
2			"	2	B	R	b	r			¢	²	Â	Ò	â	ò
3			#	3	C	S	c	s			£	³	Ã	Ó	ã	ó
4			$	4	D	T	d	t			€	Ž	Ä	Ô	ä	ô
5			%	5	E	U	e	u			¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v			Š	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w			§	·	Ç	×	ç	÷
8			(	8	H	X	h	x			š	ž	È	Ø	è	ø
9			)	9	I	Y	i	y			©	¹	É	Ù	é	ù
A			*	:	J	Z	j	z			ª	º	Ê	Ú	ê	ú
B			+	;	K	[	k	{			«	»	Ë	Û	ë	û
C			,	<	L	\	l	|			¬	Œ	Ì	Ü	ì	ü
D			-	=	M	]	m	}			-	œ	Í	Ý	í	ý
E			.	>	N	^	n	~			®	Ÿ	Î	Þ	î	þ
F			/	?	O	_	o	▓			‾	¿	Ï	ß	ï	ÿ

■ PC-8, Code Page 437 (10U)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		►		0	@	P	`	p	Ç	É	á	░	└	╨	α	≡
1	☺	◄	!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	ß	±
2	☻	↕	"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦	¶	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠	▬	&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7	•	↨	'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8	◘	↑	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9	○	↓	)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
A	◙	→	*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B	♂	←	+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
C	♀	∟	,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
D	♪	↔	-	=	M	]	m	}	ì	¥	¡	╜	═	▌	φ	²
E	♫	▲	.	>	N	^	n	~	Ä	Pt	«	╛	╬	▐	ε	■
F	☼	▼	/	?	O	_	o	⌂	Å	ƒ	»	┐	╧	▀	∩	

■ PC-8 D/N, Danish/Norwegian (11U)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		▶		0	@	P	`	p	Ç	É	á	░	└	╨	α	≡
1	☺	◄	!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	ß	±
2	☻	↕	"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦	¶	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠	▬	&	6	F	V	f	v	å	û	õ	╢	╞	╓	μ	÷
7	•	↨	'	7	G	W	g	w	ç	ù	Õ	╖	╟	╫	τ	≈
8	◘	↑	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9	○	↓	)	9	I	Y	i	y	ë	Ö	ã	╣	╔	┘	Θ	∙
A	◎	→	*	:	J	Z	j	z	è	Ü	Ã	║	╩	┌	Ω	·
B	♂	←	+	;	K	[	k	{	ï	ø	ℓ	╗	╦	█	δ	√
C	♀	∟	,	<	L	\	l			î	£	'n	╝	╠	▄	∞	ⁿ
D	♪	↔	-	=	M	]	m	}	ì	Ø	¡	╜	═	█	φ	²
E	♫	▲	.	>	N	^	n	~	Ä	₧	³	╛	╬	█	ε	■
F	☼	▼	/	?	O	_	o	△	Å	ƒ	¤	┐	╧	▀	∩	

■ PC-850, Multilingual (12U)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		▶		0	@	P	`	p	Ç	É	á	░	└	ð	Ó	-
1	☺	◄	!	1	A	Q	a	q	ü	æ	í	▒	┴	Ð	ß	±
2	☻	↕	"	2	B	R	b	r	é	Æ	ó	▓	┬	Ê	Ô	‗
3	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	Ë	Ò	¾
4	♦	¶	$	4	D	T	d	t	ä	ö	ñ	┤	─	È	õ	¶
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	Á	┼	ı	Õ	§
6	♠	▬	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	•	↨	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8	◘	↑	(	8	H	X	h	x	ê	ÿ	¿	©	╚	Ï	Þ	°
9	○	↓	)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘	Ú	¨
A	◎	→	*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Û	·
B	♂	←	+	;	K	[	k	{	ï	ø	½	╗	╦	█	Ù	¹
C	♀	∟	,	<	L	\	l			î	£	¼	╝	╠	▄	ý	³
D	♪	↔	-	=	M	]	m	}	ì	Ø	¡	¢	═	¦	Ý	²
E	♫	▲	.	>	N	^	n	~	Ä	×	«	¥	╬	Ì	¯	■
F	☼	▼	/	?	O	_	o	△	Å	ƒ	»	┐	¤	▀	´	

■ PC-858, Multilingual with Euro (13U)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		▶		0	@	P	`	p	Ç	É	á	▦	└	ð	Ó	-
1	☺	◄	!	1	A	Q	a	q	ü	æ	í	▓	┴	Đ	ß	±
2	☻	↕	"	2	B	R	b	r	é	Æ	ó	▦	┬	Ê	Ô	‗
3	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	Ë	Ò	¾
4	♦	¶	$	4	D	T	d	t	ä	ö	ñ	┤	─	È	õ	¶
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	Á	┼	€	Õ	§
6	♠	▬	&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
7	•	↨	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8	◘	↑	(	8	H	X	h	x	ê	ÿ	¿	©	└	Ï	Þ	°
9	○	↓	)	9	I	Y	i	y	ë	Ö	®	┤	┌	┘	Ú	¨
A	◎	→	*	:	J	Z	j	z	è	Ü	¬	║	┴	┌	Û	·
B	♂	←	+	;	K	[	k	{	ï	ø	½	┐	┬	■	Ù	¹
C	♀	└	,	<	L	\	l			î	£	¼	┘	├	▬	ý	³
D	♪	↔	-	=	M	]	m	}	ì	Ø	¡	¢	=	¦	Ý	²
E	♫	▲	.	>	N	^	n	~	Ä	×	«	¥	┼	Ì	¯	■
F	☼	▼	/	?	O	_	o	△	Å	ƒ	»	┐	¤	■	´	

■ PC-852, Latin 2 (17U)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		▶		0	@	P	`	p	Ç	É	á	▦	└	đ	Ó	-
1	☺	◄	!	1	A	Q	a	q	ü	Ĺ	í	▓	┴	Đ	ß	˝
2	☻	↕	"	2	B	R	b	r	é	ĺ	ó	▦	┬	Ď	Ô	˛
3	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	Ë	Ń	ˇ
4	♦	¶	$	4	D	T	d	t	ä	ö	Ą	┤	─	ď	ń	˘
5	♣	§	%	5	E	U	e	u	ů	Ľ	ą	Á	┼	Ň	ň	§
6	♠	▬	&	6	F	V	f	v	ć	ľ	Ž	Â	Ă	Í	Š	÷
7	•	↨	'	7	G	W	g	w	ç	Ś	ž	Ě	ă	Î	š	¸
8	◘	↑	(	8	H	X	h	x	ł	ś	Ę	Ş	└	ě	Ŕ	°
9	○	↓	)	9	I	Y	i	y	ë	Ö	ę	┤	┌	┘	Ú	¨
A	◎	→	*	:	J	Z	j	z	Ő	Ü	¬	║	┴	┌	ŕ	·
B	♂	←	+	;	K	[	k	{	ő	Ť	ź	┐	┬	■	Ű	ű
C	♀	└	,	<	L	\	l			î	ť	Č	┘	├	▬	ý	Ř
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■ PC-Turkish (9T)

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2	●	↕	"	2	B	R	b	r	é	Æ	ó	▦	┬	╥	Γ	≥
3	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦	¶	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠	▬	&	6	F	V	f	v	å	û	Ğ	╢	╞	╓	µ	÷
7	•	↨	'	7	G	W	g	w	ç	ù	ğ	╖	╟	╫	τ	≈
8	◘	↑	(	8	H	X	h	x	ê	İ	¿	╕	╚	╪	Φ	°
9	○	↓	)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	·
A	◙	→	*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B	♂	←	+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
C	♀	∟	,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
D	♪	↔	-	=	M	]	m	}	ı	¥	¡	╜	═	█	φ	²
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■ Windows 3.1 Latin 1 (19U)

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2			"	2	B	R	b	r	‚	'	¢	²	Â	Ò	â	ò
3			#	3	C	S	c	s	ƒ	"	£	³	Ã	Ó	ã	ó
4			$	4	D	T	d	t	„	"	¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u	…	•	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v	†	–	¦	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w	‡	—	§	·	Ç	×	ç	÷
8			(	8	H	X	h	x	ˆ	˜	¨	¸	È	Ø	è	ø
9			)	9	I	Y	i	y	‰	™	©	¹	É	Ù	é	ù
A			*	:	J	Z	j	z	Š	š	ª	º	Ê	Ú	ê	ú
B			+	;	K	[	k	{	‹	›	«	»	Ë	Û	ë	û
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■ Windows 3.1 Latin 2 (9E)

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3			#	3	C	S	c	s		“	Ł	ł	Ă	Ó	ă	ó
4			$	4	D	T	d	t	„	”	¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u	…	•	Ą	µ	Ĺ	Ő	ĺ	ő
6			&	6	F	V	f	v	†	–	¦	¶	Ć	Ö	ć	ö
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9			)	9	I	Y	i	y	‰	™	©	ą	É	Ů	é	ů
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■ Windows 3.1 Latin 5 (5T)

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2			"	2	B	R	b	r	‚	’	¢	²	Â	Ò	â	ò
3			#	3	C	S	c	s	ƒ	“	£	³	Ã	Ó	ã	ó
4			$	4	D	T	d	t	„	”	¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u	…	•	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v	†	–	¦	¶	Æ	Ö	æ	ö
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8

Appendix

■ DeskTop (7J)

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3			#	3	C	S	c	s			†	‰	÷	»	Æ	¨
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■ PS Text (10J)

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3			#	3	C	S	c	s			£	‡	^		a	
4			$	4	D	T	d	t			/	·	˜			
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6			&	6	F	V	f	v			ƒ	¶	˘			
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■ Ventura International (13J)

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2			"	2	B	R	b	r			Â	"	ô	Ø	ã	¶
3			#	3	C	S	c	s			È	°	û	Æ		†
4			$	4	D	T	d	t			Ê	Ç	á	å		‡
5			%	5	E	U	e	u			Ë	ç	é	í	Í	—
6			&	6	F	V	f	v			Î	Ñ	ó	ø	Ì	–
7			'	7	G	W	g	w			Ï	ñ	ú	æ	Ó	
8			(	8	H	X	h	x			©	¡	à	Ä	Ò	
9			)	9	I	Y	i	y			®	¿	è	ì	Õ	ª
A			*	:	J	Z	j	z			™	¤	ò	Ö	õ	º
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C			,	<	L	\	l	|			›	¥	ä	É	š	•
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■ Ventura US (14J)

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7			'	7	G	W	g	w								
8			(	8	H	X	h	x			©					
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Appendix

■ Microsoft Publishing (6J)

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■ Math-8 (8M)

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4			∞	4	Δ	Υ	δ	υ			←	⊥	⊘	ә	⌊	⌋
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■ PS Math (5M)

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■ Ventura Math (6M)

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6			&	6	Φ	ς	φ	ϖ			⌊	⊕	ℜ	©	⌈	™
7			∋	7	Γ	Ω	γ	ω			⎮	⊗	℘	±	⟩	⎮
8			(	8	H	Ξ	η	ξ			⇑	⊆	∞	→		⌋
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■ PI Font (15U)

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■ Legal (1U)

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■ Windows 3.0 Latin 1 (9U)

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■ ISO 8859/10 Latin 6 (6N)

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5			%	5	E	U	e	u			Ĩ	ĩ	Å	Õ	å	õ
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9			)	9	I	Y	i	y			Đ	đ	É	Ų	é	ų
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Appendix

■ PC-775 (26U)

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3	♥	‼	#	3	C	S	c	s	ā	ō	Ż	│	├	ė	Ń	¾
4	♦	¶	$	4	D	T	d	t	ä	ö	ż	┤	─	į	õ	¶
5	♣	§	%	5	E	U	e	u	ġ	Ģ	ź	Ą	┼	š	Õ	§
6	♠	▬	&	6	F	V	f	v	å	¢	"	Č	Ų	ų	µ	÷
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9	○	↓	)	9	I	Y	i	y	ē	Ö	®	┤	┌	┘	ķ	∙
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■ PC-1004 (9J)

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2			"	2	B	R	b	r		'	¢	²	Â	Ò	â	ò
3			#	3	C	S	c	s		"	£	³	Ã	Ó	ã	ó
4		-	$	4	D	T	d	t		"	¤	´	Ä	Ô	ä	ô
5		�‿	%	5	E	U	e	u		•	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v		†	¦	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w		‡	§	·	Ç	×	ç	÷
8	°		(	8	H	X	h	x		ˆ	¨	¸	È	Ø	è	ø
9			)	9	I	Y	i	y		‰	©	¹	É	Ù	é	ù
A	˜		*	:	J	Z	j	z		Š	ª	º	Ê	Ú	ê	ú
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■ Windows Baltic (19L)

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2			"	2	B	R	b	r	‚	'	¢	²	Ā	Ņ	ā	ņ
3			#	3	C	S	c	s		"	£	³	Ć	Ó	ć	ó
4			$	4	D	T	d	t	„	"	¤	´	Ä	Ō	ä	ō
5			%	5	E	U	e	u	…	•		µ	Å	Õ	å	õ
6			&	6	F	V	f	v	†	–	¦	¶	Ę	Ö	ę	ö
7			'	7	G	W	g	w	‡	—	§	·	Ē	×	ē	÷
8			(	8	H	X	h	x			Ø	ø	Č	Ų	č	ų
9			)	9	I	Y	i	y	‰	™	©	¹	É	Ł	é	ł
A			*	:	J	Z	j	z			Ŗ	ŗ	Ź	Ś	ź	ś
B			+	;	K	[	k	{	‹	›	«	»	Ė	Ū	ė	ū
C			,	<	L	\	l	|			¬	¼	Ģ	Ü	ģ	ü
D			-	=	M	]	m	}	¨	¯	-	½	Ķ	Ż	ķ	ż
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■ MC Text (12J)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
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1			!	1	A	Q	a	q	Å	ë	°	±	¡	—	·	Ò
2			"	2	B	R	b	r	Ç	í	¢	≤	¬	"	‚	Ú
3			#	3	C	S	c	s	É	ì	£	≥	√	"	„	Û
4			$	4	D	T	d	t	Ñ	î	§	¥	ƒ	'	‰	Ù
5			%	5	E	U	e	u	Ö	ï	•	µ	≈	'	Â	ı
6			&	6	F	V	f	v	Ü	ñ	¶	∂	∆	÷	Ê	ˆ
7			'	7	G	W	g	w	á	ó	ß	∑	«	◊	Á	˜
8			(	8	H	X	h	x	à	ò	®	∏	»	ÿ	Ë	¯
9			)	9	I	Y	i	y	â	ô	©	π	…	Ÿ	È	˘
A			*	:	J	Z	j	z	ä	ö	™	∫		⁄	Í	˙
B			+	;	K	[	k	{	ã	õ	´	ª	À	€	Î	˚
C			,	<	L	\	l	|	å	ú	¨	º	Ã	‹	Ï	¸
D			-	=	M	]	m	}	ç	ù	≠	Ω	Õ	›	Ì	˝
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Appendix

■ Symbol (19M)

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0				0	≅	Π	‾	π				°	ℵ	∠	◊	
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2			∀	2	Β	Ρ	β	ρ			′	″	ℜ	®	®	∫
3			#	3	Χ	Σ	χ	σ			≤	≥	℘	©	©	⌠
4			∃	4	Δ	Τ	δ	τ			⁄	×	⊗	™	™	|
5			%	5	Ε	Υ	ε	υ			∞	∝	⊕	Π	Σ	⌡
6			&	6	Φ	ς	φ	ϖ			ƒ	∂	∅	√	(	)
7			∋	7	Γ	Ω	γ	ω			♣	•	∩	·	|	|
8			(	8	Η	Ξ	η	ξ			♦	÷	∪	¬	⌊	⌋
9			)	9	Ι	Ψ	ι	ψ			♥	≠	⊃	∧	⌈	⌉
A			*	:	ϑ	Ζ	φ	ζ			♠	≡	⊇	∨	|	|
B			+	;	Κ	[	κ	{			↔	≈	⊄	⇔	⌊	⌋
C			,	<	Λ	∴	λ	|			←	…	⊂	⇐	⌈	⌉
D			−	=	Μ	]	μ	}			↑	|	⊆	⇑	{	}
E			.	>	Ν	⊥	ν	~			→	—	∈	⇒	|	|
F			/	?	Ο	_	ο				↓	↵	∉	⇓	|	

■ Wingdings (579L)

■ Dingbats (14L)

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1			✂	☛	✪	✱	◉	❏	)		❡	⑥	②	❽	➡	⇨
2			✄	➔	✢	✲	◎	❐	(		❢	⑦	③	❾	➢	⊃
3			✃	✓	✣	✳	✺	▲	)		❣	⑧	④	❿	➣	➦
4			✁	✔	✤	✴	✻	▼	(		♥	⑨	⑤	➜	➤	➥
5			☎	✕	✥	✵	✽	◆	)		♣	⑩	⑥	➝	➡	➧
6			✆	✖	✦	✶	✾	✿	❬		♠	❶	⑦	↔	➥	➨
7			✇	✗	✧	✷	✼	❭	❭			❷	⑧	↕	♦	➩
8			✈	✘	★	✸	✺		❨		♣	❸	⑨	➘	➤	➺
9			✉	✙	☆	✹	❆		❩		♦	❹	⑩	➙	⇨	➻
A			☞	✚	✪	✺	✽	❪	(		♥	❺	❶	➚	⇨	➼
B			☜	✛	✫	✱	✻	'	)		♠	❻	❷	➛	⇦	➽
C			✌	✜	✬	✲	●	'			①	❼	❸	➜	⇧	➾
D			✍	†	✭	✳	○	"			②	❽	❹	→	⇨	➽
E			✎	☦	✮	✴	■	"			③	❾	❺	→	⇨	⇛
F			✏	✞	✯	✿	❑				④	❿	❻	➠	⇨	

■ PC-860 Portugal (20U)

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2	☻	↕	"	2	B	R	b	r	é	È	ó	▓	┬	╥	Γ	≥
3	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦	¶	$	4	D	T	d	t	ã	õ	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠	▬	&	6	F	V	f	v	Á	Ú	ª	╢	╞	╓	µ	÷
7	•	↨	'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8	◘	↑	(	8	H	X	h	x	ê	Ì	¿	╕	╚	╪	Φ	°
9	○	↓	)	9	I	Y	i	y	Ê	Õ	Ò	╣	╔	┘	Θ	∙
A	◙	→	*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B	♂	←	+	;	K	[	k	{	Í	¢	½	╗	╦	█	δ	√
C	♀	∟	,	<	L	\	l			Ô	£	¼	╝	╠	▄	∞	ⁿ
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■ PC-865 Norway (25U)

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1	☺	◄	!	1	A	Q	a	q	ü	æ	í	▦	┴	╤	ß	±
2	☻	↕	"	2	B	R	b	r	é	Æ	ó	▦	┬	╥	Γ	≥
3	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦	¶	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠	▬	&	6	F	V	f	v	å	û	ª	╢	╞	╓	μ	÷
7	•	↨	'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8	◘	↑	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9	○	↓	)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	·
A	◎	→	*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B	♂	←	+	;	K	[	k	{	ï	ø	½	╗	╦	█	δ	√
C	♀	∟	,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	ⁿ
D	♪	↔	-	=	M	]	m	}	ì	Ø	¡	╜	═	█	φ	²
E	♫	▲	.	>	N	^	n	˜	Ä	₧	«	╛	╬	█	ε	■
F	☼	▼	/	?	O	_	o	⌂	Å	ƒ	¤	┐	╧	▀	∩	

■ PC-8 Greek Alternate Code Page 437 (14G)

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1	☺	◄	!	1	A	Q	a	q	B	Σ	κ	▦	┴	╤	ά	±
2	☻	↕	"	2	B	R	b	r	Γ	T	λ	▦	┬	╥	έ	≥
3	♥	‼	#	3	C	S	c	s	Δ	Y	μ	│	├	╙	ή	≤
4	♦	¶	$	4	D	T	d	t	E	Φ	ν	┤	─	╘	ϊ	⌠
5	♣	§	%	5	E	U	e	u	Z	X	ξ	╡	┼	╒	ί	⌡
6	♠	▬	&	6	F	V	f	v	H	Ψ	o	╢	╞	╓	ό	÷
7	•	↨	'	7	G	W	g	w	Θ	Ω	π	╖	╟	╫	ύ	≈
8	◘	↑	(	8	H	X	h	x	I	α	ρ	╕	╚	╪	ϋ	°
9	○	↓	)	9	I	Y	i	y	K	β	σ	╣	╔	┘	ώ	£
A	◎	→	*	:	J	Z	j	z	Λ	γ	ς	║	╩	┌	Ά	·
B	♂	←	+	;	K	[	k	{	M	δ	τ	╗	╦	█	Έ	√
C	♀	∟	,	<	L	\	l	|	N	ε	υ	╝	╠	▄	Ή	ⁿ
D	♪	↔	-	=	M	]	m	}	Ξ	ζ	φ	╜	═	█	Ί	²
E	♫	▲	.	>	N	^	n	˜	O	η	χ	╛	╬	█	Ό	■
F	☼	▼	/	?	O	_	o	⌂	Π	θ	ψ	┐	╧	▀	Ύ	

■ ISO 6: ASCII (0U)

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2			"	2	B	R	b	r								
3			#	3	C	S	c	s								
4			$	4	D	T	d	t								
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7			'	7	G	W	g	w								
8			(	8	H	X	h	x								
9			)	9	I	Y	i	y								
A			*	:	J	Z	j	z								
B			+	;	K	[	k	{								
C			,	<	L	\	l	|								
D			-	=	M	]	m	}								
E			.	>	N	^	n	~								
F			/	?	O	_	o	▓								

ISO Substitution Tables

■ ISO 4: United Kingdom (1E)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p								
1			!	1	A	Q	a	q								
2			"	2	B	R	b	r								
3			£	3	C	S	c	s								
4			$	4	D	T	d	t								
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7			'	7	G	W	g	w								
8			(	8	H	X	h	x								
9			)	9	I	Y	i	y								
A			*	:	J	Z	j	z								
B			+	;	K	[	k	{								
C			,	<	L	\	l	|								
D			-	=	M	]	m	}								
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F			/	?	O	_	o	▓								

■ ISO 11: Swedish (0S)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	É	P	é	p								
1			!	1	A	Q	a	q								
2			"	2	B	R	b	r								
3			#	3	C	S	c	s								
4			¤	4	D	T	d	t								
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7			'	7	G	W	g	w								
8			(	8	H	X	h	x								
9			)	9	I	Y	i	y								
A			*	:	J	Z	j	z								
B			+	;	K	Ä	k	ä								
C			,	<	L	Ö	l	ö								
D			-	=	M	Å	m	å								
E			.	>	N	Ü	n	ü								
F			/	?	O	_	o	▨								

■ ISO 60: Danish/Norwegian (0D)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p								
1			!	1	A	Q	a	q								
2			"	2	B	R	b	r								
3			#	3	C	S	c	s								
4			$	4	D	T	d	t								
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7			'	7	G	W	g	w								
8			(	8	H	X	h	x								
9			)	9	I	Y	i	y								
A			*	:	J	Z	j	z								
B			+	;	K	Æ	k	æ								
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D			-	=	M	Å	m	å								
E			.	>	N	^	n	–								
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Appendix

■ ISO 21: German (1G)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	§	P	`	p								
1			!	1	A	Q	a	q								
2			"	2	B	R	b	r								
3			#	3	C	S	c	s								
4			$	4	D	T	d	t								
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7			'	7	G	W	g	w								
8			(	8	H	X	h	x								
9			)	9	I	Y	i	y								
A			*	:	J	Z	j	z								
B			+	;	K	Ä	k	ä								
C			,	<	L	Ö	l	ö								
D			-	=	M	Ü	m	ü								
E			.	>	N	^	n	ß								
F			/	?	O	_	o	▓								

■ ISO 69: French (1F)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	à	P	µ	p								
1			!	1	A	Q	a	q								
2			"	2	B	R	b	r								
3			£	3	C	S	c	s								
4			$	4	D	T	d	t								
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7			'	7	G	W	g	w								
8			(	8	H	X	h	x								
9			)	9	I	Y	i	y								
A			*	:	J	Z	j	z								
B			+	;	K	°	k	é								
C			,	<	L	ç	l	ù								
D			-	=	M	§	m	è								
E			.	>	N	^	n	¨								
F			/	?	O	_	o	▓								

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Appendix

Symbol Sets Supported   **8-29**

■ ISO 15: Italian (0I)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	§	P	ù	p								
1			!	1	A	Q	a	q								
2			"	2	B	R	b	r								
3			£	3	C	S	c	s								
4			$	4	D	T	d	t								
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7			'	7	G	W	g	w								
8			(	8	H	X	h	x								
9			)	9	I	Y	i	y								
A			*	:	J	Z	j	z								
B			+	;	K	°	k	à								
C			,	<	L	ç	l	ò								
D			-	=	M	é	m	è								
E			.	>	N	^	n	ì								
F			/	?	O	_	o	▨								

■ ISO 17: Spanish (2S)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	§	P	`	p								
1			!	1	A	Q	a	q								
2			"	2	B	R	b	r								
3			£	3	C	S	c	s								
4			$	4	D	T	d	t								
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7			'	7	G	W	g	w								
8			(	8	H	X	h	x								
9			)	9	I	Y	i	y								
A			*	:	J	Z	j	z								
B			+	;	K	¡	k	°								
C			,	<	L	Ñ	l	ñ								
D			-	=	M	¿	m	ç								
E			.	>	N	^	n	~								
F			/	?	O	_	o	▨								

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Appendix

Specifications

Hardware Specifications

Type	Desktop Page Printer
Printing method	Electrophoto Method (On-demand fixing)
Resolution	600dpi
Printing speed Plain paper (64 to 80 g/m^2)	When printing A4 continuously: 33 pages/min. * Print speed may drop in stages depending on the paper size, paper type, print copies, and the settings of the fixing mode. (This is because the safety function that prevents damage caused by heat becomes active.)
Warm up time (Time from power on to printer ready)	9 seconds or less * May vary depending on the use conditions (such as the availability of the optional accessories and installation environment).
Recovery time (Time from sleep mode to printer ready)	0 second when the printer is in the Panel Off mode (Power Save Mode 1)
First print time	When printing A4 with the printing side facing down Approx. 8 seconds * May vary depending on the output environment.

Paper size	Cassette 1	- Standard sizes A4, B5, A5, Legal, Letter, Executive - Custom sizes When loading paper in portrait orientation: Width 148.0 to 215.9 mm; Length 210.0 to 355.6 mm When loading paper in landscape orientation: Width 210.0 to 215.9 mm; Length 210.0 to 215.9 mm Paper capacity: approx. 250 sheets (64 g/m^2)
	Cassette 2 (Optional)	- Standard sizes A4, B5, A5, Legal, Letter, Executive - Custom sizes When loading paper in portrait orientation: Width 148.0 to 215.9 mm; Length 210.0 to 355.6 mm When loading paper in landscape orientation: Width 210.0 to 215.9 mm; Length 210.0 to 215.9 mm Paper capacity: approx. 500 sheets (64 g/m^2)
	Multi-purpose tray	- Standard sizes A4, B5, A5, Legal, Letter, Executive, Envelope DL, Envelope COM10, Envelope C5, Envelope Monarch, Envelope B5 - Custom sizes When loading paper in portrait orientation: Width 76.2 to 215.9 mm; Length 127.0 to 355.6 mm When loading paper in landscape orientation: Width 127.0 to 215.9 mm; Length 127.0 to 215.9 mm Paper capacity: approx. 100 sheets (64 g/m^2)
Automatic 2-sided printing		A4, Legal, Letter
Paper output		Face-down/Face-up
Output capacity		Face-down output tray: approx. 250 sheets (64 g/m^2) Face-up output tray: approx. 50 sheets (64 g/m^2)
Noise (Declared noise emission in accordance with ISO 9296)		Lwad (declared A-weighted sound power level (1B = 10dB)) During standby: Background noise level During operation: 6.89 B or less Sound pressure level (Bystander position) During standby: Background noise level During operation: 52 dB (A) or less
Operating environment (Printer unit only)		Operating environment temperature: 10 to 32.5°C (50 to 90.5°F) Humidity: 20 to 80 % RH (no condensation)
Power supply		220 -240 V (±10 %) 50/60 Hz (±2 Hz)

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Power consumption (at temperature of 20°C (68°F))		Average during operation: approx. 572 W[1] Average during standby: approx. 11 W[1] Average in the Panel Off mode (Power Save Mode 1): approx. 11 W[1] Average in the Deep Sleep mode (Power Save Mode 2): approx. 6 W[1] Maximum: 1300 W[2] or less [1] When the printer is with standard equipment [2] However, the instantaneous peak on startup shall not be counted.
Consumables	**Toner cartridge**	Number of printable pages: approx. 6,000 pages[1] or 12,000 pages [1] (Canon Genuine Cartridge) [1] When the pages are on the basis of "ISO/IEC 19752"[2] on printing A4 size paper with the default print density setting [2] "ISO/IEC 19752" is the global standard related to "Method for the determination of toner cartridge yield for monochromatic electrophotographic printers and multi-function devices that may contain printer components" issued by ISO (International Organization for Standardization)
Weight	**Printer unit and included parts**	Printer (excluding the toner cartridge)...................approx. 16.1 kg Toner cartridge ....approx. 1.3 kg
	Consumables and optional accessories	Toner cartridge (Canon Genuine Cartridge) (Number of printable pages: approx. 6,000 pages) ....approx.1.3 kg Toner cartridge (Canon Genuine Cartridge) (Number of printable pages: approx. 12,000 pages) ....approx.1.6 kg Paper feeder unit PF-36 (including the cassette) ....approx. 5.6 kg

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Controller Specifications

CPU	R4000-333MHz* * The upper limit of the frequency range
Memory (RAM) capacity	Standard 64 MB Expandable up to 320 MB by installing an optional expansion RAM module
Host interface	USB 2.0 Hi-Speed/USB Full-Speed (USB1.1 equivalent) X 1 LAN connector (10BASE-T/100BASE-TX) X 1
User interface	LCD 16 characters X 1 line 8 LED indicators 8 Operation keys
RAM slot	1
ROM slot	1
Expansion slot	1

Software Specifications

Command language	PCL5e, PCL6, UFR II
Built-in fonts	PCL: 80 Scalable fonts, 10 Bitmap fonts
Printable area	PCL5e, PCL6 Data cannot be printed within a 4.23 mm (10 mm for envelopes) margin on all sides of the paper. UFR II Data cannot be printed within a 5 mm (10 mm for envelopes) margin on all sides of the paper. * If you have selected the [Print with Upper Left of Sheet as Starting Point] check box in the [Finishing Details] dialog box in the printer driver, you can extend the printable area to near the edges of the paper. However, when a document with no margins is printed, the data may be printed with the edges missing or the edge of paper may blot during color printing even if the [Print with Upper Left of Sheet as Starting Point] check box is selected. In this case, specify the scaling factor in the driver to print smaller so that any data on the document will not miss, and then print again.

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Dimensions of Each Part

■ **Printer unit**

• Standard state

Paper cassette   Face up output tray   Multi-purpose tray   (mm)

445

273

460   410   158   210

• State with the paper feeder installed

Paper cassette   Face up output tray   Multi-purpose tray   (mm)

445

411

475   410   158   210

■ Paper feeder unit PF-36

(mm)

478

445

168

165

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