

FS-C5010DN



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Legal and Safety Information

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

Notice on Software

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

Notice

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

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This product was developed using the Tornado™ Real Time Operating System and Tools from Wind River Systems.

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USB



This product has been certified by the USB Implementers Forum, Inc.

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Compliance and Conformity

FCC Statement (for users in the United States and Canada)

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may

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cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

Properly shielded grounded cables and connectors must be used for connection to host computer and/or peripherals in order to meet FCC emission limits.

Precautions for Use

Any modifications without prior permission of Kyocera may cause harmful interference.

If any modifications or changes are made to this equipment without prior permission of Kyocera, Kyocera as the manufacturer does not guarantee the compliance with the FCC Rules. The use of equipment that does not comply with the FCC Rules is prohibited.

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Safety Information

Laser Safety

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

Laser Notice

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

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

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

Radio Frequency Transmitter

This machine contains a transmitter module. We, the manufacturer (Kyocera Mita Corporation) hereby declare that this equipment (page printer), model FS-C5010DN is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

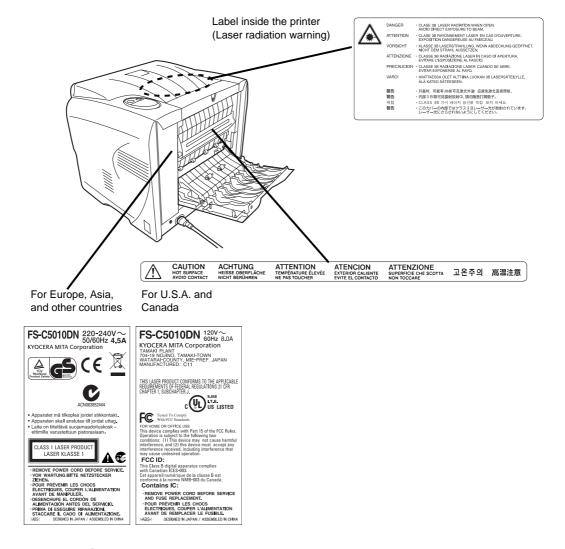
Radio Tag Technology

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

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Caution Labels

The printer bears any of the following labels.



CDRH Regulations

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

Ozone Concentration

These printers generate ozone gas (O_3) , which may concentrate in the place of installation and cause an unpleasant smell. To minimize the concentration of ozone gas to less than 0.1ppm, we recommend you not to install the printer in a confined area where ventilation is blocked.

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Declaration of Conformity for U.S.A.

Model name: Page Printer FS-C5010DN

Trade name: Kyocera Mita

Responsible party: Kyocera Mita America, Inc.

Address: 225 Sand Road PO Box 40008 Fairfield, New Jersey 07004-

0008, U.S.A.

Telephone: (973) 808-8444 Fax: (973) 882-6000

Manufacturer: Kyocera Mita Corporation

Manufacturer's address: 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka,

540-8585, Japan

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

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

User's instruction that conforms to the applicable specifications. Technical drawings.

Descriptions of the procedures that guarantee the conformity.

Other technical information.

Kyocera Mita America Inc.

CE Marking Directive

Hereby, Kyocera Mita Corporation, declares that this page printer is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

According to Council Directive 89/336/EEC, 73/23/EEC, and 1999/5/EC

Manufacturer: Kyocera Mita Corporation

Manufacturer's address: 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka,

540-8585, Japan

Declares that the product

Product name: Page Printer

Model number: FS-C5010DN (as tested with enhancement optional unit;

Paper Feeder PF-330)

Conforms to the following product specifications:

EN 55 022:1998+A1:2000+A2:2003 Class B

EN 61 000-3-2:2000

EN 61 000-3-3:1995+A1:2001

EN 55 024:1998+A1:2001+A2:2003

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EN 60 950-1:2001+A11 EN 60 825-1:1994+A1+A2 EN 300330-1

EN 300330-2

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

User's instruction that conforms to the applicable specifications. Technical drawings.

Descriptions of procedures that guarantee conformity.

Other technical information.

Declaration of Conformity (Australia)

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

declares that the product

Product name: Page Printer Model name: FS-C5010DN

Description of devices: This Page Printer Model FS-C5010DN is 24ppm (monochrome) or 6ppm (color); A4 size and utilizes plain paper; dry toner; etc. The printer can be equipped with several optional enhancement units, such as a PF-330 paper feeder.

conforms to the following product specifications:

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

AS/NZS 4268: 2003

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

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

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

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

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

Fax: +61 2-9888-9588

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Canadian Department of Communications Compliance Statement

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

Avis de conformité aux normes du ministere des Communications du Canada

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

EN ISO 7779

Maschinenlärminformationsverordnung 3. GSGV, 18.01.1991: Der höchste Schalldruckpegel beträgt 70 dB (A) oder weniger gemäß EN ISO 7779.

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Energy Star Program



As an Energy Star Partner, we have determined that this product meets the Energy Star guidelines for energy efficiency.

The basic objective of the Energy Star Program is to reduce environmental pollution by encouraging the manufacture and sale of equipment that uses energy more efficiently.

This printer is equipped with a sleep timer function that conforms with the standards of the Energy Star Program. This function makes it possible to reduce the amount of electrical power consumed by the printer. For maximum power savings, turn off the printer's power supply when not using the printer for extended periods of time.

For details on the sleep timer function and printer power consumption, refer to this manual.

Initial settings of the sleep timer function and power saved using the sleep timer function:

Initial Auto Sleep Setting: 15 minutes (60 minutes) Power Consumption in Auto Sleep: 6W (80W)

(): ENERGY STAR program guideline

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Please read this Operation Guide before using the machine. Keep it close to the machine for easy reference.

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



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



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



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

Symbols

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



... [General warning]



[Warning of danger of electrical shock]



. [Warning of high temperature]

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



... [Warning of prohibited action]



.. [Disassembly prohibited]

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



.. [Alert of required action]



. [Remove the power plug from the outlet]



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

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



Installation Precautions

Environment



CAUTION.

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



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



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

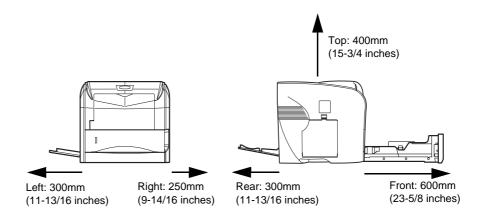


To keep the machine cool and facilitate changing of parts and maintenance, allow access space as shown below. Leave



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adequate space, especially around the vents, to allow air to be properly ventilated out of the printer.



Other Precautions

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

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

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

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Power Supply/Grounding the Machine



WARNING-

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



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



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



Other Precautions

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

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

Handling of Plastic Bags



WARNING-

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



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Precautions for Use

Cautions when Using the Machine



WARNING-

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



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



Do not damage, break or attempt to repair the power cord. Do not place heavy objects on the cord, pull it, bend it unnecessarily or cause any other type of damage.



These types of situations present a danger of fire or electrical shock.



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



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



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



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



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

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

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



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



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



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



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

Other Precautions

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

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

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

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

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

Use shielded interface cables.

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

Cautions when Handling Consumables



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

Keep the Toner Container out of the reach of children.



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

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

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



Other Precautions

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

Store all consumables in a cool, dark location.

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

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About the Operation Guide

This Operation Guide has the following chapters:

Chapter 1 - Machine Parts

This chapter explains the names of parts.

Chapter 2 - Loading Paper

This chapter explains how to load paper into your printer.

Chapter 3 - Printing

This chapter explains how to print from your PC.

Chapter 4 - Maintenance

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

Chapter 5 - Troubleshooting

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

Chapter 6 - Options

This chapter explains the options for this printer.

Chapter 7 - Specifications

This chapter lists the printer's specifications.

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Conventions

This manual uses the following conventions.

Convention	Description	Example
Italic Typeface	Used to emphasize a key word, phrase or reference to additional information.	Close the front cover. Refer to Toner Container Replacement on page 3-3.
Bold Typeface	Used to denote operation panel keys.	Press [GO]. To start printing, click OK.
Notes	Used to provide additional or useful information about a function or feature.	NOTE: For information about storing the pin, refer to step 10.
Important	Used to provide important information.	IMPORTANT: Ensure paper is not folded, curled, or damaged.
Caution	Cautions are statements that suggest <i>mechanical</i> damage as a result of an action.	CAUTION: The fuser unit inside the printer is hot. Do not touch it with your hands as it may result in a burn injury.
Warning	Used to alert users to the possibility of <i>personal</i> injury.	WARNING: High voltage is present in the charger section.

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1 Machine Parts

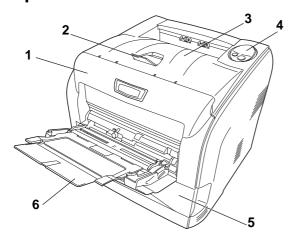
This section provides explanations and illustrations for you to determine the parts and their functions. Try to become familiar with the names and functions of these parts for correct use and optimal performance.

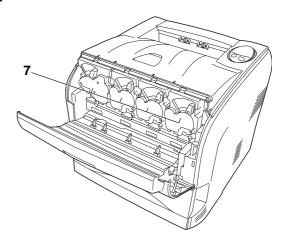
This chapter contains explanations on the following topics:

•	Components at the Front of the Printer	. 1-2
•	Components at the Left of the Printer and Internal	
	Components	. 1-2
•	Components at the Rear of the Printer	. 1-3

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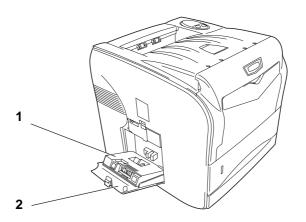
Components at the Front of the Printer





- 1 Front Cover
- 2 Paper Stopper
- 3 Top Tray
- 4 Operation Panel
- 5 Paper Cassette
- 6 MP (Multi-Purpose) Tray
- 7 Toner Container

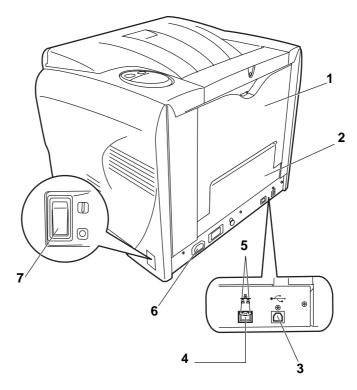
Components at the Left of the Printer and Internal Components



- 1 Waste Toner Box
- 2 Left Cover

1-2 OPERATION GUIDE

Components at the Rear of the Printer

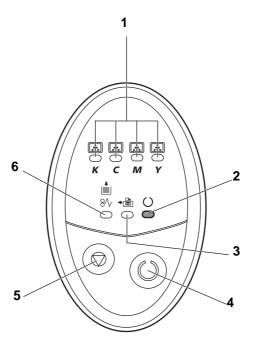


- 1 Rear Cover (Face up Tray)
- 2 Rear Subcover
- 3 USB Interface Connector
- 4 Network Interface Connector
- 5 Network Indicators
- 6 Power Cord Connector
- 7 Power Switch

IMPORTANT: If you turn the power off, you have to wait for an interval of five or more seconds before turning it back on.

OPERATION GUIDE 1-3

Operation Panel



- 1 Toner Indicators
- 2 Ready Indicator
- 3 Data Indicator
- 4 GO Key
- 5 Cancel Key
- 6 Attention Indicator

1-4 OPERATION GUIDE

Indicators

There are four types of indicators located on the top right of the printer. The indicators are used to identify the status of the printer at any time. To identify the printer status, check the indicators on the printer and then refer to the table below.

Indicator	Status	Meaning
Ready	Lit	Indicates online status (printing is possible).
(Green)	Fast Flashing	An error has occurred, but printing resumes when the key is pressed
(Green)	Slow Flashing	Offline status. You cannot print, but the printer can receive data. The printer is in sleep mode.
	Off	Printing has stopped because an error has occurred.
Data	Lit	The printer is processing data.
→ 🖹	Flashing	The printer is receiving data.
(Green)	Off	The printer is not processing data.
Attention ** Orange)	Lit	The front cover or the paper transfer unit is open. The rear cover is open while you specified duplex printing. The waste toner box is not installed, or the waste toner box is full. While an optional feeder is installed and the feeder is selected as a paper source, the paper cassette of the main unit (CASS1) is not installed correctly.
	Fast Flashing	A paper jam has occurred.
	Slow Flashing	The cassette is not inserted properly or the paper has run out.
	Off	The printer status is normal.
Toner	Lit	The printer has stopped because the toner is exhausted.
K C M Y	Slow Flashing	The toner is running low.
(Orange)		

NOTE: When the Attention indicator lights up and the Ready indicator is flashing, memory overflow, print overrun, or KPDL error may occur. Press **GO** to clear such errors.

For other combinations of the four indicators, call for service. KM-NET for Clients (software included in the CD-ROM) and COMMAND CENTER will provide more detailed information about the printer status.

OPERATION GUIDE 1-5

Keys

Refer to the following table for the name and description of the basic functions of each key.

Key	Status	Operation	Function
Cancel		Press momentarily	Stops the buzzer.
		Press for 1 second or more	Cancels data from the PC.
⊚ GO	At Ready	Press momentarily	Switches On-line / Off-line.
		Press for 3 to 10 seconds	Prints the status page after the toner indicators flashed.
		Press for 10 seconds or more	Prints the service status page after the toner indicators flashed.
	At Error	Press momentarily	Clears the error.
	Paper Empty	Press momentarily	Resumes printing by switching automatically to an available paper source.

1-6 OPERATION GUIDE

2 Loading Paper

This chapter contains explanations on the following topics:

•	General Guidelines	2-2
•	Selecting the Right Paper	2-4
•	Paper Type	2-12
•	Loading Paper	2-13

OPERATION GUIDE 2-1

General Guidelines

The machine is designed to print on standard copier paper, but it can also accept a variety of other types of paper within the limits specified below.

NOTE: The manufacturer assumes no liability for problems that occur when paper not satisfying these requirements is used.

Selection of the right paper is important. Using the wrong paper can result in paper jams, curling, poor print quality, and paper waste, and in extreme cases can damage the machine. The guidelines given below will increase the productivity of your office by ensuring efficient, trouble-free printing and reducing wear and tear on the machine.

Paper Availability

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

There are three general grades of paper: *economy*, *standard*, and *premium*. The most significant difference between grades is the ease with which they pass through the machine. This is affected by the *smoothness*, *size*, and *moisture content* of the paper, and the way in which the paper is cut. The higher the grade of paper you use, the less risk there will be of paper jams and other problems, and the higher the level of quality your printed output will reflect.

Differences between paper from different suppliers can also affect the machine's performance. A high-quality printer cannot produce high-quality results when the wrong paper is used. Low-priced paper is not economical in the long run if it causes printing problems.

Paper in each grade is available in a range of basis weights (defined later). The traditional standard weights are 60 to 105 g/m² (16 to 28lb).

Paper Specifications

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

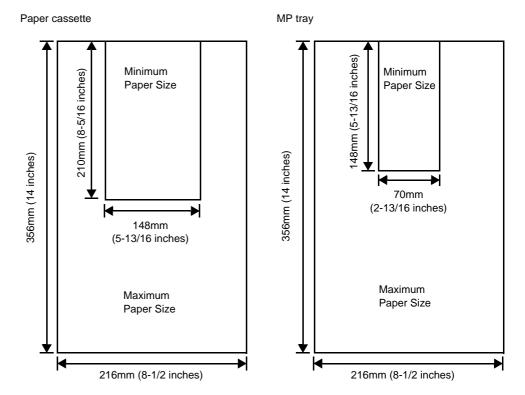
Item	Specification
Weight	Cassette: 60 to 105g/m² (16 to 28 lb/rim) MP Tray: 60 to 220g/m² (16 to 59 lb/rim)
Thickness	0.086 to 0.110mm (3.4 to 4.3 mils)
Dimensions	Refer to Paper Sizes on page 2-4
Dimensional accuracy	±0.7mm (±0.0276 inches)
Squareness of corners	90° ±0.2°
Moisture content	4% to 6%

2-2 OPERATION GUIDE

Item	Specification
Direction of grain	Long grain
Pulp content	80% or more

Minimum and Maximum Paper Sizes

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



OPERATION GUIDE 2-3

Selecting the Right Paper

This section describes the guidelines for selecting paper.

Condition

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

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

Composition

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

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

Paper Sizes

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

MP Tray:

Executive, Statement, Envelope #10, Envelope #9, Envelope Monarch, Envelope #6, Envelope C5, Envelope DL, Legal, Oficio II, Letter-R, Folio, ISO A4-R, JIS B5-R, ISO B5-R, ISO A5, JIS B6, ISO A6, Hagaki, Ofuku-Hagaki, Youkei 2, Youkei 4, 16 kai, Custom (70×148 to 216×356 mm ($2-13/16 \times 5-13/16$ to $8-1/2 \times 14$ inches))

Cassette:

Legal, Oficio II, Letter-R, Folio, ISO A4-R, JIS B5-R, ISO A5, 16 kai

Smoothness

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

Basis weight

Basis weight is the weight of paper expressed in grams per square meter (g/m²). Paper that is too heavy or too light may cause feed errors or paper jams as well as premature wear of the product. Uneven weight of paper,

2-4 OPERATION GUIDE

namely uneven paper thickness may cause multiple-sheet feeding or print quality problems such as blurring because of poor toner fusing.

The recommended basis weight is between 60 and 105g/m² (16 to 28 lib/ream) for the cassette and between 60 and 220g/m² (16 to 59 lib/ream) for the MP tray.

Paper Weight Equivalence Table

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

U. S. Bond Weight (lb)	Europe Metric Weight (g/m²)		
16	60		
17	64		
20	75		
21	80		
22	81		
24	90		
27	100		
28	105		
32	120		
34	128		
36	135		
39	148		
42	157		
43	163		
47	176		
53	199		

Thickness

The paper used with the machine should be neither extremely thick nor extremely thin. If you are having problems with paper jams, multiple feeds, and faint printing, the paper you are using may be too thin. If you are having problems with paper jams and blurred printing the paper may be too thick. The correct thickness is 0.086 to 0.110mm (3.4 to 4.3 mils).

Moisture Content

Moisture content is defined as the percent ratio of moisture to the dry mass of the paper. Moisture can affect the paper's appearance, feed ability, curl, electrostatic properties, and toner fusing characteristics.

The moisture content of the paper varies with the relative humidity in the room. When the relative humidity is high and the paper absorbs moisture, the paper edges expand, becoming wavy in appearance. When the relative humidity is low and the paper loses moisture, the edges shrink and tighten, and print contrast may suffer.

Wavy or tight edges can cause jams and alignment anomalies. The moisture content of the paper should be 4 to 6%.

To ensure correct moisture content, it is important to store the paper in a controlled environment. Some tips on moisture control are:

- Store paper in a cool, dry location.
- Keep the paper in its wrapping as long as possible. Re-wrap paper that is not in use.
- Store paper in its original carton. Place a pallet etc. under the carton to separate it from the floor.
- After removing paper from storage, let it stand in the same room as the machine for 48 hours before use.
- Avoid leaving paper where it is exposed to heat, sunlight, or damp.

Paper Grain

When paper is manufactured, it is cut into sheets with the grain running parallel to the length (long grain) or parallel to the width (short grain). Short grain paper can cause feeding problems in the machine. All paper used in the machine should be long grain.

Other Paper Properties

Porosity: Indicates the density of paper fiber.

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

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

Electrostatic discharge: During the printing process the paper is electrostatically charged to attract the toner. The paper must be able to release this charge so that printed sheets do not cling together in the *Output Tray*.

Whiteness: The contrast of the printed page depends on the whiteness of the paper. Whiter paper provides a sharper, brighter appearance.

Quality control: Uneven sheet size, corners that are not square, ragged edges, welded (uncut) sheets, and crushed edges and corners can cause the machine to malfunction in various ways. A quality paper supplier should take considerable care to ensure that these problems do not occur.

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Packaging: Paper should be packed in a sturdy carton to protect it from damage during transport. Quality paper obtained from a reputable supplier is usually correctly packaged.

Special Paper

The following types of special paper can be used:

- Thin paper (60 to 64 g/m²)
- Thick paper (90 to 220 g/m²)
- · Colored paper
- · Recycled paper
- Overhead projector transparencies
- Cardstock
- Coated paper
- Envelopes
- Labels

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

Since the composition and quality of special paper vary considerably, special paper is more likely than white bond paper to give trouble during printing. No liability will be assumed if moisture and so forth given off during printing on special paper causes harm to the machine or operator.

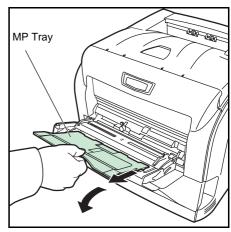
NOTE: Before purchasing any type of special paper, test a sample on the machine and check that printing quality is satisfactory.

Transparency

This printer is available for monochorome printing on transparencies. Transparencies must be fed to the *MP Tray*. One transparency can be loaded at a time.

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

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

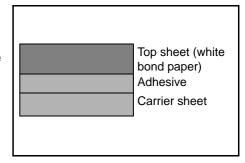


Labels

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

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

Label paper has a structure comprising of three layers, as shown in the diagram. The top sheet is printed on. The adhesive layer consists of pressuresensitive adhesives. The carrier sheet (also called the linear or backing sheet) holds the labels until used. Due to the complexity of its composition, adhesive-

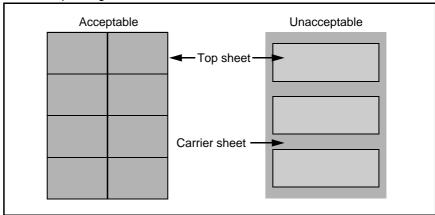


backed label paper is particularly likely to give printing problems.

Adhesive label paper must be entirely covered by its top sheet, with no spaces between the individual labels. Labels with spaces in between are liable to peel off, causing serious paper jam problems.

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Some label paper is manufactured with an extra margin of top sheet around the edge. Do not remove the extra top sheet from the carrier sheet until after printing is finished.

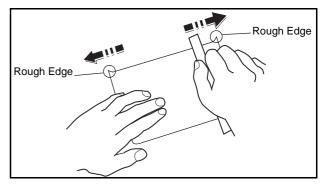


The table below lists the specifications for adhesive label paper.

Item	Specification
Weight of top sheet	44 to 74g/m² (12 to 20 lb/ream)
Composite weight	104 to 151g/m² (28 to 40 lb/ream)
Thickness of top sheet	0.086 to 0.107mm (3.9 to 4.2 mils)
Composite thickness	0.115 to 0.145mm (4.5 to 5.7 mils)
Moisture content	4 to 6% (composite)

Postcards

Up to 10 postcards can be loaded at a time. Fan the stack of postcards and align the edges before loading them in the MP tray. Make sure the postcards you are going to set are not curled. Feeding curled postcards may cause paper jams.

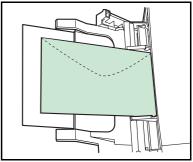


Some postcards have rough edges on the back (those are created when the paper is cut). In this case, put the postcards on a flat place and rub the edges with, for example, a ruler to smooth them.

Envelopes

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

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



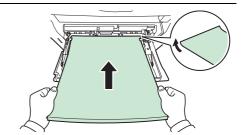
Normally, envelopes have a diagonal grain direction. Refer to *Paper Grain on page 2-6*. This direction can easily cause wrinkles and creases when envelopes pass through the printer. Before purchasing envelopes, make a test print to check whether the printer accepts the envelope.

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

Thick Paper

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

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



Colored Paper

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

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Preprinted Paper

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

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

Recycled paper

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

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

Paper Type

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

A different paper type setting can be made for each paper source including the MP tray. Not only can preset paper types be selected, but it is also possible for you to define and select customized paper types. Paper type can be changed using the printer driver and *Configuration Tool*. The following types of paper can be used.

	Paper source					
Paper Type			Paper Weight			
	MP tray Paper Cassette		Range	Display in KM-NET for Clients	Duplex path (MP tray available only in Cassette mode)	
Plain	Yes	Yes	75 to 90g/m ²	3	Yes	
Transparency	Yes	No	Transparency	8	No	
Preprinted	Yes	Yes	75 to 90g/m ²	3	Yes	
Labels	Yes	No	105 to 135g/m ²	5	No	
Bond	Yes	Yes	90 to 105g/m ²	4	Yes	
Recycled	Yes	Yes	75 to 90g/m ²	3	Yes	
Vellum	Yes	No	Less than 64g/m ²	1	No	
Rough	Yes	Yes	90 to 105g/m ²	4	Yes	
Letterhead	Yes	Yes	75 to 90g/m ²	3	Yes	
Color	Yes	Yes	75 to 90g/m ²	3	Yes	
Prepunched	Yes	Yes	75 to 90g/m ²	3	Yes	
Envelope	Yes	No	135 to 170g/m ²	6	No	
Cardstock	Yes	No	135 to 170g/m ²	6	No	
Coated	Yes	No	90 to 105g/m ²	4	No	
Thick	Yes	No	135 to 170g/m ²	6	No	
High quality	Yes	Yes	75 to 90g/m ²	3	Yes	
Custom 1 (to 8)*	Yes	Yes	75 to 220g/m ²	3	Yes	
Yes: Can be stored No: Cannot be stored						

^{*} This is a paper type defined and registered by the user. Up to eight types of user settings may be defined. User can also enable or disable the duplex path when using Custom. For details, refer to *KM-NET for Clients Operation Guide*.

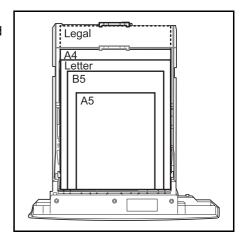
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Loading Paper

The following explains the procedure for loading paper in the cassette and the MP tray.

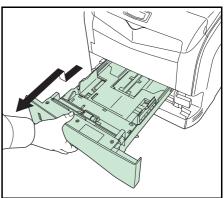
Loading Paper into the Cassette

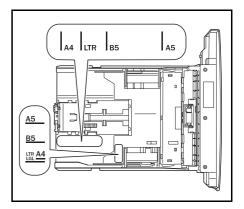
The paper cassette can accommodate A5 to A4/Letter and Legal size paper, and can hold approximately 250 sheets.



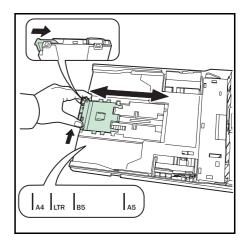
1 Pull the paper cassette all the way out of the printer.

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

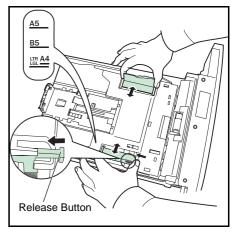




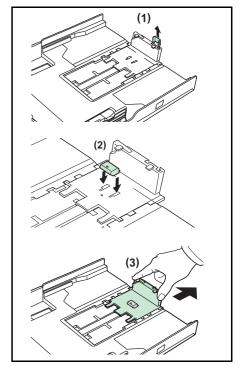
Adjust the paper length guide to the paper size required.



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

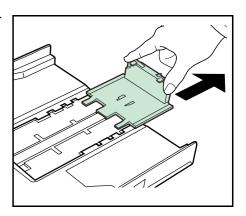


If using Folio or Oficio II paper, remove the green stopper (1) from the paper length guide and fix it on the paper length guide (2). Pull the paper length guide (3) to the desired paper size.

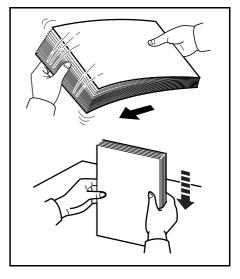


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If using Legal paper, pull the paper length guide all the way out, without stopper.

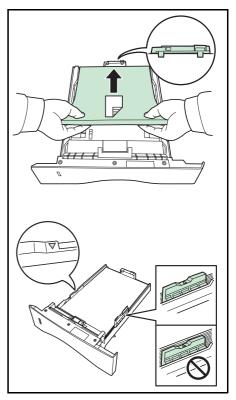


Fan the paper, then tap it on a level surface to avoid media jams or skewed printing.

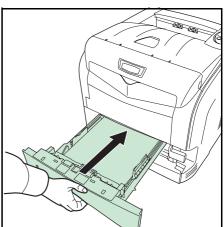


Place the paper in the paper cassette. Ensure the side to be printed is facing down and the paper is not folded, curled, or damaged.

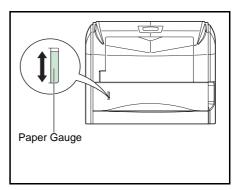
NOTE: Do not load more paper than will fit under the load limits on the paper guides.



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



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

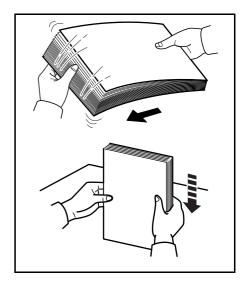


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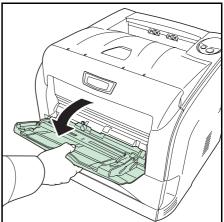
Loading Paper into the MP (Multi-Purpose) Tray

The MP tray can accommodate various paper sizes and can hold approximately 50 sheets of paper.

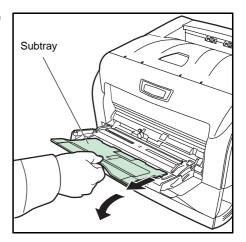
1 Fan the media (paper/ transparencies), then tap it on a level surface to avoid paper jams or skewed printing.



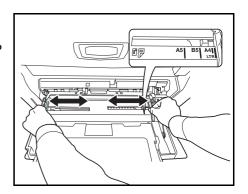
2 Pull the MP tray towards you until it stops.



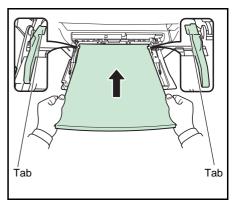
3 Pull out the subtray and unfold the flap.



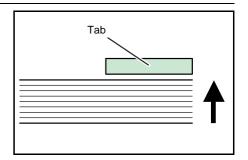
Adjust the position of the paper guides on the MP tray. Standard paper sizes are marked on the MP tray. For standard paper sizes, slide the paper guides to the corresponding mark.



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



NOTE: Do not load more paper than exceeds the tab of the MP tray.



2-18 OPERATION GUIDE