



FS-1750

FS-3750

Installation Manual

Kyocera Laser Printer

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 6. The emulation mode can be changed by following the procedures described in *Chapter 2* in the *User's Manual* (PDF file) provided on the *Kyocera Digital Library* CD-ROM.

Notice

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

No responsibility is assumed if accidents occur while the user is following the instructions in this manual. No responsibility is assumed for defects in the printer's firmware (contents of its read-only memory).

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This Kyocera page printer uses PeerlessPrintXL to provide the HP LaserJet compatible PCL6 language emulation. PeerlessPrintXL is a trademark of The Peerless Group, Redondo Beach, CA 90278, U.S.A.

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

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FCC statement

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.

Note

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

- ☐ Reorient or relocate the receiving antenna.
- ☐ Increase the separation between the equipment and 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 manufacturer for compliance could void the user's authority to operate the equipment.

Shielded circular cable should be used for interfacing with the computer.

Caution to user

Any modification without prior permission may cause harmful interference.

If any modification/change is introduced to this equipment without prior permission, Kyocera as the manufacturer cannot guarantee compliance with FCC rules.

To use equipment which does not comply with FCC rules is prohibited.

The printer may be optionally installed with the following units:

Conforming to the Class A limits

- ☐ HS-3E Bulk Paper Stacker (for FS-3750)
- ☐ PF-7E Bulk Paper Feeder

Conforming to the Class B limits

- ☐ EF-1 Envelope Feeder
- ☐ DU-20 Duplexer (for FS-3750)
- ☐ DU-21 Duplexer (for FS-1750/FS-3750)
- ☐ HS-20 Paper Handler/Stacker (for FS-3750)
- ☐ HS-21 Paper Handler/Stacker (for FS-1750/FS-3750)
- ☐ PF-20/PF-20mini Paper Feeder (for FS-3750)
- ☐ PF-21/PF-21mini Paper Feeder (for FS-1750/FS-3750)
- ☐ SO-6 Sorter/Stacker
- ☐ ST-20 Bulk Paper Stacker

Interface connectors

Important note on the interface connectors

Be sure to turn off printer power before connecting or disconnecting an interface cable to the printer. For protection against static discharge which may be applied to the printer's internal electronics through the interface connector(s), keep any interface connector which is not in use capped using the protective cap supplied.

✎ Use shielded interface cable.

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 825-1.

Caution: Laser radiation when open. DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.

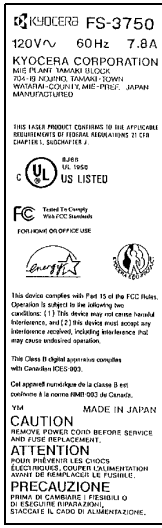
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



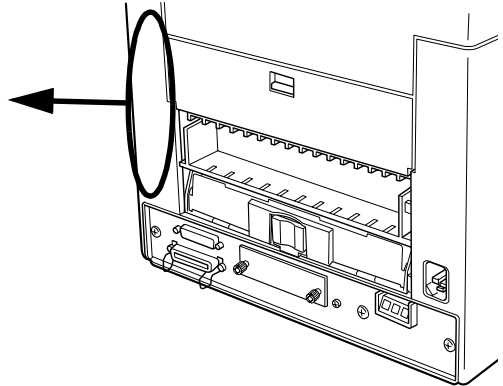
(Philippines)



(European/
Asian countries)



(U.S.A./Canada)



The labels shown are affixed to the FS-3750. Similar labels are affixed to same location on the FS-1750.

CDRH regulations

The Center of 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

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

IMPORTANT SAFEGUARDS

- 1.** Read all of these instructions and save these instructions for later use.
- 2.** Unplug this product from the wall outlet before cleaning.
- 3.** Do not use this product near water.
- 4.** Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
- 5.** Slots and openings in the cabinet and the back are provided for ventilation to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
- 6.** This product is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
- 7.** Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
- 8.** If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord ampere rating.
- 9.** Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
- 10.** Except as explained elsewhere in User's Manual, do not attempt to service this product yourself. Removing covers may expose you to dangerous voltage points or other risks. Refer all servicing in those compartments to service personnel.
- 11.** Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A— When the power cord or plug is damaged or frayed.
 - B— If liquid has been spilled into the product.
 - C— If the product has been exposed to rain or water.
 - D— If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
 - E— If the product has been dropped or the cabinet has been damaged.

Declaration of Conformity (U.S.A.)

Model Number: Page Printer FS-1750/FS-3750
(as tested with enhancement optional units: EF-1, PF-21, DU-21,
HS-21 and ST-20 etc.)

Trade Name: Kyocera

Responsible Party: Kyocera Electronics Inc.

Address: 11465 John's Creek Parkway, Suite #250 Duluth, GA 30097, U.S.A.

Telephone number: 770-623-2150

Fax number: 770-623-2151

Contact person for technical matter: Paul Bosak
Phone: 770-623-2163

Manufacturer's name: Kyocera Corporation, Printer Division

Manufacturer's address: 2-14-9 Tamagawadai, Setagaya Ward,
Tokyo 158-8610, 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.

CE Marking Directive

according to Council Directive 89/336/EEC and 73/23/EEC

Manufacturer's name: Kyocera Corporation, Printer Division

Manufacturer's address: 2-14-9 Tamagawadai, Setagaya Ward, Tokyo 158-8610, Japan

declares that the product

Product name: Page Printer

Model number: FS-1750/FS-3750 (as tested with enhancement optional units: EF-1,
PF-21, DU-21, HS-21 and ST-20 etc.)

conforms to the following product specifications.

EN 55 022:1998 Class B, if operated without PF-7E and without HS-3E
EN 55 022:1998 Class A, if operated with PF-7E and with HS-3E

EN 61 000-3-2:1995

EN 50 082-1:1992
IEC 801-2:1991
IEC 801-3:1984
IEC 801-4:1988

EN 60 950:1992+A1+A2+A3+A4
EN 60 825-1+A11:1994

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 ELECTRONICS EUROPE GmbH

Mollsfeld 12

40670 Meerbusch, Germany

Phone: +49 21 59 918 0

Fax: +49 21 59 918 100

Declaration of Conformity (Australia)

Manufacturer's name: Kyocera Corporation, Printer Division

Manufacturer's address: 2-14-9 Tamagawadai, Setagaya Ward, Tokyo 158-8610, Japan

declares that the product

Product name: Page Printer

Model number: FS-1750/FS-3750 (as tested with enhancement optional units:

EF-1, PF-21, DU-21, HS-21 and ST-20 etc.)

Description of device: This Page Printer Model FS-3750 is the 18ppm (FS-1750 is the 14ppm); A4 size and utilized plane paper; laser; dry toner etc. The printer can be equipped with several enhancement optional units as a paper feeder as PF-21, a duplexer as DU-21, a sorter as ST-20 etc.

Conforms to the following product specifications.

AS/NZS 3548: 1995 (EN 55 022:1994 Class B, if operated without PF-7E and without HS-3E)
 (EN 55 022:1994 Class A, if operated with PF-7E and with HS-3E)

IEC60950 (EN 60 950:1992+A1+A2+A3+A4)

IEC60825-1 (EN 60 825-1:1994+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 the procedures that guarantee the conformity
 Other technical information.

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

KYOCERA ELECTRONICS AUSTRALIA PTY., LTD

Unit 6, 112 Talavera Road, North Ryde NSW 2113, Australia

Phone: +61 2-9888-9999

Fax: +61 2-9888-9588

Canadian Department of Communications compliance statement

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

Avis de conformité aux normes du ministère des Communications du Canada

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

ISO 7779

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

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Prolonged Non-Use and Moving the Printer

Prolonged Non-use

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

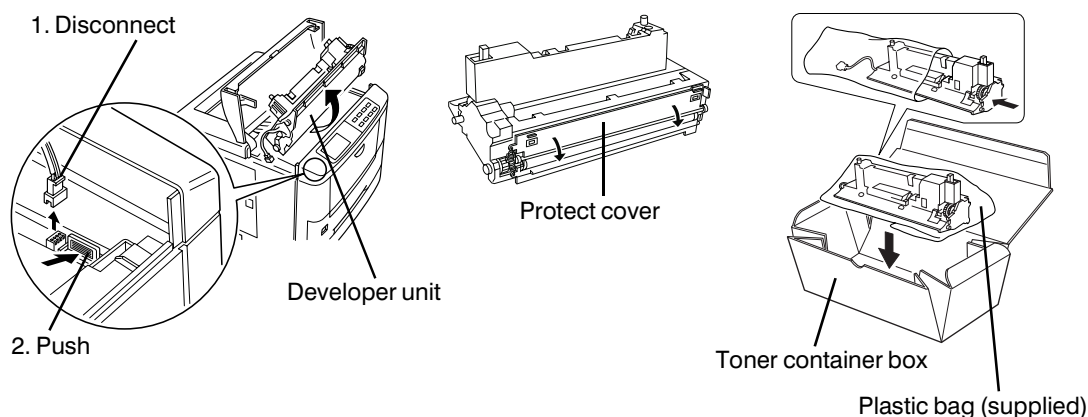
We recommend you consult with your dealer about the additional actions you should take to avoid possible damages that may occur when the printer is used next time.

Moving the Printer

When you move the printer:

- ☐ Move it gently.
- ☐ Keep it as level as possible, to avoid spilling toner inside the printer.
- ☐ If you need to move the printer to another location, first remove the toner container, waste toner bottle, and developer unit. After removing the developer unit from the printer, put it into the supplied plastic bag and place it into the box in which the toner container is packaged. Make sure that the waste toner bottle is securely capped and place it in the plastic bag together with the toner container. Be sure to consult a service-man before attempting long-distance transportation of the printer.

(1) Remove the developer unit. (2) Close the protect cover. (3) Pack the developer unit.



To reinstall the developer unit in the printer, use the reverse procedure of the above.

ENERGY STAR®



As an ENERGY STAR Partner, Kyocera Corporation has 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 the instruction manual provided with the printer.

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

	Initial sleep mode setting	Power consumption in sleep mode
FS-1750	30 minutes (30 minutes)	14 W (30 W)
FS-3750	30 minutes (60 minutes)	16 W (45 W)

() : ENERGY STAR program guideline

The action program Energy 2000



Energy partnership for a sustainable development.
We get further – with all our energy.

Kyocera ECO-PRODUCT



This product has been developed and manufactured with the express interest of reducing the impact on the environment.

Using Kyocera's innovative cartridge free technology, Kyocera has created an advanced printing system that does not require the wasteful replacement and disposal of a cartridge.

Introduction

The Kyocera laser printer has many extremely desirable features. It has been designed to make a contribution to a cleaner environment as well as to represent the latest generation of page printer technology.

Maintenance Features

- **Compact design**

Thanks to the inboard cassette configuration, the printer requires no more space than the average computer.

- **Ultra long life modules**

The main modules in this laser printer such as the drum, developer unit, and fuser unit have been designed for ultra long life.

- **Amorphous silicon drum**

The drum has been developed using Kyocera's unique ceramic technology using amorphous silicon.

Print Engine Features

- **Superb print quality**

Using 1200 dots-per-inch in "Fast 1200 mode" or "Fine 1200 mode", the printout is close to typeset quality. Also, with Kyocera Image Refinement (KIR) technology, high quality printing can be achieved even at 600 dpi and 300 dpi.

- **High speed**

A4 sizes typically print at the rate of 18 (14 for the FS-1750) pages per minute. (Actual time varies according to page complexity)

- **Large paper capacity**

Approximately 250 sheets can be loaded into the paper cassette, and about 100 sheets can be loaded into the MP tray.

- **Wide variety of print media**

As well as standard paper, the printer will print on Transparency, labels and other types of special purpose media.

- **Sleep mode**

Conserves energy during the printer's idle periods.

- **Ecoprint mode**

Extends the toner yield by reducing the amount of toner used on the page.

- **Standard bi-directional parallel interface**

Supports high-speed data exchange with the computer.

Software Features

- **Wide variety of available fonts**

The printer comes with 80 PCL/PS compatible fonts installed.

- **Kyocera's own PRESCRIBE 2e printer language**

Allows advanced graphic capabilities that allow you to print out any outline shape or solid form, as well as providing a variety of special effects such as patterned fills, gray-scale shading, a user accessible print image model, and multiple page orientations and print directions within the same page.

- **Automatic rotation of fonts and graphics**

Images and fonts are automatically rotated to match the page orientation.

- **A wide variety of internal symbol sets**

The printer supports most PCL 6 symbol sets.

- **Display of printer messages in any of four languages**

English, French, German, or Italian. As an option it is also possible to download the messages in other languages. Please contact your Kyocera dealer.

- **Memory card slot for option fonts, macros, forms, etc.**

Data in the memory card can be selectively read from the printers control panel.

- **Simple network management protocol (SNMP) compliance**

Offers network managers complete open network management.

- **Kyocera PrintMonitor**

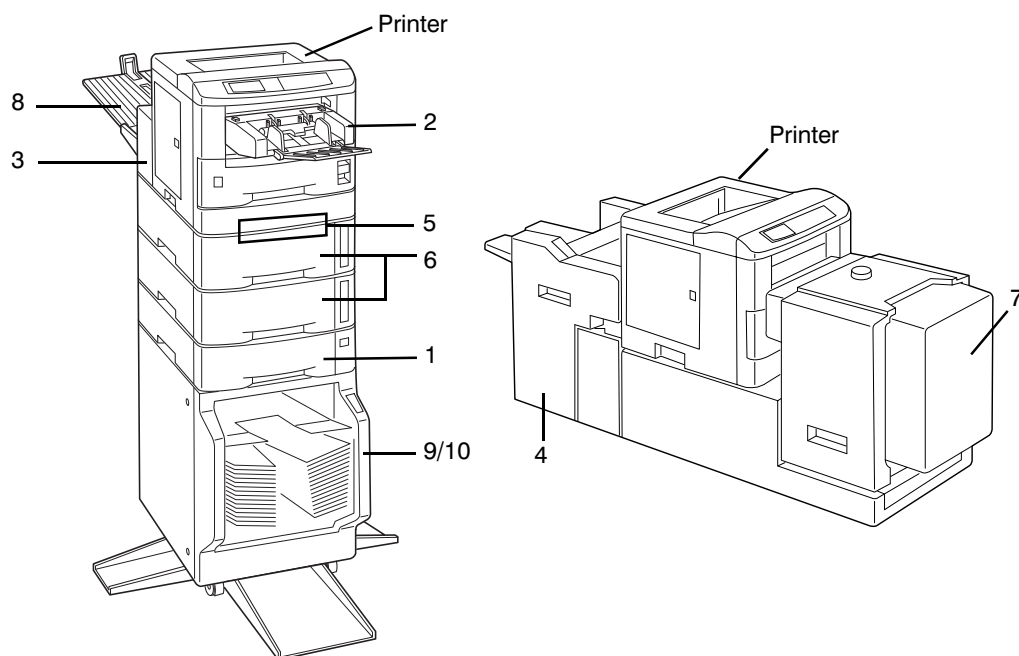
Provides network wide management of the Kyocera FS family of laser printers. Refer to the readme file located in the Kyocera Digital Library CD-ROM (included with the printer) for details.

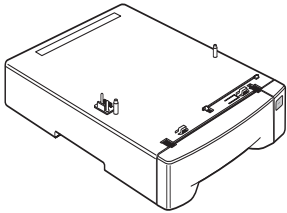
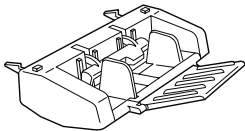
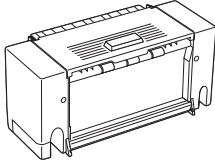
- **PDF417 two-dimensional bar codes**

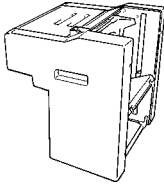
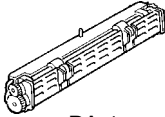
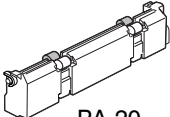
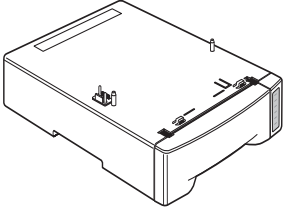
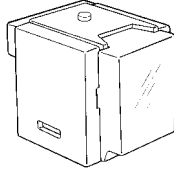
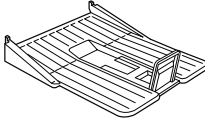
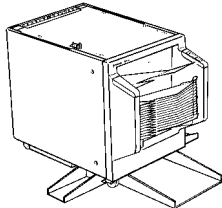
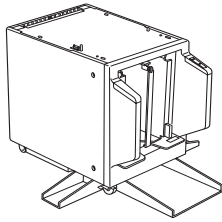
The printer includes the capability that allows the user to implement the two-dimensional stacked bar code symbology, PDF 417, or Portable Data File 417.

Options

The following options are available for the printer.



1	DU-20 (Duplexer for FS-3750) DU-21 (Duplexer for FS-1750/FS-3750) Performs duplex printing. Attaches to the bottom of the printer.	
2	EF-1 (Envelope feeder) Allows continuous feeding of envelopes and postcards. Can be installed by removing the MP tray from the printer.	
3	HS-20 (Paper handler/stacker for FS-3750) HS-21 (Paper handler/stacker for FS-1750/FS-3750) Required in order to use the printer with the DU-20/DU-21 duplexer, the SO-6 sorter/stacker, or the ST-20 stacker.	

4	HS-3E (Bulk paper stacker for FS-3750) Large-capacity stacker that holds up to approximately 2,000 sheets of paper. Attaches to the rear of the printer.	
5	PA-1/PA-20 (Paper path adaptor) Necessary when optional feeders, sorters and duplex units are attached to the printer. (The point of attachment varies depending on the option installed.)	  PA-1 PA-20
6	PF-20/PF-20mini (Paper feeder for FS-3750) PF-21/PF-21mini (Paper feeder for FS-1750/FS-3750) Holds approximately 500 sheets of paper. Up to two paper feeders can be attached to the bottom of the printer unit. However, the PF-20mini/PF-21mini cannot be used together with options such as duplexers or sorters.	
7	PF-7E (Bulk paper feeder) Holds up to about 2,000 sheets of paper. Can be installed by removing the MP tray from the printer.	
8	PT-4 (Face-up output tray for FS-1750) This is a face-up output tray. It attaches to the rear of the printer.	
9	SO-6 (Sorter/stacker) A sorter stacker providing 15 sorter trays and 1 bulk tray. Attaches to the bottom of the printer.	
10	ST-20 (Bulk paper stacker) Large-capacity stacker that holds up to approximately 1,500 sheets of paper. Attaches to the bottom of the printer.	

Guide to the Manual

Unless specifically stated otherwise, information in this manual applies to printer models FS-1750/FS-3750. The printer illustrations used in this manual are of the FS-3750.

Installation Manual (This booklet)

The *Installation Manual* is this booklet. This manual guides you through the following topics:

- ☐ Installation
- ☐ Printer operation

CD-ROM (Kyocera Digital Library)

The CD-ROM supplied contains the printer User's Manual, PRESCRIBE 2e Programming Manual, and PDF417 Two Dimensional Bar Code Implementation Manual. To gain access to these documents, insert the CD-ROM into the appropriate drive and follow the instructions on the insert accompanying the CD-ROM. To view these documents, you need the Adobe Acrobat software installed in your computer. For details, read the instructions on the CD-ROM package.

The User's Manual guides you through topics concerning the operations and maintenance of the printer.

User's Manual (on CD-ROM):

- ☐ Installation
- ☐ Printer operation
- ☐ Control panel operations
- ☐ Fonts
- ☐ Maintenance and troubleshooting

PRESCRIBE 2e Programming Manual (on CD-ROM):

- ☐ PRESCRIBE 2e command reference
- ☐ Fonts
- ☐ Bar codes
- ☐ Printer permanent parameters
- ☐ Emulation

PDF417 Two Dimensional Bar Code Implementation Manual (on CD-ROM):

- ☐ PDF417 overview
- ☐ PRESCRIBE 2e commands for PDF417

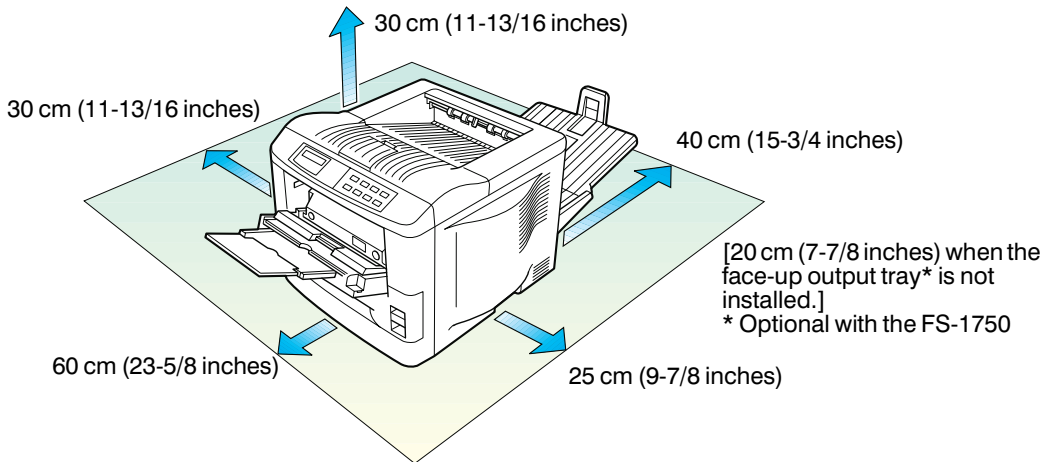
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1. Positioning the Printer

Clearance

Allow at least the necessary minimum clearance around the printer (see below). A total space of 92 cm by 61 cm by 138 cm (36-1/4 by 24-1/16 by 54-5/16 inches) is needed.



Places to Avoid

Avoid installing the printer in locations subject to:

- ☐ Direct drafts of hot or cold air
- ☐ Direct drafts from outside (Avoid locations near doors leading outside.)
- ☐ Sudden temperature or humidity changes
- ☐ Sources of high temperature, for example, near stoves or radiators
- ☐ Excessive dust
- ☐ Vibration
- ☐ Ammonia or other harmful fumes. (If you are planning to fumigate the room, or make liberal use of insecticide, remove the printer first!)
- ☐ Excessive sunlight or humidity
- ☐ Lack of ventilation
- ☐ Low air pressure, e.g., located more than 2000 meters (6500 feet) above sea level

Basic requirements

The printer will work best if it is installed in a location that is:

- ☐ Near the computer
If the parallel interface is used to connect the printer to the computer, the connecting cable should be shielded type and not be longer than 3 meters (10 feet).
- ☐ Level and well supported
Place the printer on a sturdy table or desk. Do not place the printer on an unstable cart, stand, or table. The printer may fall, causing injury, or serious damage to the printer.
- ☐ Near an AC wall outlet, preferably one that can be used for the printer alone (see section *Power Supply on next page*).

Power requirements are:

Voltage	120 V (U.S.A./Canada), 220 to 240 V (European countries), ±10 % at each voltage
Frequency	60 Hz (120 V), ±2 % 50/60 Hz (220 to 240 V), ±2 %
Current capacity	FS-1750: Max. 5.8 A at 120 V, or Max. 3 A at 220 to 240 V FS-3750: Max. 7.8 A at 120 V, or Max. 4 A at 220 to 240 V

The outlet should be earthed, or an adapter should be used.

If an extension cord is used, the total length of the power cord plus extension should be 5 meters (17 feet) or less.

- ☐ Well ventilated, not too hot or cold, and not too damp or dry

Temperature	10 to 32.5 °C (50 to 90.5 °F)
Humidity	20 to 80 %

If you install the printer where the temperature or humidity is outside the above ranges, you may not get the best print quality, and there will be an increased chance of paper jams.

Power Supply

The printer should not be on the same power circuit as an air conditioner, fluorescent light, copier, or shredder, because these devices generate electrical noise on the power line. If it must share a power circuit with equipment like this, a high-frequency noise filter or isolation transformer is advisable. (Filters and transformers are available commercially.)

Avoid using plug multipliers to connect a large number of devices on the same circuit as the printer.

If the power from the outlet itself appears to be unstable, a line stabilizer should be used. In places where the voltage tends to fluctuate, it may be necessary to install a voltage regulator.

As the disconnect device is not incorporated in the printer's AC primary circuit, an easily accessible socket outlet must be provided near the equipment.

If the printer is used with the optional Sorter (SO-6) or Stacker (ST-20), in order to avoid short-circuiting, it should be ensured that these devices are plugged securely into their respective power outlets.

Da kein Trennschalter in den Wechselstrom-Primärkreis des Druckers eingebaut ist, muß eine leicht zugängliche Steckdose in der Nähe des Gerätes vorhanden sein.

Wenn der Drucker mit dem gesonderten Sorter (SO-6) oder Stapler (ST-20) verwendet wird, muß darauf geachtet werden, daß diese Geräte einwandfrei an separate Steckdosen angeschlossen sind, um Kurzschluß zu vermeiden.

2. Unpacking and Inspection

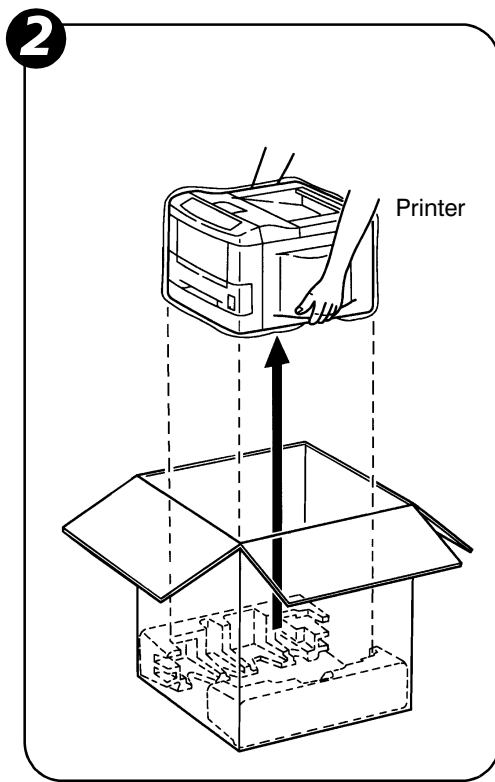
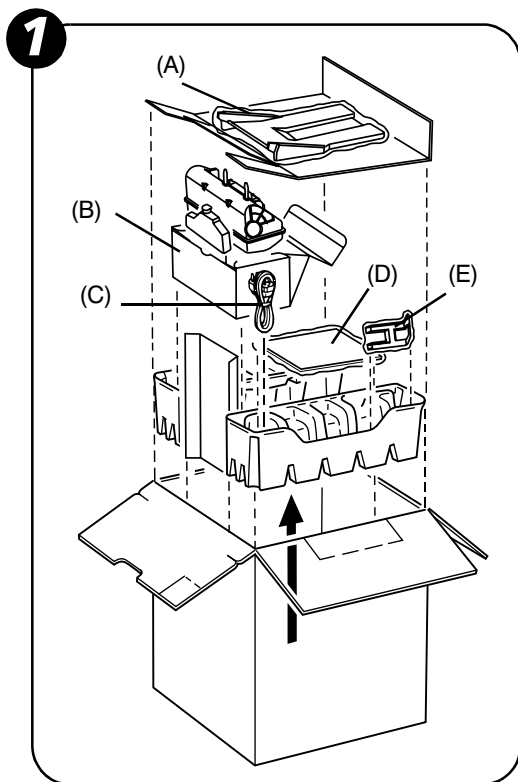
The printer is packed as shown below. Unpack the printer following figures 1 and 2 on the next page. While unpacking it, check that the listed parts are all accounted for.

Examine the package for any signs of damage that may have been caused during transportation. If the carton is found to be badly damaged, leave the carton unopened and immediately notify the dealer from whom you purchased the printer.

Save the box and other packing materials in case you have to repack the printer for transportation at a later date.

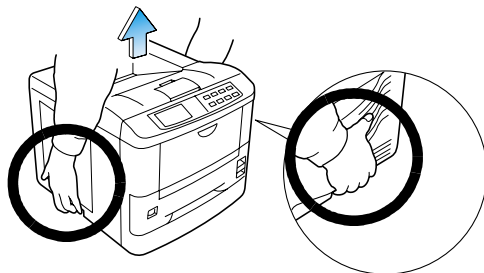
List of Shipped Components

- ☐ (A) Face-up Output Tray (FS-3750 only)
- ☐ (B) Toner Kit (Box for the Developer Unit)
- ☐ (C) Power Cord
- ☐ (D) Installation Manual and Kyocera Digital Library (CD-ROM), including the printer drivers and manuals.
- ☐ (E) Paper Stopper (FS-3750 only)



To remove the printer from the box, grasp the handholds on either side of the printer. Lift the printer from the carton as shown below.

- ◆ **Always use these handholds whenever you lift or move the printer.**
- ◆ **The handhold on the right side of the printer doubles as the memory card slot. Be sure to remove the memory card first, if inserted, before lifting or moving the printer.**



3. Names of Parts

This section takes you on a guided tour of the printer, pointing out its major parts. The part names introduced here will be used throughout this manual.

Symbols appearing with the part names have the following meanings.

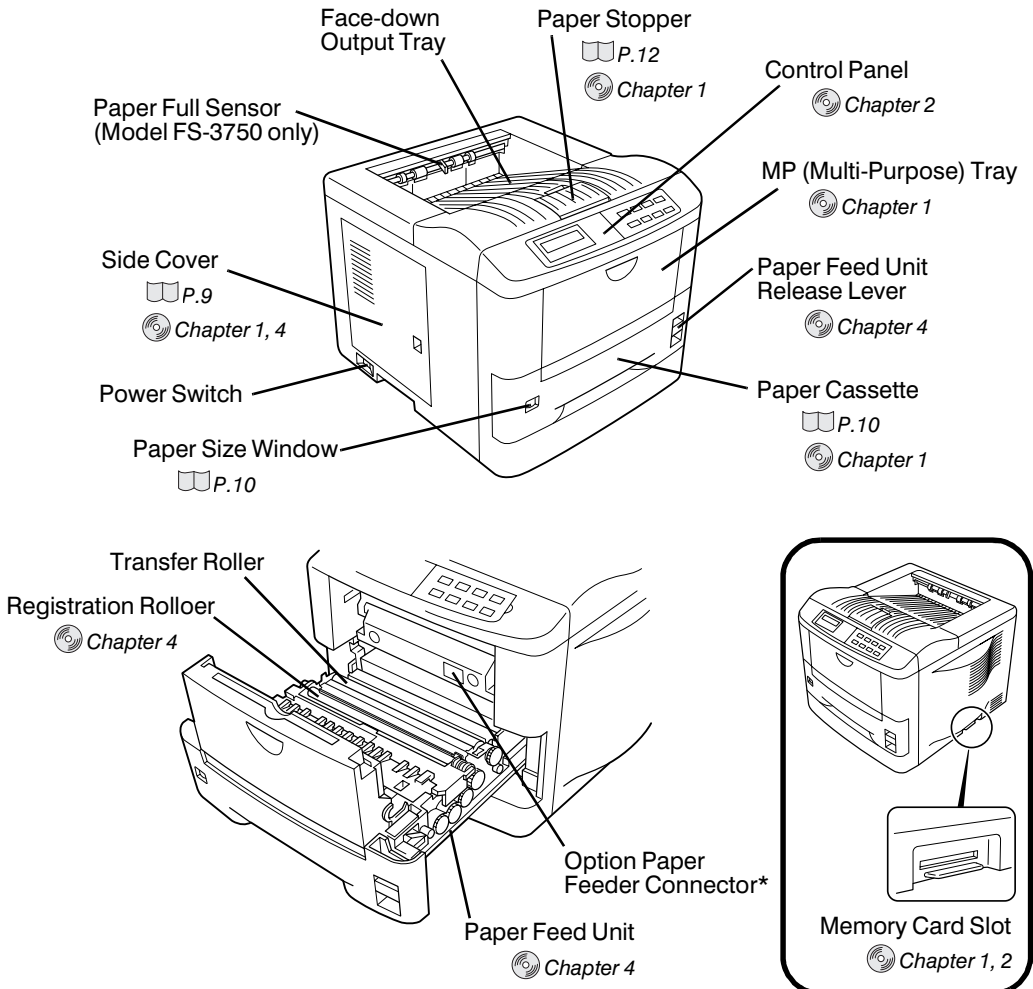


--- See page XX in this manual.

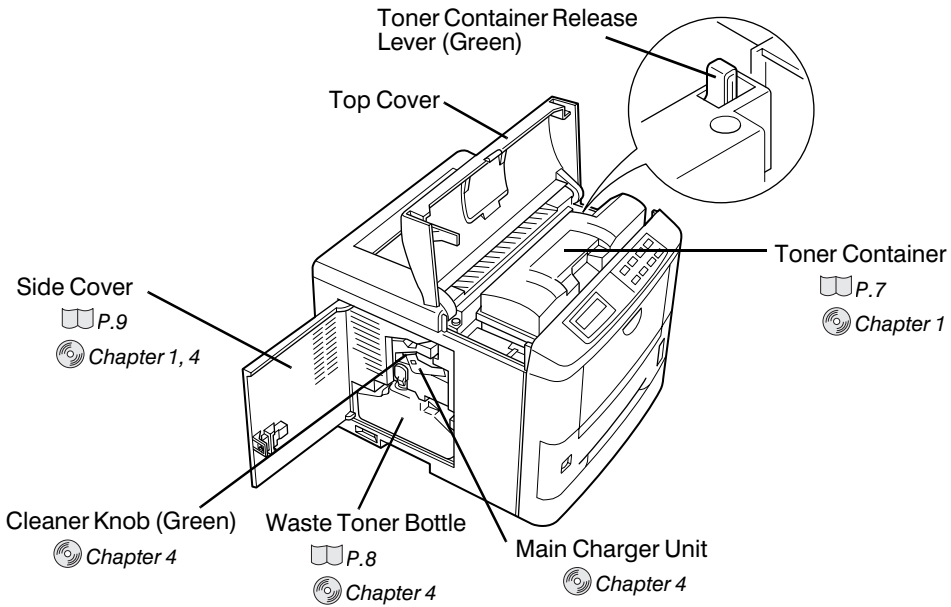


--- See Chapter or Appendix XX in the *User's Manual* (PDF file) provided on the *Kyocera Digital Library* CD-ROM.

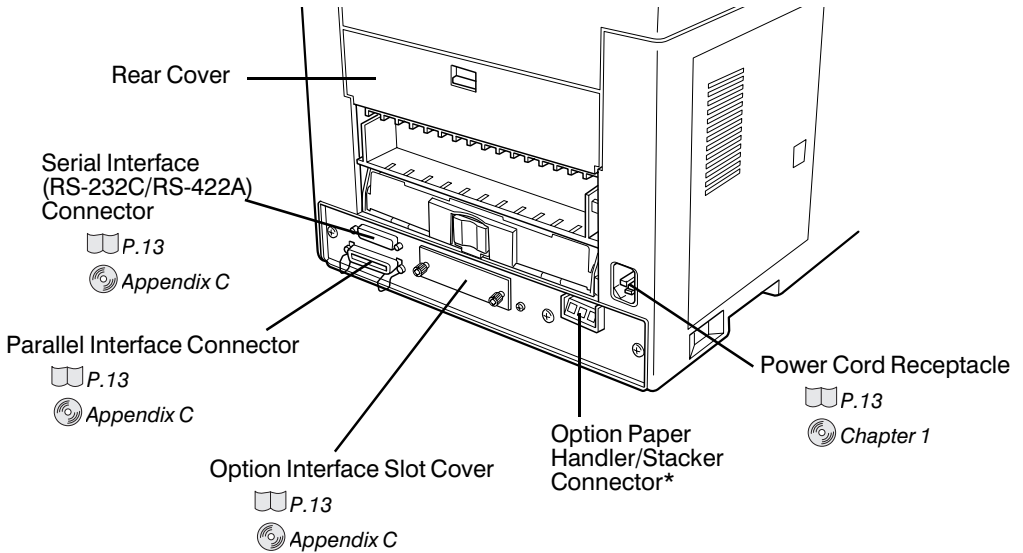
Front View



Interior View



Rear View



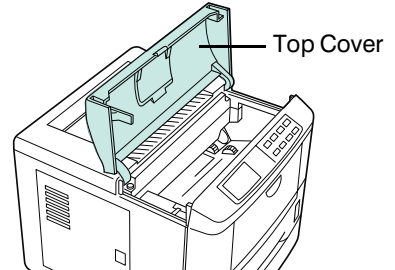
*: To protect the printer against static discharge, the connector must be covered with the supplied protective cap when not in use.

4. Setting Up and Interfacing

Before you can use the printer for the first time, you must set up the printer by installing the printer components and interfacing with the computer. Follow the steps that follow.

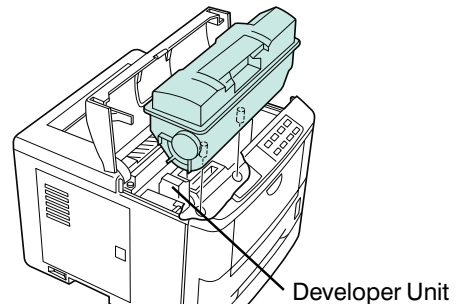
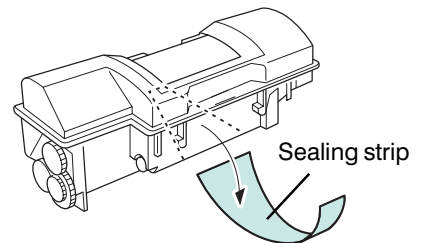
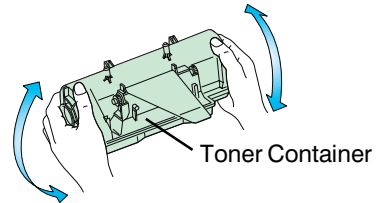
1—Open the Top Cover

1. Remove the packing tape from the printer.
2. Open the printer top cover all the way.



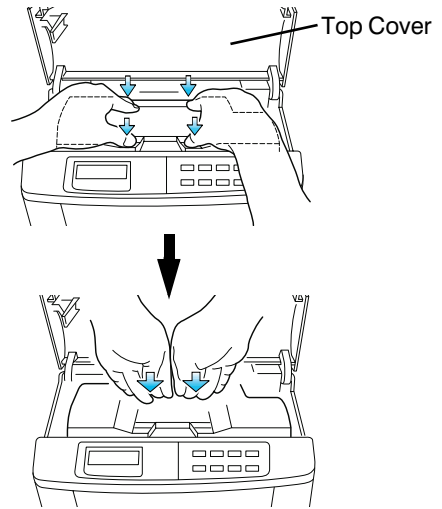
2—Install the Toner Container

1. Take the toner container from the toner kit.
2. With the label side down, thoroughly shake the toner container (in the direction of the arrow) ten times or more to loosen and mix the toner inside.
3. The bottom of the toner container is sealed with a sealing strip. Peel off the seal on the toner container and carefully pull off and dispose of the sealing strip.
- ✎ **Be sure to peel the seal off the toner container before the toner container is fitted into the developer unit.**
4. Install the toner container on the developer as show in the figure.



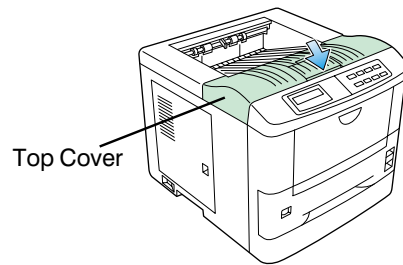
- 5.** When the toner container is installed correctly on the developer, push the top of the container unit ("**PUSH HERE**") until it locks in.

✎ **Make sure that the toner container is properly locked in the printer.**



3—Close the Top Cover

Close the top cover by pressing the arrowed part in this figure.



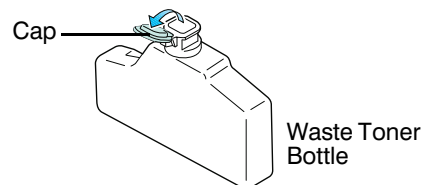
4—Install the Waste Toner Bottle

The waste toner bottle is in the toner kit supplied with the printer. The waste toner bottle must be installed in the printer.

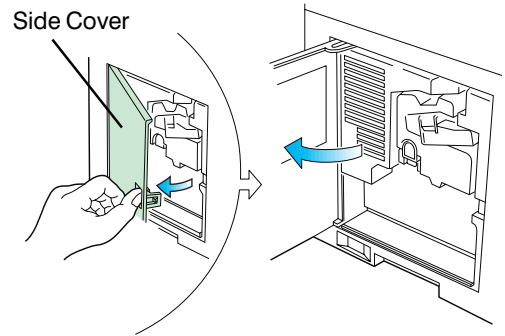
Install the waste toner bottle in the printer as follows.

- 1.** Take the waste toner bottle from the toner kit supplied.

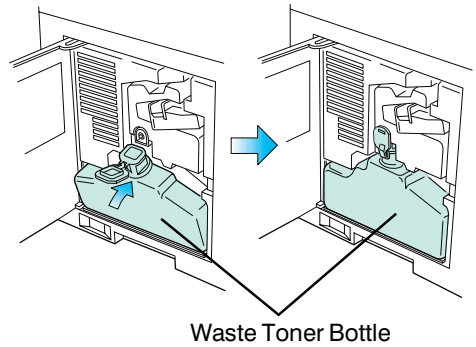
✎ **Do not cap the waste toner bottle.**



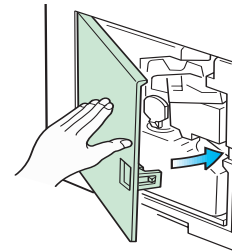
2. Open the side cover on the left side of the printer.



3. Insert the waste toner bottle with the bottle tilted slightly towards you as shown in the figure.



4. Ensuring that it is correctly inserted, close the side cover.

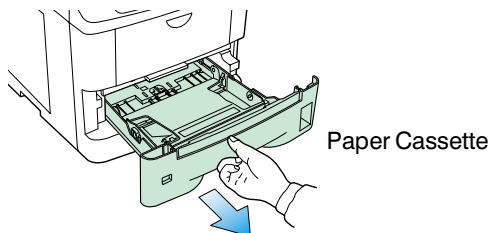


5—Adjusting the Paper Guides in the Cassette and Adding Paper

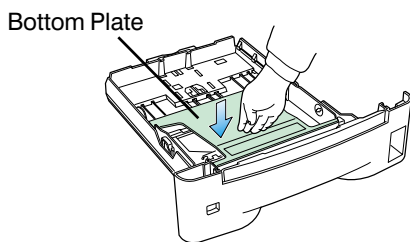
The paper cassette provided with the printer can accommodate paper sizes from A5 to legal, by adjusting the position of the paper guides and the paper stopper. Paper sizes that are not standard sizes (custom sizes) but within the size limitations can also be loaded into the cassette. When loading custom sizes into the cassette, the size must be input into the printer on the control panel. (Refer to 2.7. *Setting Custom Sizes* in the *User's Manual* (PDF file) provided on the *Kyocera Digital Library* CD-ROM) Standard size paper settings are indicated as fixed positions in the cassette.

- ✎ ◆ **Before adding paper, remove the paper cassette all the way from the printer.**
- ◆ **Read the paper manufacturer's instructions concerning handling of the paper.**

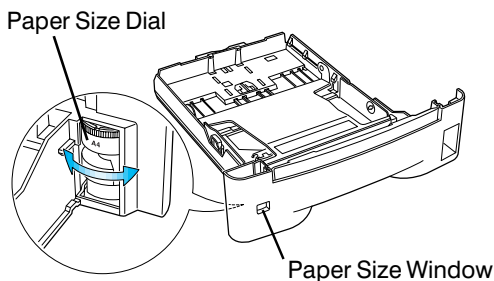
1. Remove the paper cassette from the printer, and place it on a flat, stable surface.



2. Push the bottom plate down until it locks.



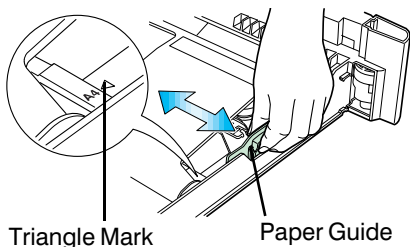
3. Turn the paper size dial so that the size of the paper you are going to use appears in the paper size window.



- ✎ **When the paper size dial is set to "CUSTOM" the paper size must be set into the printer on the control panel. See 2.7. *Setting Custom Sizes* for the setting procedure in the *User's Manual* (PDF file) provided on the *Kyocera Digital Library* CD-ROM.**

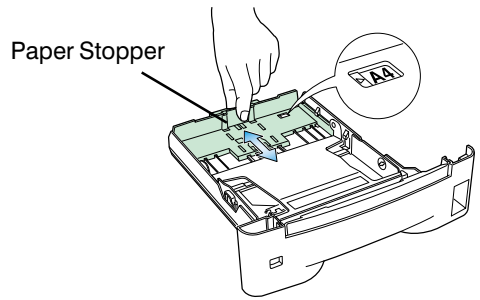
4. Adjust the paper guide and paper stopper positions.

Move the paper guides while lifting the green latch on the right. Set the triangular markings on the guides to the size of paper that you are to use as indicated.



Move the paper stopper while pushing on the green button at the back. Set the paper stopper to the size of paper that you are to use as indicated in the small windows on the floor of the cassette.

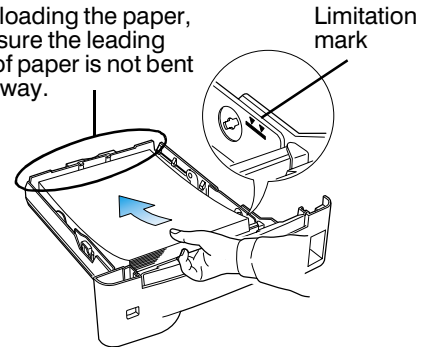
When using custom size paper, move the paper guides and paper stopper all the way out, insert the paper, and then adjust the paper guides and paper stopper to suit. Adjust them so that they are in light contact with the paper.



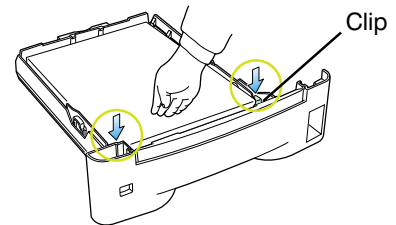
5. Tap the edges of the paper to align the sheets neatly. Set the paper in the cassette as shown. The side of paper that faces downward in the cassette is the one on which printing is done.

Do not load paper into the cassette higher than the limitation mark on the right. (The cassette should hold approximately 250 sheets of paper with a 0.1 mm thickness.)

When loading the paper, make sure the leading edge of paper is not bent in any way.

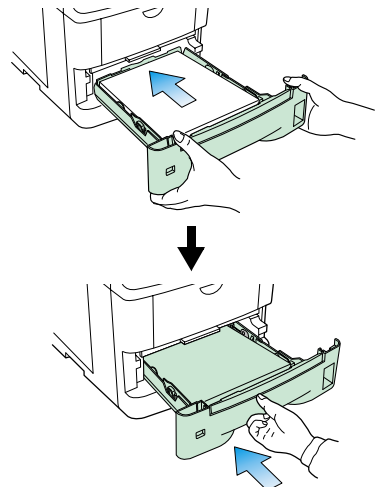


6. Set the stack of paper so that it is under the clips as shown.



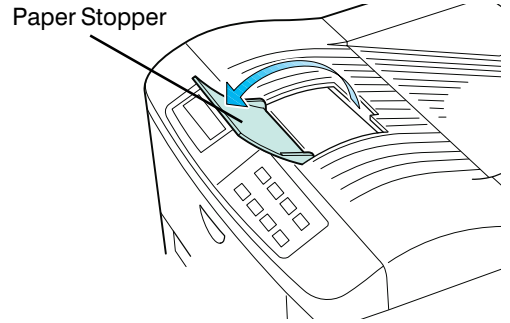
7. Hold the cassette as shown in the illustration and insert the paper cassette into the printer cassette slot. Push it straight in as far as it will go.

✎ If the paper size dial on the cassette is not set to match the size of paper inserted, a paper jam may result.



6—Open the Paper Stopper on the Face-down Output Tray

Open the paper stopper as shown right.

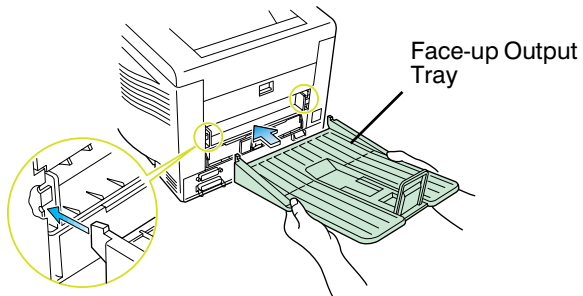
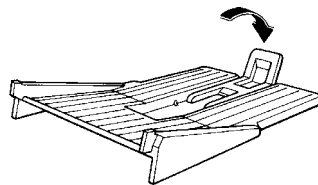
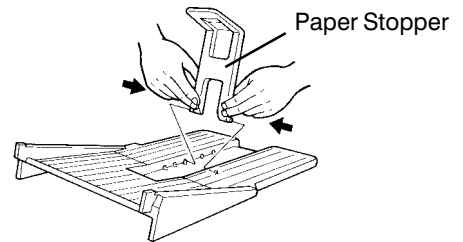
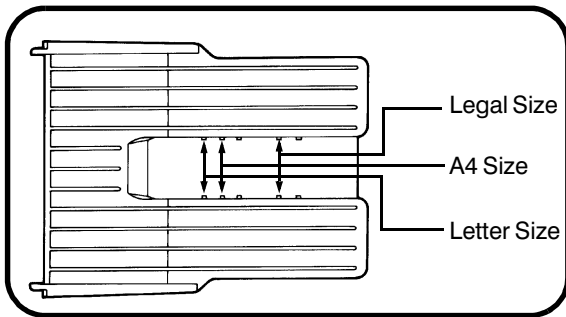


7—Install the Face-up Output Tray

✎ This face-up output tray is a separate option (PT-4) with the FS-1750.

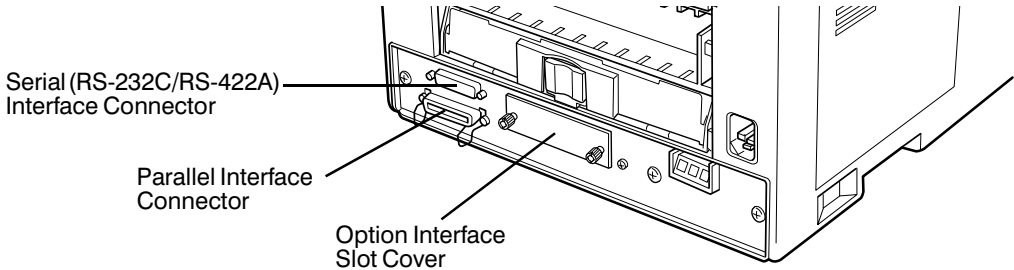
If you want the printed pages stacked face-up (in reverse order), mount the face-up output tray as follows.

Depending on the size of the paper you use, mount the paper stopper on the face-up output tray as shown below.



8—Connect the Printer to the Computer

The printer has two computer cable connectors and a slot for installing an option interface. The one marked "☐" is for a parallel (Centronics standard) interface. The one marked "IOIOI" is for a serial (RS-232C/RS-422A) interface. You may use whichever is convenient for your computer, with the option interface, if you have already have one installed. All interface connectors can be used simultaneously with different computers.



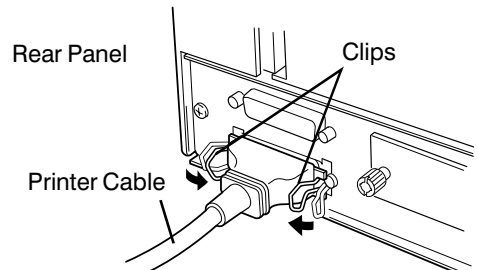
✎ **Only connect or disconnect cables to the connectors while the printer and computer power are switched off.**

Parallel interface

Plug one end of the cable into the connector marked *Parallel* on the printer. Close the clips on both sides to hold it in place.

Plug the other end into a parallel (Centronics) interface connector on your computer. This connector is usually marked *PRINTER*.

For more details about the parallel interface, see *Appendix C* in the *User's Manual* (PDF file) provided on the *Kyocera Digital Library* CD-ROM.

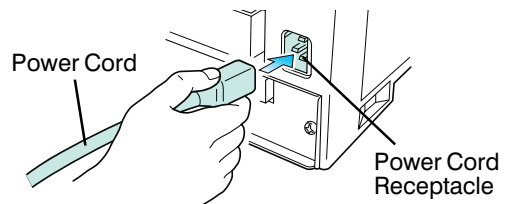


Serial interface

The serial interface of this printer is set to RS-232C mode before leaving the factory, but can also be set to RS-422A mode to suit your operating environment. Follow the instructions in *Appendix C* in the *User's Manual* (PDF file) provided on the *Kyocera Digital Library* CD-ROM.

9—Attach the Power Cord

1. Check that the power switch is off.
2. Plug one end of the power cord into the receptacle at the back of the printer.
3. Plug the other end into the wall outlet.



10—Print a Status Page

Test that the printer works by printing out a status page as follows.

1. Switch on the printer's power. The message display should indicate `Self test`.
- ✎ **When the printer is first switched on after installation, there will be a delay of several minutes (approx. 6 to 7 minutes) before the printer gets ready to print. During this period, the message display shows `Please wait`.**
2. Wait until the ON LINE indicator is also lit and the message display indicates `Ready`.
3. Press the **STATUS** key. The printer should print a page listing the positions of margins, memory allocation, and other information.

A sample status printout is shown in *Chapter 2* in the *User's Manual* (PDF file) provided on the *Kyocera Digital Library* CD-ROM.

11—Test the Interface with the Computer

Test that the printer and computer are correctly connected. If you have connected the printer and computer with a parallel interface cable, follow the procedure below.

1. Check that the printer's message display indicates `Ready` and that the ON LINE indicator is ON.
2. Boot the computer in DOS mode, or set the computer to DOS (prompt) mode.
3. At the DOS prompt, type the following.

```
ECHO !R! STAT; EXIT;>PRN
```

If the printer prints a status page, the computer and printer are connected correctly. For details on the status page, refer to *Chapter 2* in the *User's Manual* (PDF file) provided on the *Kyocera Digital Library* CD-ROM.

If you do not get this result, check that the cable is securely plugged in at both ends, and repeat the test. If you still do not get the right result, you may have a defective or improperly-wired cable. Try using a different cable.

12—Set the Emulation Mode

The printer emulates the operation of five other printers. It is factory-set to emulate the PCL 6 at power-up. If you primarily use software that supports PCL 6, or that supports the Kyocera printer itself, the factory setting is the one you want. If you primarily use software that supports another printer, it is convenient to change the printer's power-up emulation mode.

The emulation mode can be changed from the printer control panel. To change the emulation mode, refer to the *Mode Select Menu* diagram on the *last page* of the *User's Manual* (PDF file) provided on the *Kyocera Digital Library* CD-ROM.

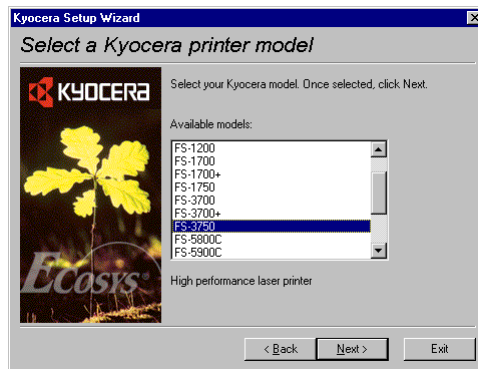
13—Install the Printer Driver

Printer drivers are provided for using the printer with Windows 95, Windows 98, or Windows 3.1. Use the *Kyocera Digital Library* CD-ROM supplied with the printer. To install the printer driver, proceed as follows. Reference to the Windows manual is also recommended.

Windows 95/Windows 98

The automatic installation screen appears when the CD-ROM for the printer is inserted into the computer, if the computer is set for CD auto-run. Proceed with the installation according to the instructions that appear on the screen. Read the explanation below for information about the main screens during installation. (The screens shown below are typical examples. Specific screen content may vary slightly according to the version of the *Kyocera Digital Library* CD-ROM being used.)

Select *FS-3750* or *FS-1750* from this screen.

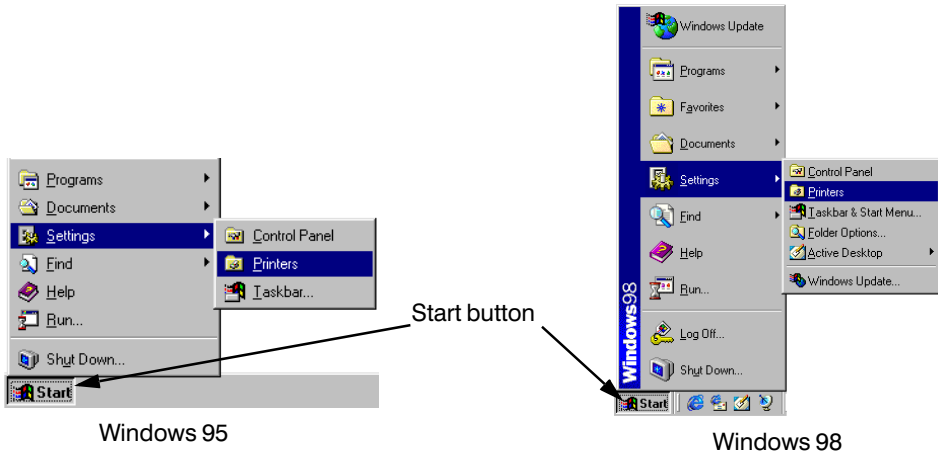


The types of drivers are shown below. Select the driver that you need. (When you click an explanation appears below the box.

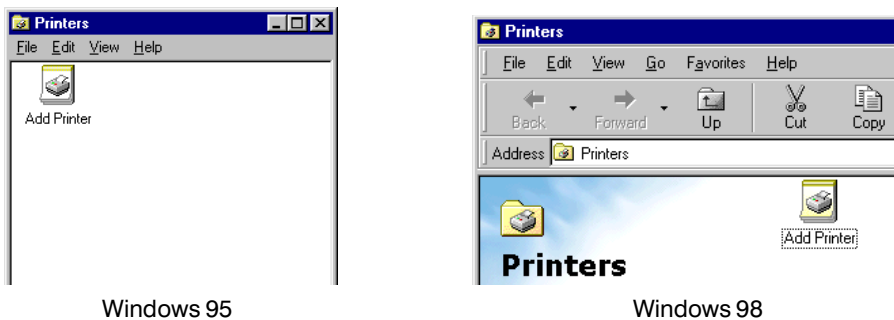


Depending on the computer, installation screens may not appear. If this happens, install the printer driver according to the procedure below.

1. Insert the supplied CD-ROM (Kyocera Digital Library) into the CD-ROM drive of the computer.
2. Click on *Start* with the mouse on the Windows95/98 Task Bar, and align the cursor with *Settings*. Click on *Printers* among the items displayed.



3. The printer folder will open. Double click on *Add printer*.



4. The Printer Wizard screen will appear. Click on *Next >*.
5. A screen for selecting the printer to be connected will appear. Select the most appropriate printer and click on *Next*.
6. Next, *Click the manufacturer and model of your printer....* screen will appear. At this point, select *Have Disk ...* located at the lower right. (See the figure for Step 7.)
7. A screen for installing from floppy disk will appear. Copy manufacture's files from inside the box, or input one of the following directories:

(Standard PCL5E driver)

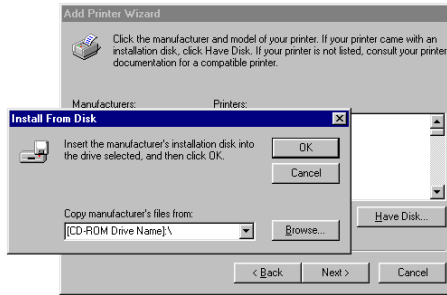
[CD-ROM Drive Name]:\drivers\[Language]\pcl\9x

(Standard PCLXL driver)

[CD-ROM Drive Name]:\drivers\[Language]\pcl\9x\enhanced

(Standard KPDL driver)

[CD-ROM Drive Name]:\drivers\[Language]\kpd\9x



8. Select *Kyocera FS-1750* or *Kyocera FS-3750* click on *Next >*, and follow the on-screen instructions to install. Once the driver has been properly installed, a Kyocera printer icon will be added to the printers folder.

✎ **When printing under Windows 95/98, be sure to set the emulation of this printer to PCL 6 (default setting).**

Windows 3.1

To install the printer driver for Windows 3.1, proceed as follows:

1. Insert the *Kyocera Digital Library CD-ROM* in your CD-ROM drive.
2. Start Windows on your computer.
3. Double click on *Control Panel*.
4. Double click on *Printers*.
5. Click on *Add*.
6. Click on *Install*.
7. Select *Install Unlisted or Updated Printer* under *List of Printers*.
8. Click *Install*.
9. Select the drive into which you inserted the *Kyocera Digital Library CD-ROM*, and then select one of the following directories.

(Standard PCL5E driver)

[CD-ROM Drive Name]:\drivers\[Language]\pcl\3x

(Standard PCLXL driver)

[CD-ROM Drive Name]:\drivers\[Language]\pcl\3x\enhanced

(Standard KPDL driver)

[CD-ROM Drive Name]:\drivers\[Language]\kpd\3x

Click *OK* and follow the instructions that appear on the screen.

10. When the driver is installed, click on *Close* to close *Control Panel*.

5. Memory Expansion Installation

In this section is explained how to expand the printer's memory. Expanded printer memory enables you to print more complex pages, download more fonts, and define more macros.

It begins by explaining how to remove the main circuit board from the printer, and explains how to install a SIMM (single in-line memory module) on the main circuit board.

The FS-1750 comes supplied with 8 MB of memory installed, and likewise the FS-3750 comes with 16 MB of memory supplied. Two slots are provided for expanding the memory in your printer so that more complex printing can be done, as well as increasing the printing speed. By installing optional memory cards into your printer, the memory in the FS-1750 can be increased to a maximum of 72 MB, and the FS-3750 can be increased to a maximum of 64 MB.

- ◆ **A 16 MB SIMM is installed in one of the SIMM sockets in the FS-3750, so in order to increase the memory to the maximum 64 MB this SIMM must be changed.**
- ◆ **The expansion memory should be installed only by a Kyocera authorized dealer or Kyocera certified technician. Kyocera shall not be liable for damage due to improper installation of the expansion memory.**

The minimum memory requirements for the printer with various options installed are listed in the table below. Please refer to this table when expanding the printer's memory.

Printing condition	Resolution			
	300 dpi	600 dpi	1200 dpi	
			Fast mode	Fine mode
PCL 6, duplex mode = None	8 MB	8 MB	8 MB	8 MB
PCL 6, duplex mode = On	8 MB	8 MB	8 MB	12 MB
KPDL, duplex mode = None	8 MB	8 MB	8 MB	8 MB
KPDL, duplex mode = On	8 MB	8 MB	12 MB	12 MB
PCL 6/KPDL resource protection, duplex mode = None	—	10 MB	10 MB	10 MB
PCL 6/KPDL, resource protection, duplex mode = On	—	14 MB	14 MB	14 MB

Removing the Main Circuit Board

The main circuit board of the printer is equipped with two sockets for memory expansion. Expansion memory is available in the form of a SIMM.

✎ The following instructions are intended for the technician only.

Notes on Handling the Main Circuit Board and SIMM

Protect the electronics by taking these precautions:

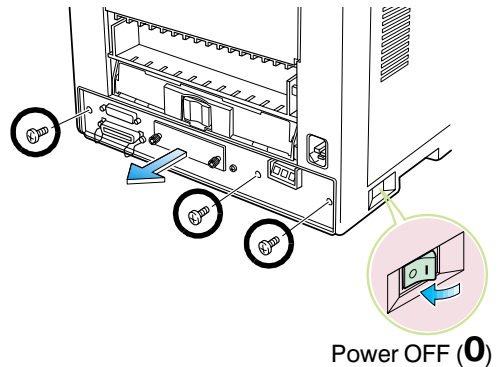
- ❑ Before touching the main circuit board, touch a water pipe or other large metal object to discharge yourself of static electricity. While doing the work, it is recommended that you wear an antistatic wrist strap.
- ❑ Touch the main circuit board and SIMM only by the edges.

Withdrawing the Main Circuit Board from the Printer

✎ Be sure to remove the memory card first if inserted in the printer's memory card slot.

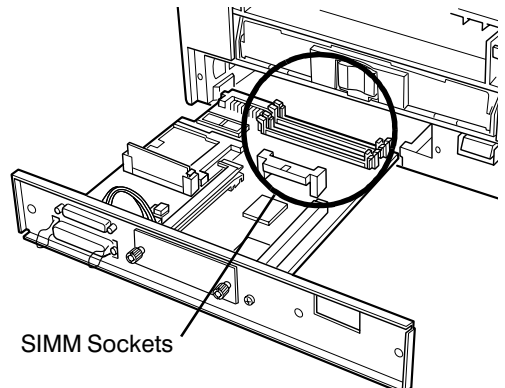
Withdraw the main circuit board completely from the printer as follows:

1. Turn the printer's power off. Unplug the printer's power cable and disconnect the printer from the host computer.
2. Remove the three screws from the printer's rear cover.



3. Pull the main circuit board all the way out of the printer.

✎ Before pulling the main board out, clean an area on the table, etc., at the back of the printer's rear panel. Foreign objects, accidentally sticking to the back of the main board, can cause serious damage to the printer.



Install the SIMM as described on the *next page*.

SIMM to be used

See your Kyocera dealer for purchasing information of the SIMMs that are best suited for use with this printer.

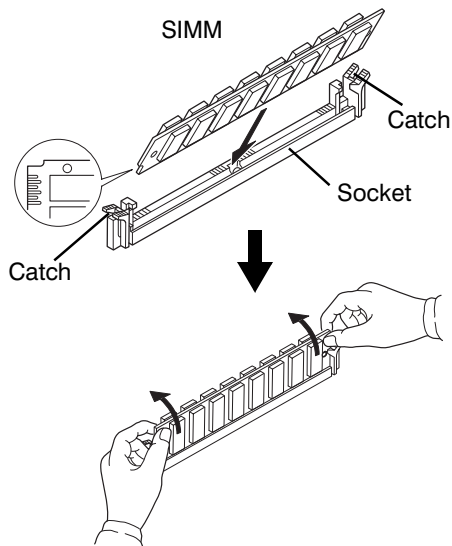
Either 4 MB, 8 MB, 16 MB or 32 MB SIMMs can be used for memory expansion.

Installing and Removing SIMMs

Installing SIMMs

Insert the SIMM into the socket as shown right.

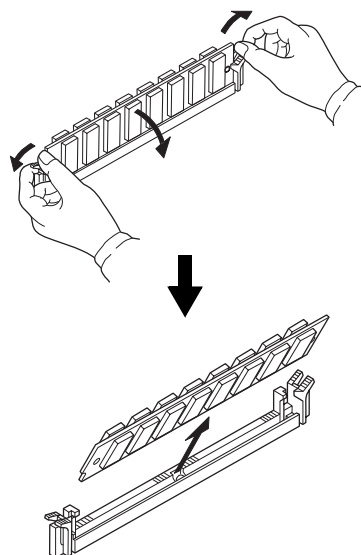
1. Remove the SIMM from its package.
2. Insert the connector end of the SIMM into the socket.
3. Carefully push the board upright until it snaps into place. Make sure that the catches at the ends of the socket fit into the holes at the ends of the SIMM board.



Removing SIMMs

To remove a SIMM, carefully pull the end catches slightly outwards and tilt the SIMM as shown, then pull the SIMM out of the socket.

Reverse the procedure under *Withdrawing the Main Circuit Board from the Printer* to put the main circuit board back into the printer.



Testing the Expansion Memory

After you have finished installing SIMMs in the printer, test the printer to see if the installation has been successful.

To test the expansion memory, proceed as follows:

- 1.** Make sure the power switch is off. Plug the power cord into the printer and turn power on.
- 2.** When the printer is on-line, press the **STATUS** key.
- 3.** If the installation has been successful, the amount of memory shown on the status page in the *User's Manual* (PDF file) provided on the *Kyocera Digital Library* CD-ROM will correspond with the amount of expanded memory. (The factory installed memory size is 8 MB for the FS-1750 and 16 MB for the FS-3750.)

Printer Specifications

Item	Description	
	FS-1750	FS-3750
Printing method	Electrophotography, laser scan.	
Printing speed	14 pages/minute (A4 or letter-size paper, when printing multiple copies of the same page)	18 pages/minute (A4 or letter-size paper, when printing multiple copies of the same page)
Resolution	1200 dpi (Fine 1200 mode/Fast 1200 mode) 600 dpi (with KIR [Kyocera Image Refinement]) 300 dpi (with KIR [Kyocera Image Refinement])	
First print	Approx. 15 seconds (A4 or letter size), depends on input data.	Approx. 12 seconds (A4 or letter size), depends on input data.
Warm-up time	Approx. 50 seconds (at 23 °C, 120 or 220 V)	Approx. 40 seconds (at 23 °C, 120 or 220 V)
Controller	PowerPC 603e (100 MHz)	PowerPC 603e (166 MHz)
Main memory	8 MB, expandable up to 72 MB	16 MB, expandable up to 64 MB
Memory card slot	One, PC CARD (PCMCIA 2.1/JEIDA 4.2 [type I , memory card])	
Self test	Performed at power-up	
Scanning system	Laser diode, polygon mirror.	
Maximum duty cycle	25,000 pages/month	50,000 pages/month
Drum	Amorphous silicon drum	
Developer	Mono-component dry developer	
Main charger	Positive scorotron charger	
Transferring	Negative charger roller	
Separation	Curvature separation	
Drum cleaning	Blade cleaner	
Drum discharging	Illumination by eraser LED array	
Fuser	Heat roller and pressure roller	
Toner saving	Ecoprint mode	
Paper	Plain paper. See <i>Appendix B</i> in the <i>User's Manual</i> (PDF file) provided on the <i>Kyocera Digital Library</i> CD-ROM.	
Paper feed trays	Cassette: Legal size to A5 universal cassette 148 to 216 mm (5-13/16 to 8-1/2") × 210 to 356 mm (8-1/4 to 14"). Holds 250 sheets of thickness 0.1 mm MP tray: 80 to 148 mm (3-1/8 to 5-13/16") × 216 to 356 mm (8-1/2 to 14") (see <i>page B-2</i> in the <i>User's Manual</i> (PDF file) provided on the <i>Kyocera Digital Library</i> CD-ROM). Holds 100 sheets of thickness 0.1 mm	

Item	Description	
	FS-1750	FS-3750
Capacity of output trays	Face-down tray — 250 sheets of thickness 0.1 mm Face-up tray — 250 sheets of thickness 0.1 mm	
Ambient conditions	Temperature: 10 to 32.5 °C (50 to 90.5 °F) Humidity: 20 to 80 % RH Optimum conditions: 20 °C (68 °F), 60 % RH Altitude: Max. 2000m (6500 feet) Illumination: Max. 1500 lx	
Power requirements	120 V, 60 Hz, max. 5.8 A (U.S.A./Canada) 220 to 240 V, 50/60 Hz, max. 3 A (European countries) Max. allowable voltage fluctuation: ± 10 % Max. allowable frequency fluctuation: ± 2 %.	120 V, 60 Hz, max. 7.8 A (U.S.A./Canada) 220 to 240 V, 50/60 Hz, max. 4 A (European countries) Max. allowable voltage fluctuation: ± 10 % Max. allowable frequency fluctuation: ± 2 %.
Power consumption	Max. 667 W During sleeping 14 W	Max. 898 W During sleeping 16 W
Operating noise (in accordance with ISO 7779 [Bystander Position, sound pressure level at the front])	During printing: LpA = 50 dB (A) During standby: LpA = 39 dB (A) During sleep mode: Immeasurably low	During printing: LpA = 53 dB (A) During standby: LpA = 39 dB (A) During sleep mode: Immeasurably low
Dimensions	373 mm (14-11/16") wide $\times$ 310 mm (12-3/16") high $\times$ 383 mm (15-1/16") deep (Excl. the paper tray)	
Weight	14 kg (30 lb.), main unit only	

