

Chapter two I N S T A L L A T I O N / O P E R A T I O N

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Unpacking

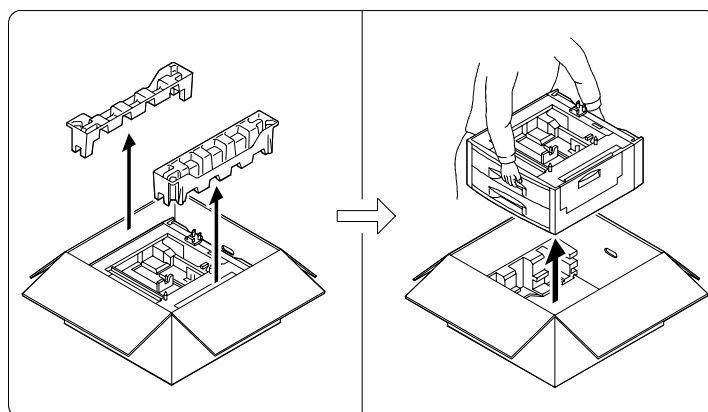
The FS-7000 printer is delivered in two cartons—the printer carton and the paper feeder carton. Since the paper feeder is installed under the printer, begin unpacking and installing with the paper feeder.

Unpacking the paper feeder

To unpack the paper feeder, proceed as diagrammed below.



Warning—The paper feeder weighs approximately 20 kg (9 lb.).



Place the paper feeder on a stable, level surface (table, floor, etc.). Note that wheels are available for the printer as the CA-30 kit.

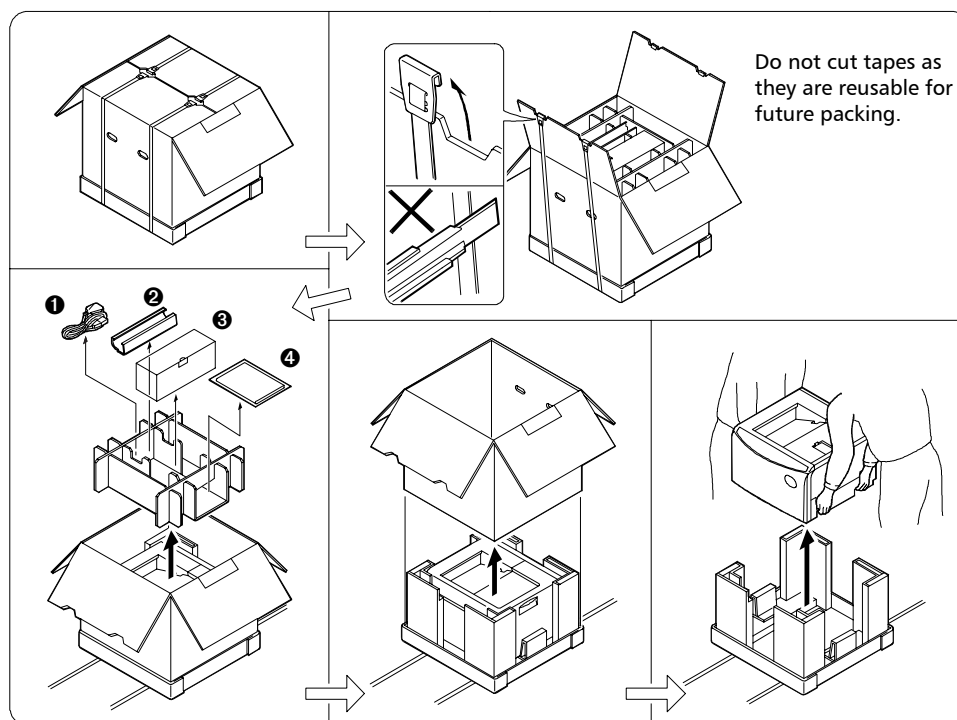
Unpacking the printer

To unpack the printer, proceed as shown in the diagrams below. Check that the listed parts are all present.



Warning—The printer weighs approximately 41 kg (18 lb.). Lift it using two or more people.

Take out the accessories: ❶Power cable, ❷Drum unit cover, ❸Toner kit (TK-30), ❹Documents incl. CD-ROM.



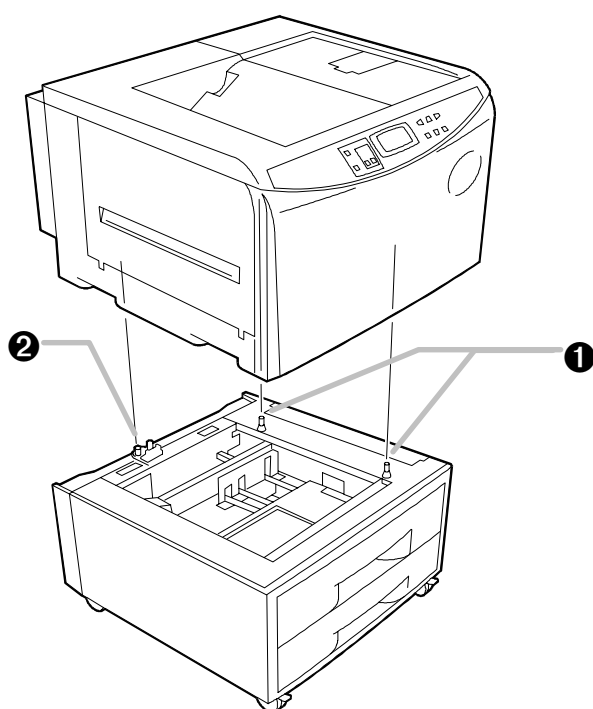
Installing the printer

Installing the printer requires several steps. Proceed as follows in sequence.

If the printer is used with wheels (CA-30), fit them now before proceeding.

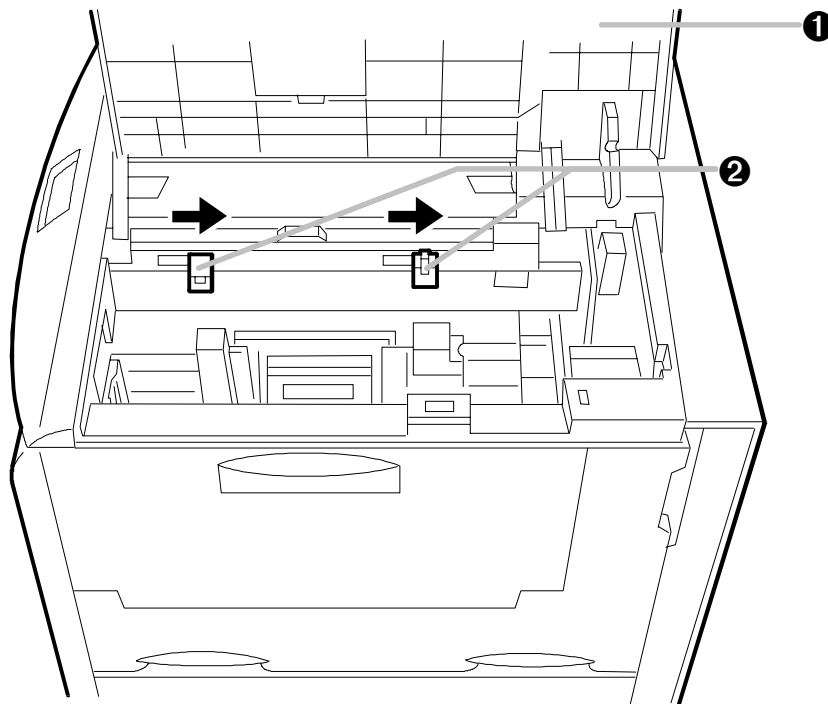
Connecting the printer and the paper feeder

The printer should be mounted over the paper feeder as shown below. Align the pins **①** and the connector **②** on the paper feeder with the matching holes and the connector located at the bottom of the printer, then slowly lower the printer onto the paper feeder.



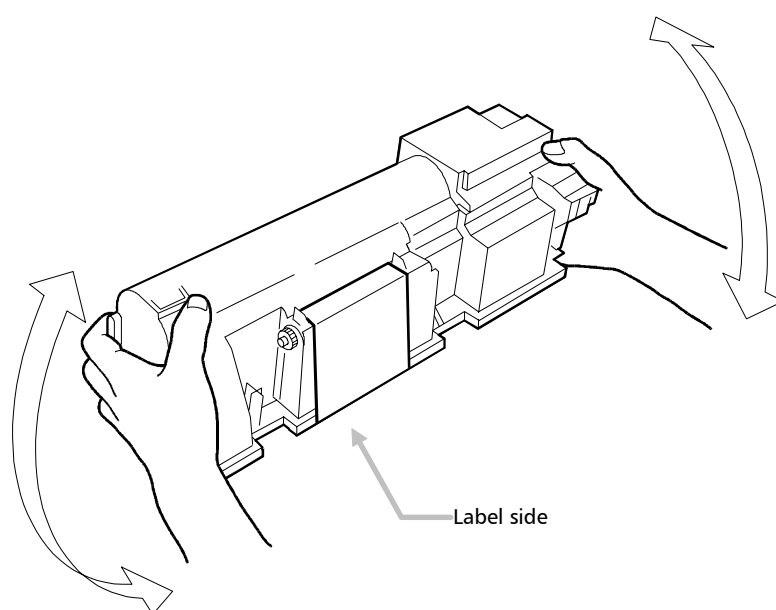
Installing toner

First open the top cover ❶ atop the printer. Slide the toner container release levers ❷ to the right side position. (This is the “open” position in which the toner container becomes removable.)

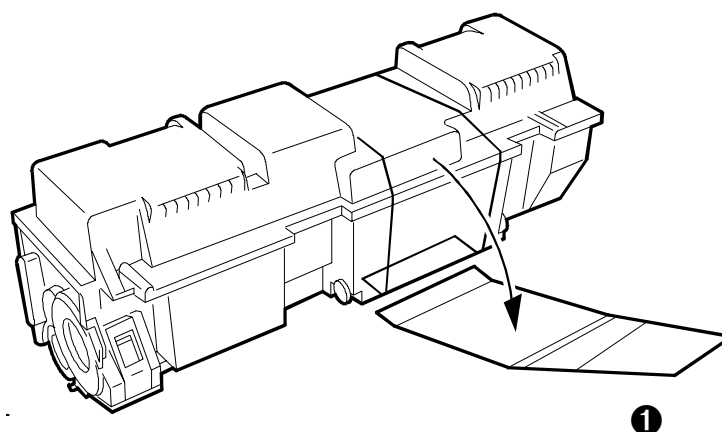


Take the toner container from the toner kit (TK-30) supplied with the printer. With its label side facing down, give it a good shake (5 to 6 times).

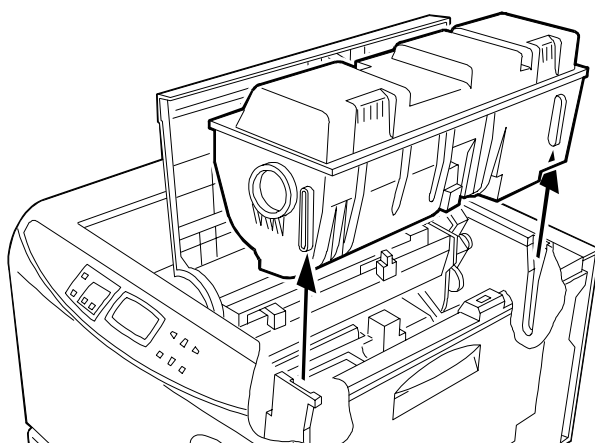
See the picture on the [next page](#).



Peel off the seal ❶ on the bottom of the toner container by carefully pulling off.

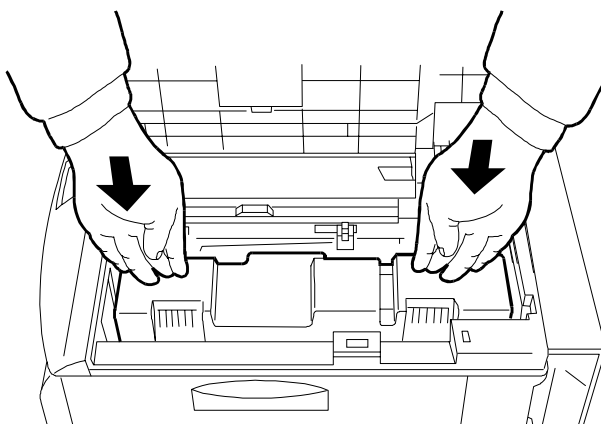


Insert the toner container in the printer as below. Align the two locating keys at the sides of the container with the mating slots in the printer.

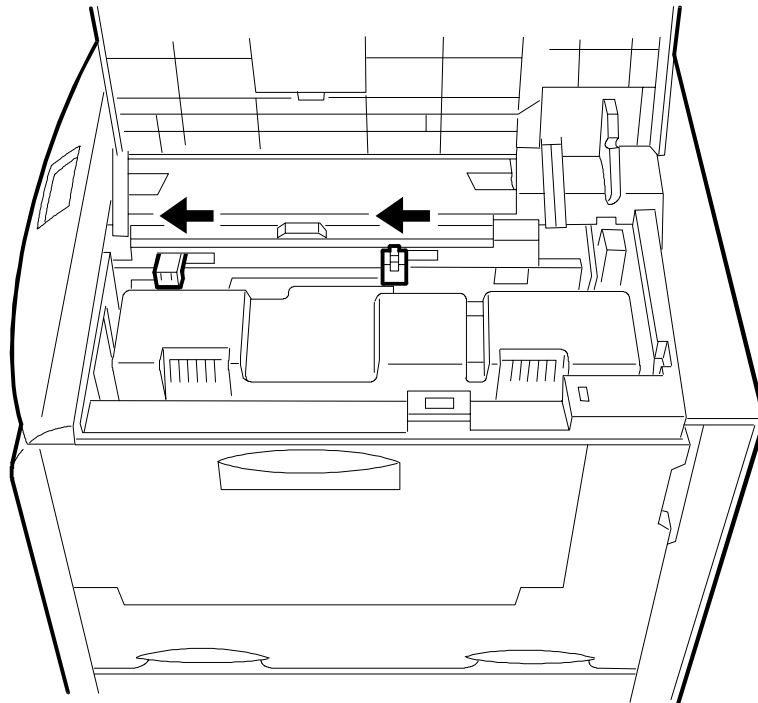


Caution—To avoid trouble, the toner container must be correctly seated and locked in the printer. To do this, press the far side of the container **⓪** at the **PUSH HERE** marks.

Making sure that the toner container is seated correctly on the developer, press the two **PUSH HERE** markings on the toner container using both hands.



When the toner container is inserted in the printer properly, slide the toner container release levers to the left side position until it stops. After installing the toner container, close the top cover down firmly.



Developer initialization

The printer is shipped from the factory with no toner supplied in its developer unit. When the printer is first switched on after the toner container is installed in the manner above, there will be a delay of several minutes before the printer gets ready to print a job.

This delay is necessary for the printer to fill the developer reservoir with a sufficient amount of toner to continuously support a print job. The period of time for this delay varies depending on model: approximately 5 minutes.

Since the automatic implementation of the developer initialization is done only once at first switching power on, if a new developer is installed in the printer, the developer must be initialized manually using the service mode on the front panel. Refer to the section [Feeding toner into the new developer](#) in chapter 3.

Expanding memory

Expanded printer memory is required particularly when a memory error occurred. It enables the printer to print more complex pages, download more fonts, and define more macros.

Since expanding memory requires removal of the main circuit board from the printer and handling of SIMM (single in-line memory module), the following procedures should be followed only by a qualified service technician.

Minimum memory requirements

By default, the printer is equipped with 4MB of memory at the shipment which is expandable up to a maximum of 68MB (two 32MB SIMMs). The minimum memory requirements for the printer with various options installed are listed in the table below. Refer to this table for obtaining a rough approximation on how much memory is required for a particular need.

Printing environment	Resolution	
	300 dpi	600 dpi
HP emulation	2MB	2MB
HP+duplex (using DU-30 duplexer)	2MB	3MB
HP+KPD L	2MB	3MB
HP+KPD L+duplex	3MB	5MB
HP+KPD L+resource protection	n/a	10MB
HP+KPD L+resource protection+duplex	n/a	14MB

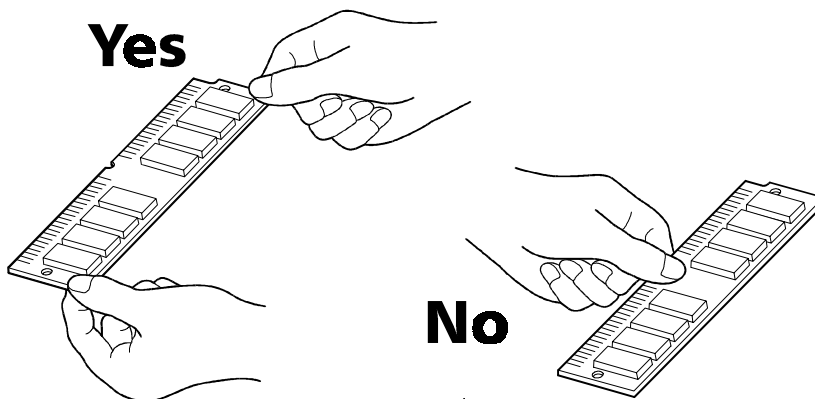
SIMM specifications

Memory size in MB	1, 2, 4, 8, 16, 32
Number of pins	72
Access speed	80 ns or faster
Parity	With/without
Bus width	32 bits

Notes on handling SIMM

Before proceeding to install SIMM, read the following notes for handling the main circuit board and SIMMs

- 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, not in the middle. See below.



- Follow the instructions the SIMM manufacturer should provide.

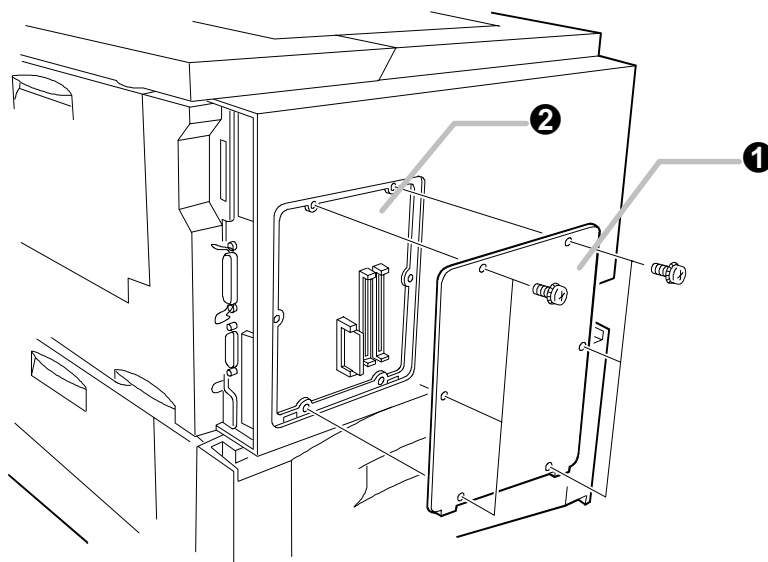
Getting access to the memory sockets

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. To gain access to the main board, the printer's rear panel should be removed.



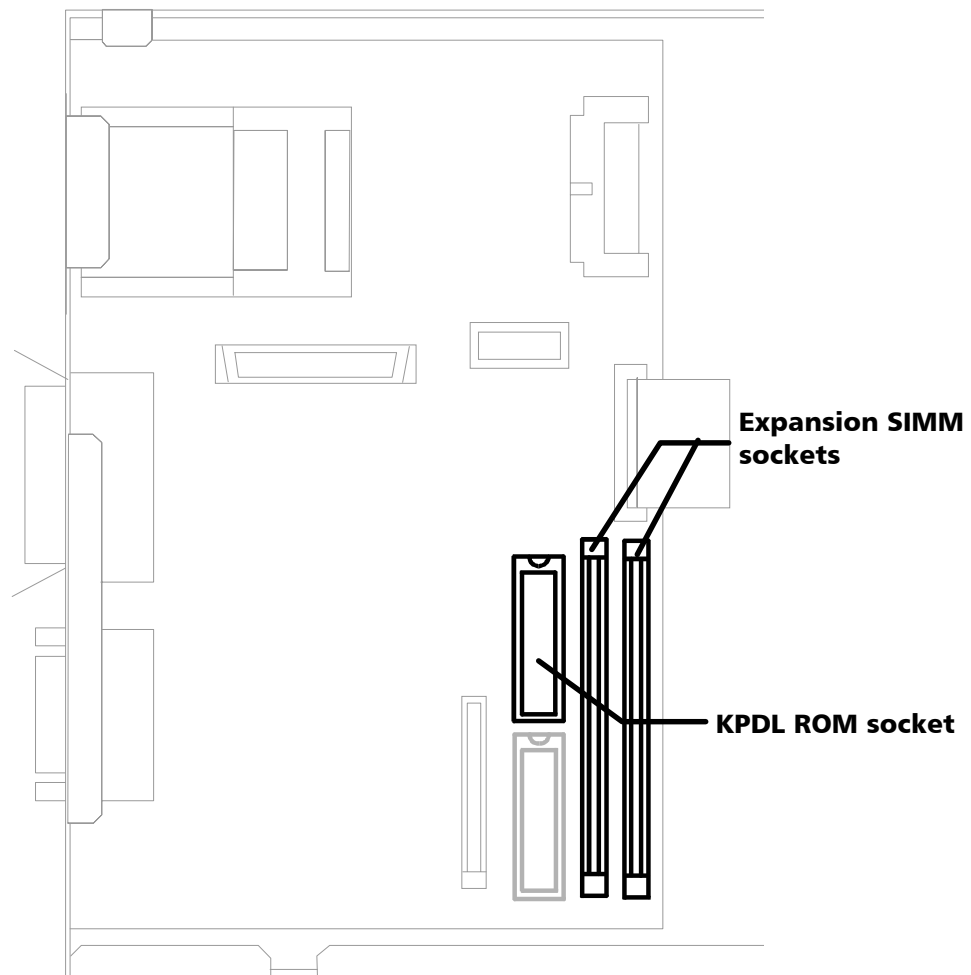
Warning—Turn the printer's power off. Unplug the printer's power cable and disconnect the printer from the computer or the network.

Turn the power switch off. Remove the main board access panel ❶ by removing 6 (plated) screws. The main controller board ❷ is exposed for inserting SIMMs.



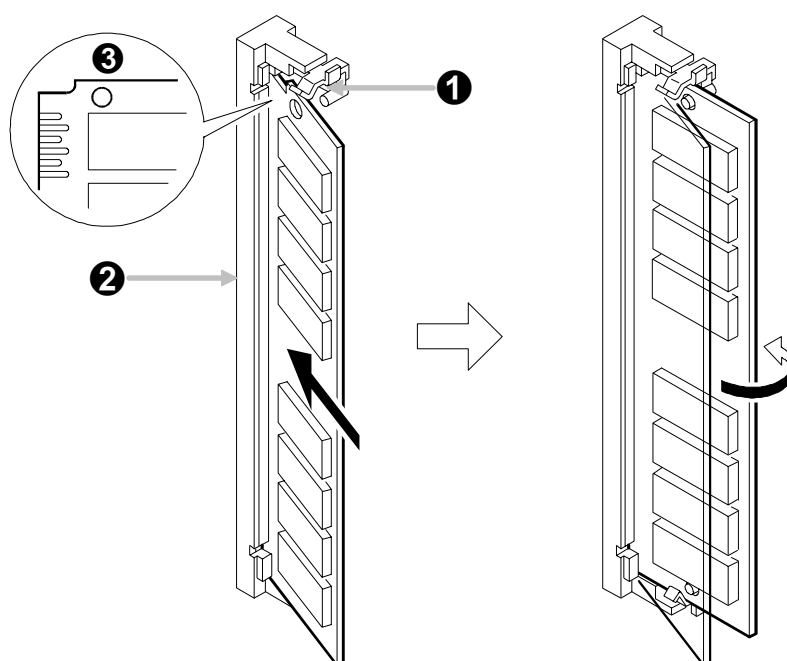
Caution—When the main board is open, use care to avoid foreign objects from entering the main board area. Otherwise, a serious damage to the printer could result.

Locate the sockets for the SIMMs on the main controller board by referring to the diagram on the next page. Locate the sockets for memory expansion on the main board. These sockets have 72 pins and are symbolized as YS1 and YS2.



Installing SIMM

Insert the SIMM ❶ into the socket ❷ as shown. 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 ❸ at the ends of the SIMM board.



Testing the expansion memory

After installing SIMMs in the printer, test the printer to see if the installation has been successful. To test the expansion memory, turn printer power on and print a status page.

If the installation has been successful, the *Total memory* (Memory Allocation) of the status page will show the expanded memory size corresponding to the amount of memory added.

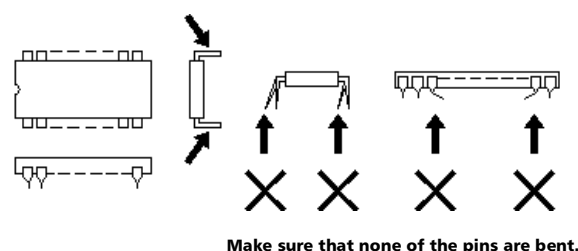
Installing KPDL

KPDL (Kyocera Printer Description Language) is an upgrade for adding Kyocera's implementation of the PostScript page description language. Upgrade is done by inserting a KPDL ROM (PK-5) into an empty socket on the printer's main circuit board.

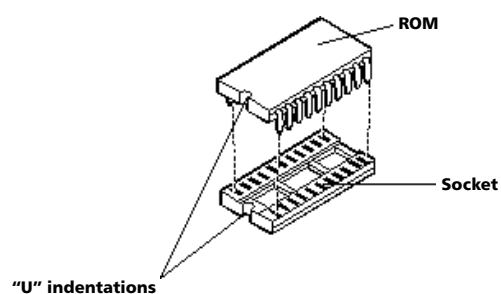
For details on KPDL, refer to the *KPDL Upgrade Kit Installation Manual* supplied with PK-5.

Installing the KPDL ROM

Before installing the KPDL ROM delivered, carefully straighten the pins as follows.



To insert the ROM into its socket, position the ROM in the socket as shown. Make sure that the U-shaped indentation at the end of the ROM is oriented in the same direction as the U-shaped indentation at the end of the socket. Align all pins of the ROM properly with their socket holes.



Getting access to the KPDL ROM socket

Refer to the previous section *Expanding memory*, page 2-10, and remove the printer's rear panel.

Locate the socket for inserting the KPDL ROM. Refer to the diagram on page 2-14. This socket is marked as U13, adjacent to another (shorter) empty socket (U13).

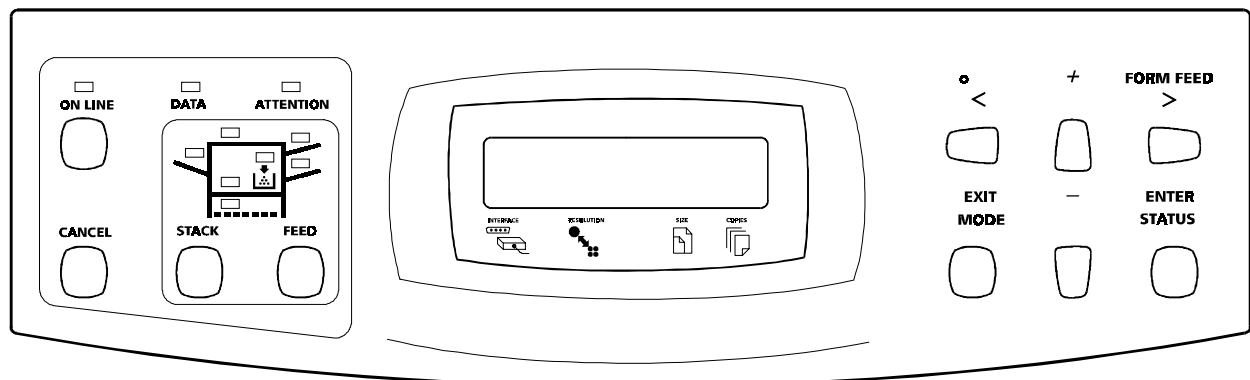
Using the control panel

This section provides explanation on how to use the printer's control panel. This is more fully detailed in the user's manual.

Front control panel

The printer's control panel has the LED indicators and a quartz message display to provide a quick access to the printer's conditions. It also features the control keys for adjusting the various conditions on the fly. Note that the adjustments made using these keys may be overridden by the settings made from within an application software.

Control panel view



Basic key operation

The control keys are used to configure the printer as follows. For more detailed explanations on these keys, refer to the printer's *User's Manual*.

Key	Function
ON LINE	Switches the printer online and offline.
CANCEL	Abandons a printing job, resets numeric values or cancels a setting procedure.
STACK	Selects whether printed pages are delivered to the face-down or face-up tray.
FEED	Selects the cassette feed or manual (MP tray) feed.
—CONTINUE	Resumes printing when the message display indicates a memory error. Also, enters in a submenu item during mode selection.
+	Cycles forward through the item selections or enters numeric values.
—FORM FEED	Prints and feeds out one page. Also, exits a submenu item during mode selection.
MODE/EXIT	Enters/exits the mode selection for changing the printer's configuration.
—	Cycles reverse through the item selections or enters numeric values.
ENTER/STATUS	Prints a page of status information. During mode selection, this key finalizes numeric values and other selections for changing the printer's configuration.

Indicators

Indicator	Status	Function
①—ONLINE/Green	Steady	The printer is on-line and ready to prints received data.
	Off	The printer is off-line. The printer stores but not prints received data.
②—DATA/Green	Flashing	The printer is receiving data from the host computer.
	Steady	The printer is processing the data for printing or for writing on a memory card.
③—ATTENTION/Red	Flashing	①The printer is warming up. ②The printer was stopped because of an error such as the insufficient memory, memory card errors, etc. (See chapter 6.)
	Steady	①The printer needs attention for a problem that can be cleared by the user such as an open cover, missing toner kit, paper-full stack, etc. ②The printer was stopped because of a problem that needs servicing provided by a service technician.

Mode selection menu

The **MODE** key on the control panel allows to set or change the printer environment such as the number of copies to make, emulation, etc., and to print a font list, manipulating a memory card, etc.

During operating in the mode selection, several front panel keys serve exclusively for its secondary function as labeled beside them (EXIT, +, -, ENTER, ◀, ▶). The diagram on the next page gives a full load map to the full options and the sequence of mode selection as well as usage of these secondary keys.

Service mode

Within **Others** option, the **Service** mode can be accessed by authorized service personnel. This mode provides the following three treatments for service purpose:

- printing a service information (a service status page)
- cleaning on the drum surface
- accelerating initial toner replenishment for a new developer

The service mode is available only when the printer is ready. To activate these features, see chapter 3, page 3-12. While in service mode, the printer accepts print data but does not print it.

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