

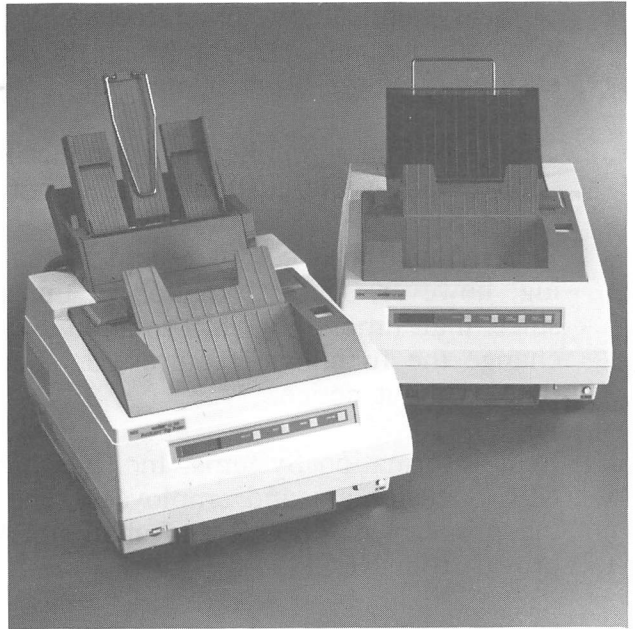
Silentwriter[™]
LC 800 Series
User's Guide



NEC
NEC Information Systems, Inc.



Silentwriter[™]
LC 800 Series
User's Guide



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Boxborough, MA 01719-9988

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**FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT**

This unit has been type-tested and found to comply with the limits for a Class B computing device in accordance with the specifications for Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation.

**Manufacturer's Instructions and User's Responsibility
to Prevent Radio Frequency Interference**

Manufacturer's Instructions

The user must observe the following precautions in installing and operating this device:

1. Operate the equipment in strict accordance with the manufacturer's instructions for the model.
2. Plug the unit into a properly grounded wall outlet and use the power cord supplied with the unit, unmodified.
3. Always operate the unit with the factory-installed cover on the unit.
4. Make no modification to the equipment which would affect its meeting the specified limits of the Rules.
5. Maintain the equipment in a satisfactory state of repair.
6. Use a shielded and properly grounded I/O cable to ensure compliance of this unit to the specified limits of the rules.

User's Responsibility

The user is ultimately responsible for correcting problems that arise from harmful radio-frequency emissions from equipment under his control. If this equipment does cause 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 of the following measures. All of these responsibilities and any others not mentioned are exclusively at the expense of the user.

1. Change in orientation of the receiving device antenna.
2. Change in orientation of the equipment.

3. Change in location of equipment.
4. Change in equipment power source.

If these attempts are unsuccessful, install one or all of the following devices:

1. Line isolation transformers
2. Line filters
3. Electro-magnetic shielding

If necessary, the user should consult the dealer, NEC, or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission to be helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

NOTE

The operator of a computing device may be required to stop operating his device upon finding that the device is causing harmful interference and it is in the public interest to stop operation until the interference problem has been corrected.

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Introducing the Silentwriter LC 800 Series

Your new Silentwriter™ LC 800 Series desktop page printer merges text and graphics to produce high-resolution output on paper or transparencies at a fast eight pages per minute. Using the latest in proven light-emitting diode (LED) technology, NEC has created a page printer that provides both trouble-free service and easy operation.

STANDARD AND OPTIONAL FEATURES

The LC 800 Series advanced printer technology is evident in four previous models. These include the LC 815, the LC 850, the LC 860Plus, and the LC 890. Each integrates production capabilities with time saving options.

It is important to note that specific options are not standard in all models.

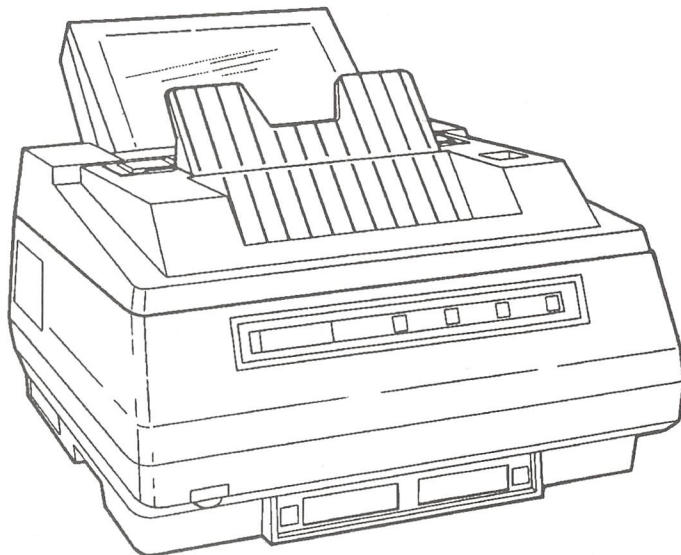
For example, the second hopper is not included in the LC 815 and LC 850 units. The option may be purchased separately through an authorized dealer.

The LC 860Plus is supplied with the second hopper as well as additional features. Installation procedures for all options, including the second hopper, are in this guide.

The LC 800 Series printers (except for the LC 890) are equipped with four built-in (resident) fonts and two ports for optional font cartridges. These combine to provide up to 12 fonts which can be used in the same document. Additionally, underline, bold, and shadow printing capabilities, plus a choice of horizontal (portrait) or vertical (landscape) printing, give you a wide selection of print variations.

You can upgrade the LC 800 Series with options such as a 25-sheet paper tray for the face-up output slot and an image/graphics memory board. This 1.3-megabyte (1.3-MB) memory board provides full-page bit map graphics resolution at 300 x 300 dots per inch, and an extensive library of font cartridges. These features make the LC 800 Series one of the most powerful desktop page printers on the market today.

Introducing the Silentwriter LC 800 Series



For best results, read this guide completely before using the printer.
Keep the guide handy for reference.

Not all LC 800 Series functions or options may be supported by your computer or particular software. Please check with your computer dealer or software dealer for details.

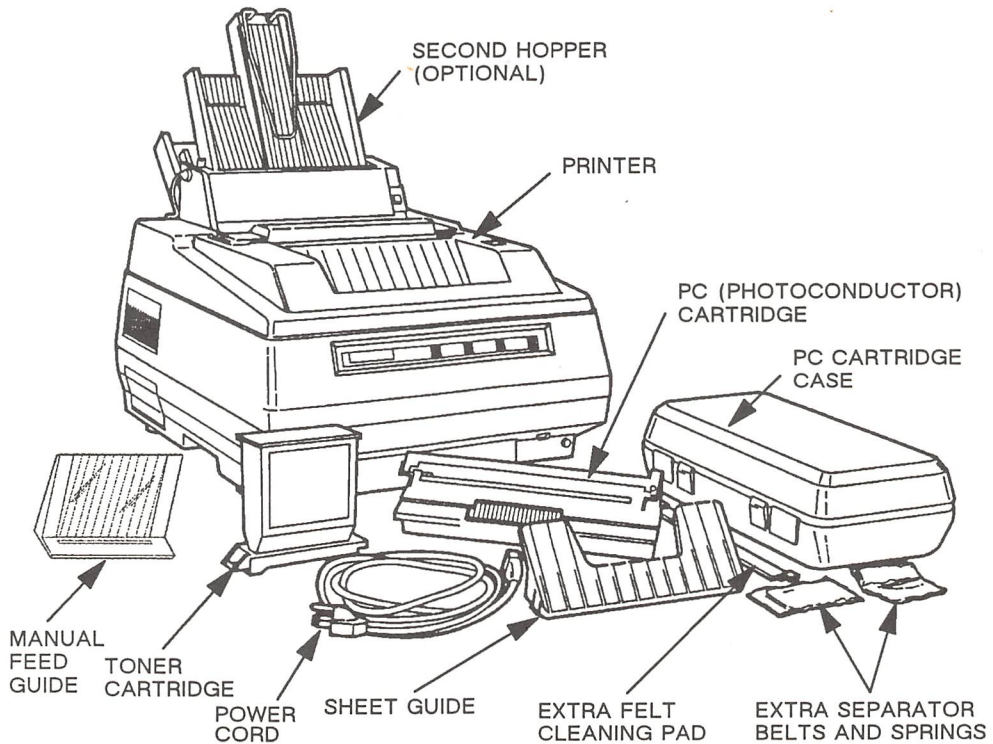
Setting Up

CARTON CONTENTS

Once you've unpacked the printer, check to see that you have all the items shown below. If any are missing, contact your dealer.

Save the packing materials in case you ever need to repack and move the printer to another location.

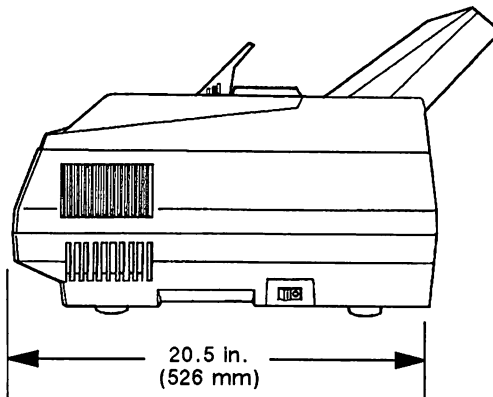
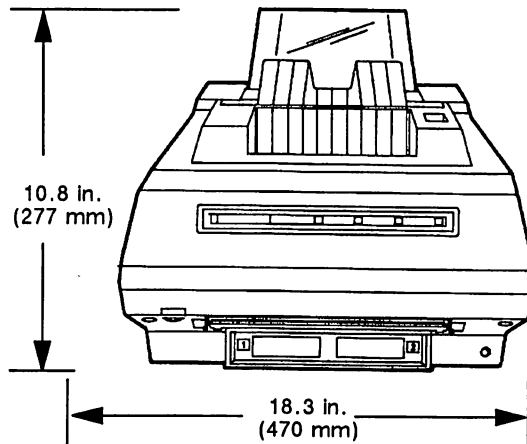
Keep the PC cartridge case closed until you are ready to install the cartridge in the printer. Do not touch the blue PC drum or expose it to light for more than 60 seconds at a time.



OPERATING ENVIRONMENT

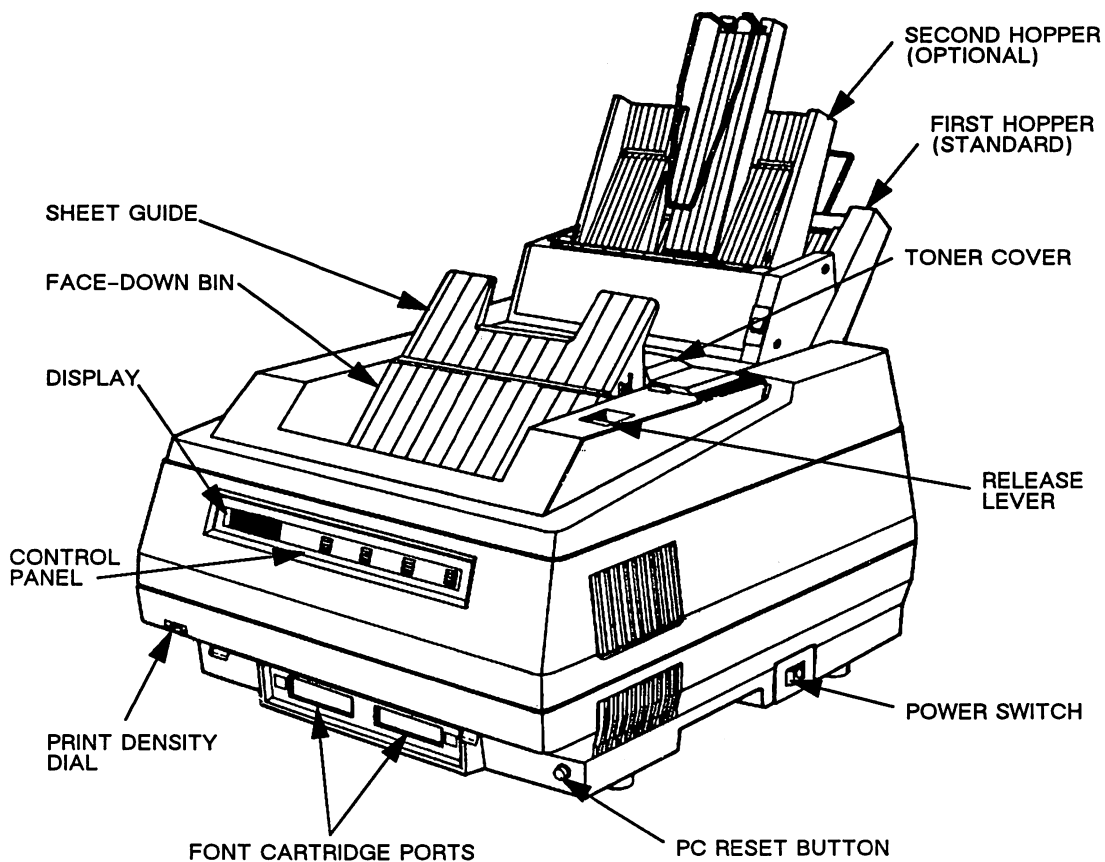
A suitable environment is very important for the proper operation of your printer. Failure to operate the unit within these limits may cause degradation in the quality of output. The location of the printer should meet the following requirements.

- The area should be well-ventilated and away from direct sunlight, humidifiers, heaters, and sudden temperature changes.
- Temperature should be between 50°F and 95°F (10°C and 35°C).
- Relative humidity should be between 20 and 80 percent.
- Adequate space should surround the printer to allow easy access (see the dimensions below).



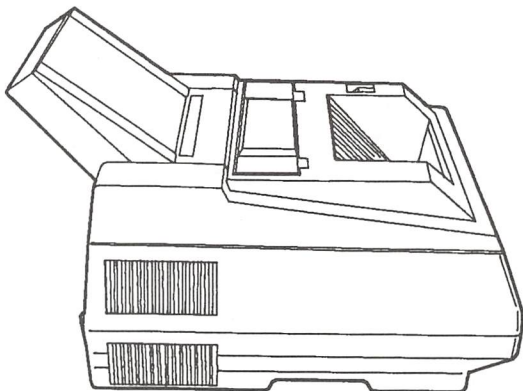
PRINTER FEATURES

The illustration below will help you become familiar with the important parts of the printer and the terms used to describe them.

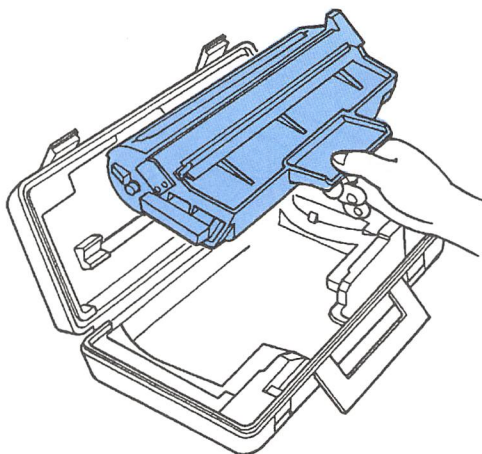


PC (PHOTOCONDUCTOR) CARTRIDGE

The PC cartridge shipped with your printer lasts for approximately 7,000 sheets. Follow these steps to install the PC cartridge. When “PC LIFE” appears on the display, see “REPLACING THE PC CARTRIDGE.”

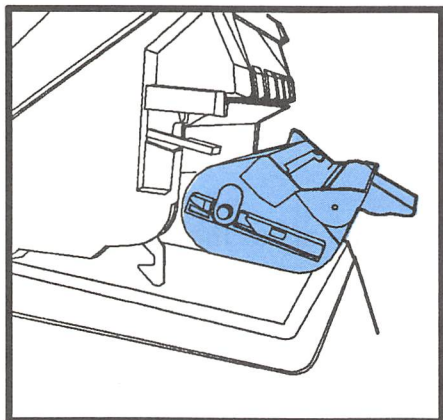


- 1 Pull the release lever forward to open the upper unit.

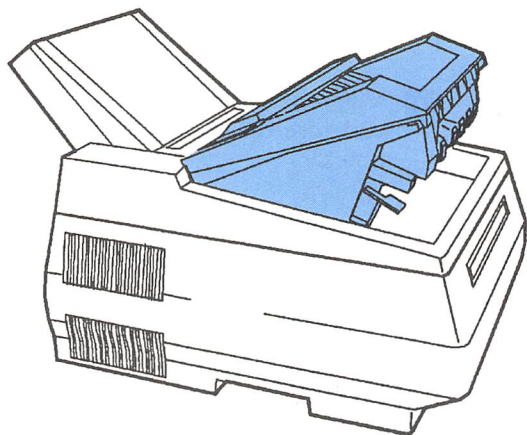


- 2 Remove the PC cartridge from its case and hold the cartridge by its handle.

Keep the PC cartridge case closed until you are ready to install the cartridge in the printer. Do not touch the blue PC drum or expose it to light for more than 60 seconds at a time.



- 3 Slide the PC cartridge along the guides inside the upper unit until you hear both sides lock firmly in place.



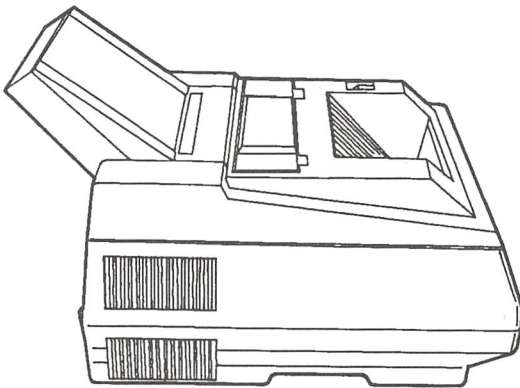
- 4 Close the upper unit immediately to protect the PC drum from light exposure.
- 5 Save the PC cartridge case, extra felt cleaning pad, extra separator belt and cotton swab.

If you need to move the printer, remove the PC cartridge from the printer and store it in the cartridge case before repacking the printer.

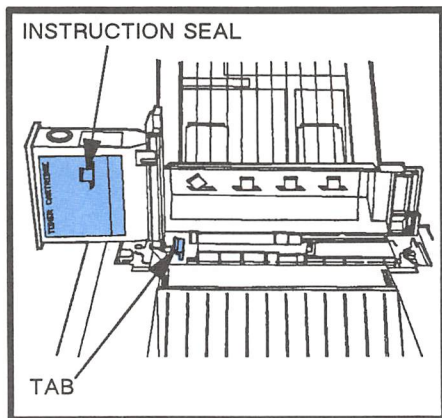
TONER CARTRIDGE

A disposable toner cartridge comes with your printer. The toner inside the cartridge lasts for approximately 3,000 pages. However, toner life varies with the amount of output. Substantial graphics output will reduce toner life.

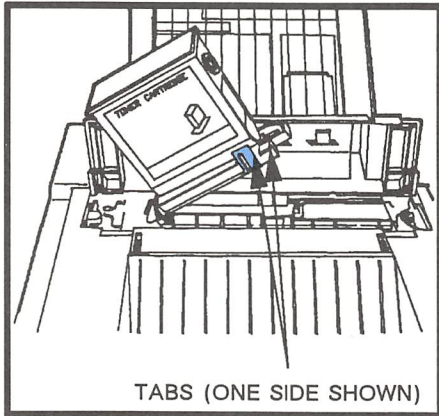
Follow these steps at installation to load the contents of the cartridge into the developer station. When "TONER EMPTY" appears on the display, see "ADDING TONER."



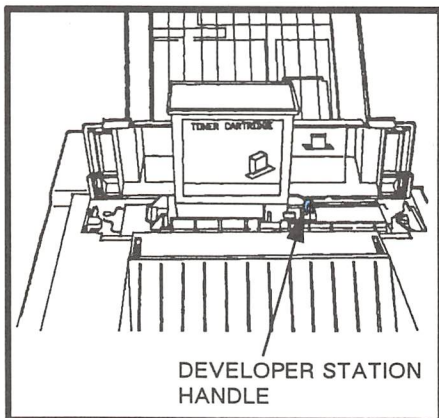
- 1 Remove the toner cartridge from the box and unwrap it.
- 2 Press the toner cover tabs and lift to open the toner cover.
- 3 Vigorously shake the toner cartridge up and down several times.



- 4 Hold the toner cartridge so that the instruction seal faces the front of the printer.
- 5 Tip the cartridge on its left side and slide it under the tab on the top left of the developer station.

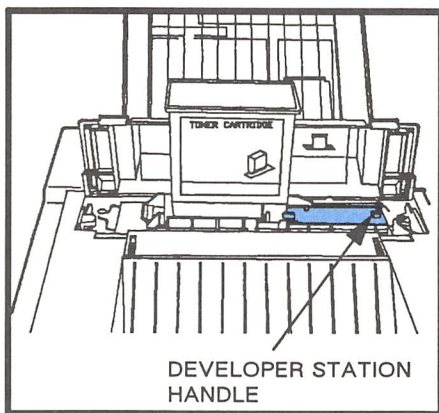


- 6 While pressing the tabs on either side of the cartridge in, move the cartridge to an upright position on the developer station.

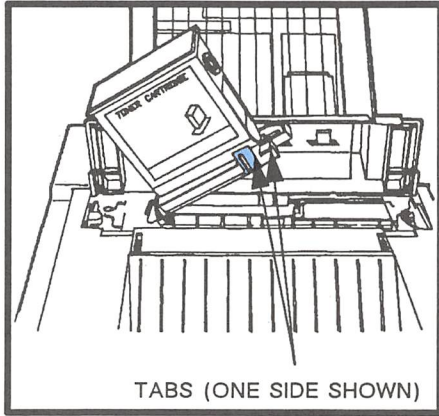


- 7 Pull the developer station handle all the way to the right side of the printer. The toner empties into the developer station.

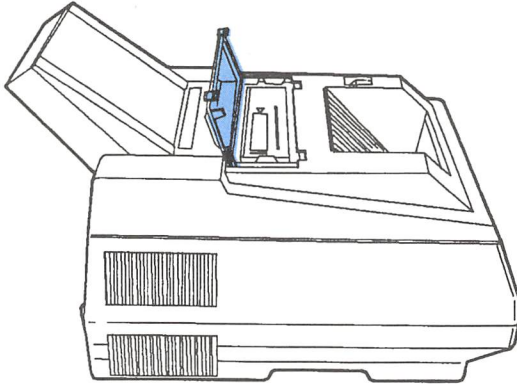
- 8 Tap the top of the cartridge several times to allow toner to flow easily into the developer station.



- 9 Push the developer station handle all the way in, back to its original position.



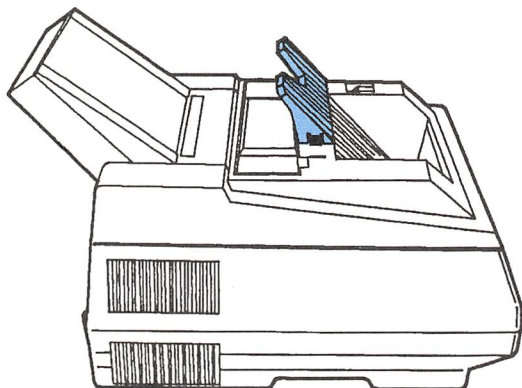
- 10 While pressing the tabs on either side of the cartridge in, lift the empty toner cartridge off the developer station and discard it.



- 11 Close the toner cover.

SHEET GUIDE

The sheet guide is an extension of the face-down bin. The guide helps to neatly stack printed pages. To install the guide, complete these two easy steps.



- 1 Insert the tabs of the sheet guide into the holes on the face-down bin.
- 2 Press to secure.

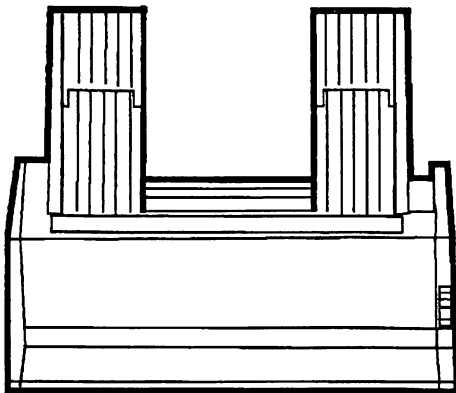
SECOND HOPPER

The second hopper is a paper handling device that doubles the printer's paper capacity from 250 sheets to 500 sheets. It also allows you to use two types of paper.

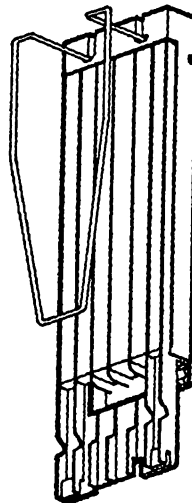
The second hopper is a standard feature of the LC 860Plus; it is an option for the LC 815 and LC 850 printers.

The LC 860Plus shipping carton contains the following items:

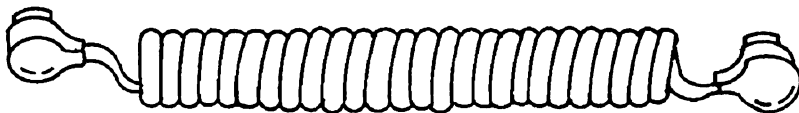
- second hopper (installed)
- center guide
- cable
- first hopper manual slot replaces second hopper as required.



SECOND HOPPER



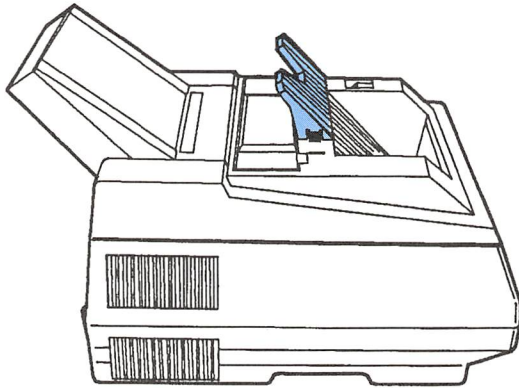
CENTER GUIDE



CONNECTOR CABLE

To install the second hopper in LC 800 Series printers, follow the two steps below. You'll need a flat-tip screwdriver.

First Hopper Cover and Manual Feed Slot Removal

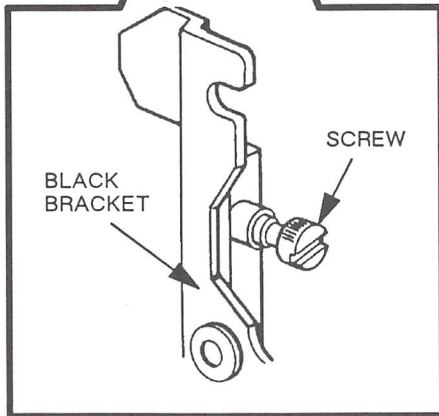
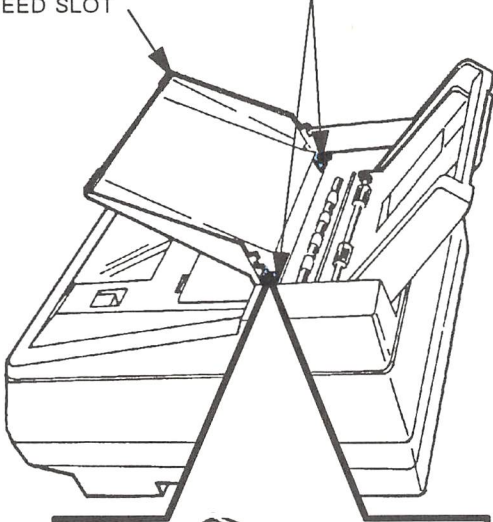


- 1 Turn off and unplug the printer.
- 2 Press the tabs on the sheet guide and pull to remove it.

Setting Up

FIRST HOPPER
COVER/MANUAL
FEED SLOT

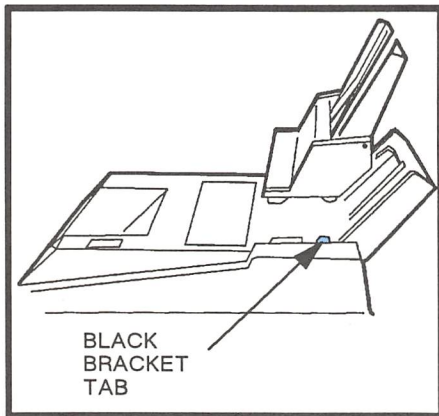
SCREWS



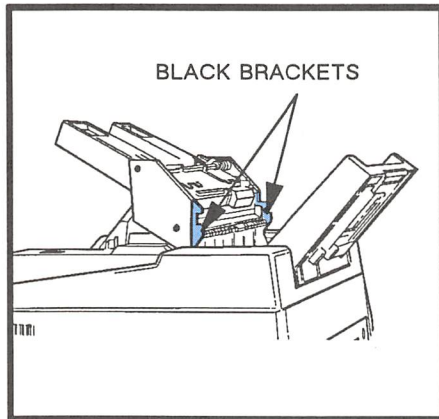
3 Loosen the screws that hold the first hopper cover to the black brackets.

4 Pull the black brackets away from the first hopper cover, lift the cover off, and set it aside.

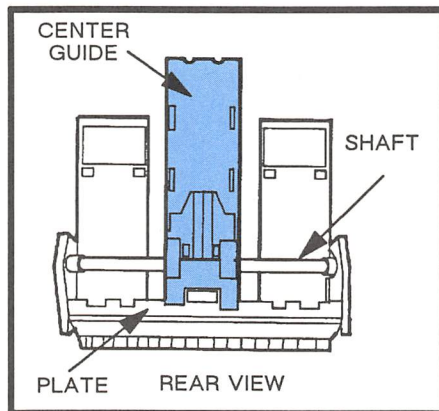
Second Hopper Installation



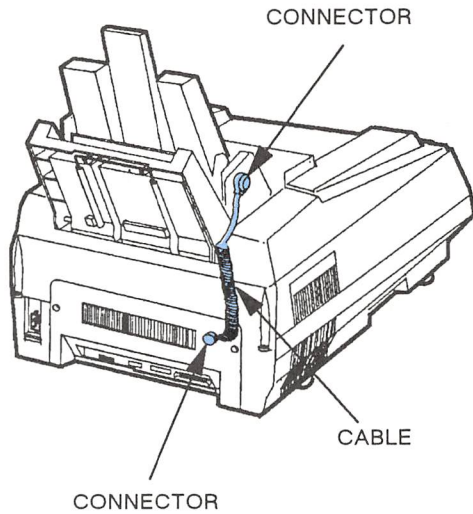
- 1 Lower the second hopper into position, fitting the tabs on the black brackets into the slots on the underside of the second hopper.



- 2 Making sure the hopper is positioned properly on the black brackets, swing the hopper forward.
- 3 Tighten the screws.

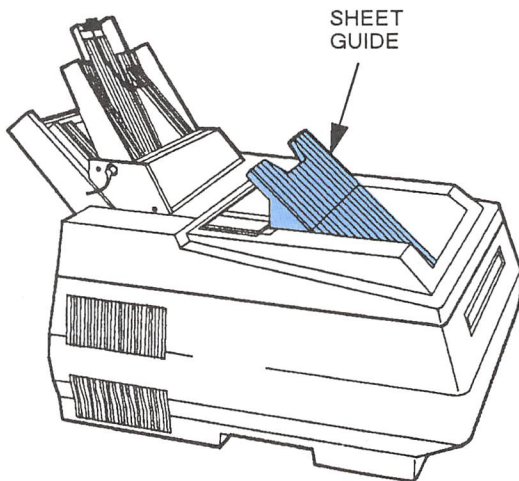


- 4 Snap the center guide onto the second hopper's shaft and plate.
- 5 Swing the hopper back toward the first hopper until it clicks into position.



- 6 Plug one end of the cable into the connector on the left side of the second hopper. Plug the other end of the cable into the connector on the rear of the printer.

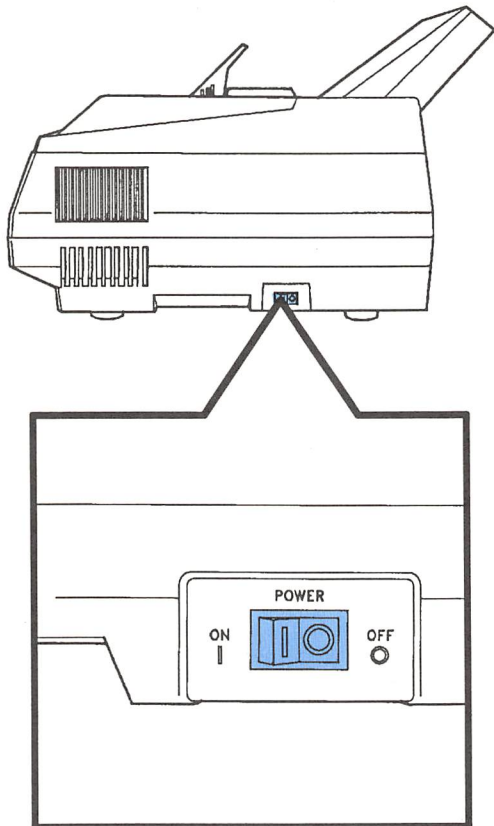
The notch at either end of the cable must fit into the small hole in each connector.



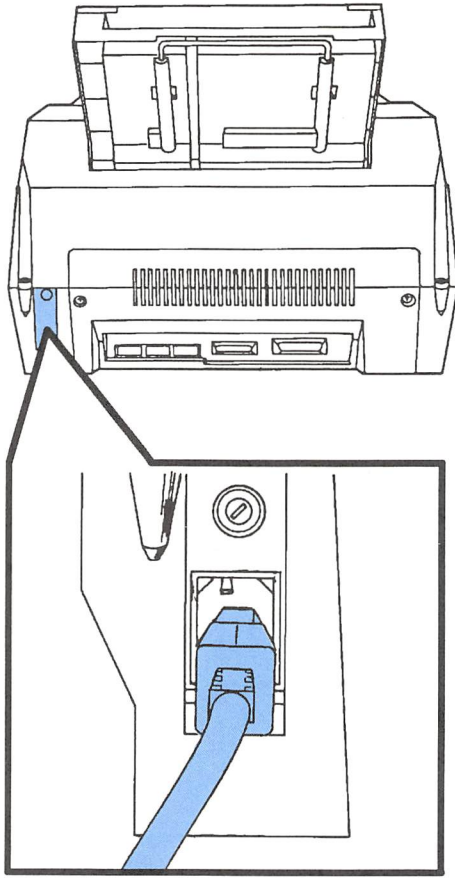
- 7 Replace the sheet guide.

POWER CORD

Follow these steps to connect the power cord.



- 1 Make sure the power is off.

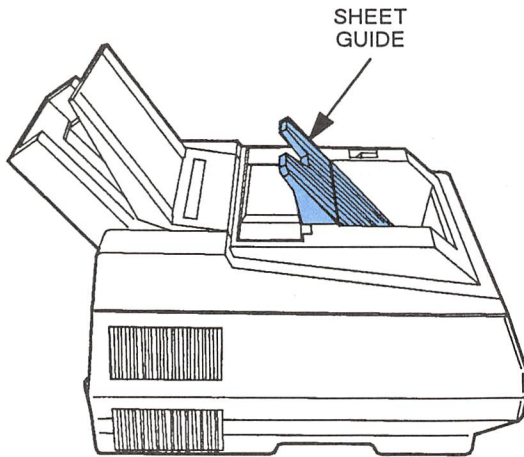


- 2 Connect the power cord to the rear of the printer.
- 3 Plug the other end of the power cord into a properly grounded outlet.

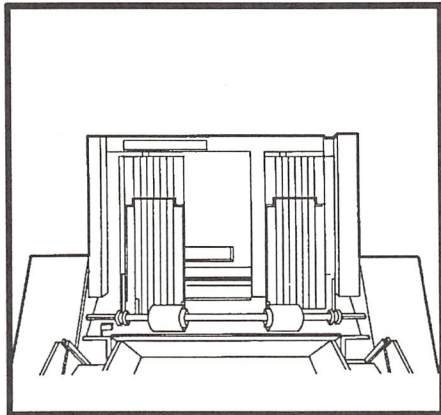
SELF-TEST

Use the self-test to check the printer's performance and print quality.

The self-test prints 10 pages for each resident font and each optional font (when a font cartridge is installed).



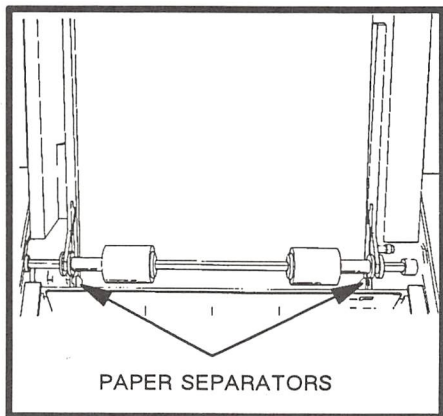
- 1 Make sure the power is off.
- 2 Be sure that the sheet guide is installed.
- 3 Open the hopper cover.



- 4 Pull the lock lever forward.

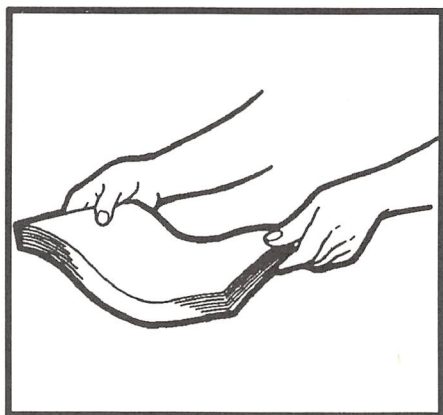
- 5 Place up to 250 sheets of paper in the hopper.

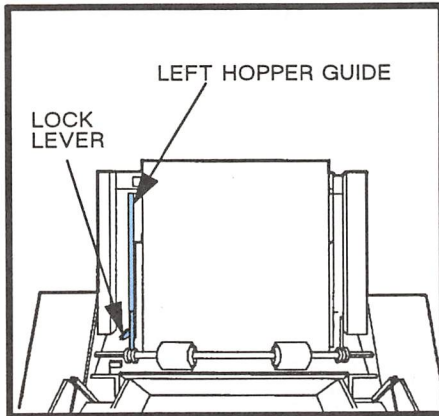
Remember that if the model you've purchased is the LC 860Plus it is equipped with the second hopper. This hopper will hold a total of 500 sheets of paper.



- 6 Make sure that the paper fits under the left and right paper separators at the bottom of the hopper.

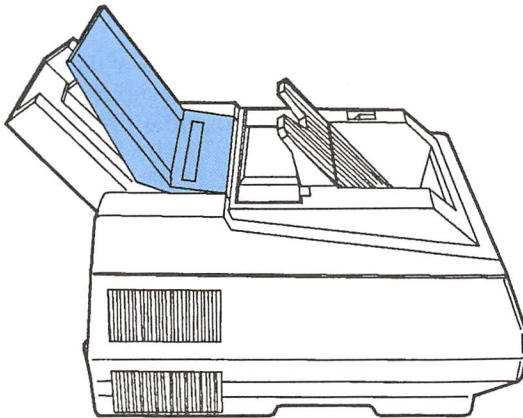
Fan the paper thoroughly to reduce the effect of static electricity which can cause misfeeds.





- 7 Adjust the left hopper guide to snugly fit the width of the paper.
- 8 Push the lock lever backward.

If the left hopper guide does not touch the left side of the paper, a paper size error may appear on the display.

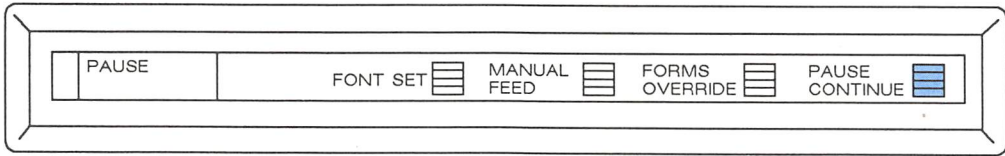


- 9 Close the hopper cover.
- 10 Turn on the power.
"WAIT" displays for about two minutes.

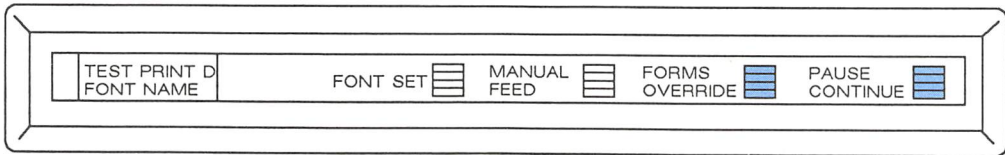
Next "WARM UP" blinks on the upper half of the display and the name of the first resident font appears on the lower half of the display.

Then "CONT" and the paper size appear on the upper half of the display while the lower half remains unchanged.

- 11 Press **PAUSE CONTINUE**.
“PAUSE” appears on the display.



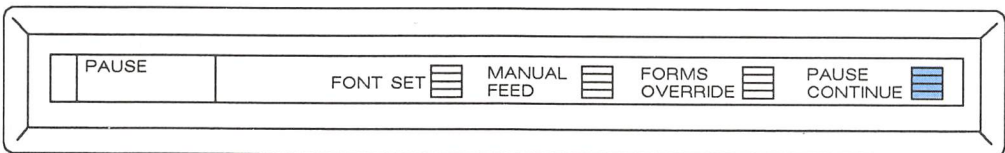
- 12 Press and hold **FORMS OVERRIDE**. Then press **PAUSE CONTINUE**.
Release both buttons at the same time to activate the self-test.



“TEST PRINT” and a flashing “D” appear on the upper half of the display, while the font name appears on the lower half of the display. (“D” means that there is data in the buffer.)

The test begins.

- 13 Press **PAUSE CONTINUE** to stop the self-test and put the printer in a pause state.



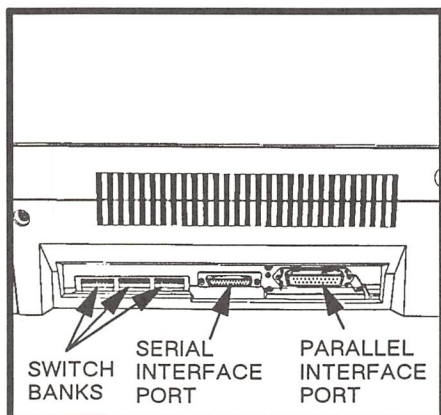
Approximately three more pages will print out.

SWITCH BANKS AND INTERFACE CABLE PORTS

Three banks of switches and two interface cable ports are located on the rear of the printer.

The switches are factory set for a parallel interface. For a complete description of switch settings, see your technical reference guide.

You must purchase an interface cable separately from your printer dealer or computer dealer. Once you have the correct cable, follow these steps to connect the printer to the host computer.



- 1 Make sure the printer power is off.
- 2 Connect the interface cable to the correct port on the rear of the printer.
- 3 Connect the other end of the cable to the interface port on the host computer.



Using Your Printer

CONTROL PANEL

The control panel located on the front of the printer allows you to control printer operations such as font selection, manual paper feed, or self-test execution. The four buttons on the control panel make it easy for you to run the printer.

The upper half of the display on the left side of the control panel shows printer status information, operator messages, and error messages (see “PROBLEM SOLVING”). The lower half of the display indicates the name of the font in use.

The figure on the next page shows the control panel and explains its functions.



STATUS INDICATOR

WAIT, WARM UP, PAUSE, CONT, SECOND HPR, PAPER SIZE. D MEANS THAT THE PAGE BUFFER CONTAINS DATA.

ALSO DISPLAYS ALL OPERATOR AND ERROR MESSAGES.

FONT SET BUTTON

PRESS TO SELECT A RESIDENT OR CARTRIDGE FONT.

PRESS AFTER ERROR MESSAGE DISPLAYS TO ISOLATE PROBLEM

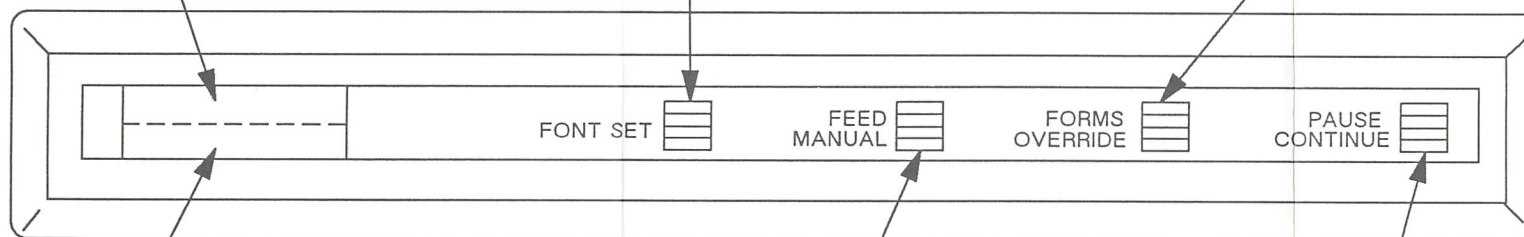
PRESS WITH FORMS OVERRIDE AND THEN TURN ON POWER TO START A HEX DUMP TEST.

FORMS OVERRIDE BUTTON

PRESS WITH PAUSE CONTINUE TO PERFORM A SELF-TEST.

WHEN A ERROR OCCURS, PRESS AFTER PRESSING PAUSE CONTINUE TO PRINT ALL DATA REMAINING IN THE PAGE BUFFER.

PRESS WITH FONT SET AND THEN TURN ON POWER TO START A HEX DUMP TEST.



FONT NAME

DISPLAYS NAME OF RESIDENT OR OPTIONAL CARTRIDGE FONT.

MANUAL FEED BUTTON

WHEN THE PRINTER IS IN A PAUSE STATE, PRESS TO SELECT MANUAL FEED. THEN PRESS PAUSE CONTINUE TO ACTIVATE MANUAL FEED.

WHEN THE PRINTER IS IN A PAUSE STATE AND AN OPTIONAL SECOND HOPPER IS INSTALLED, PRESS TO SELECT THE SECOND HOPPER. THEN PRESS PAUSE CONTINUE AGAIN TO ACTIVATE SECOND HOPPER OPERATION.

PAUSE CONTINUE BUTTON

PRESS TO ALTERNATE BETWEEN PAUSE AND CONTINUE STATES.

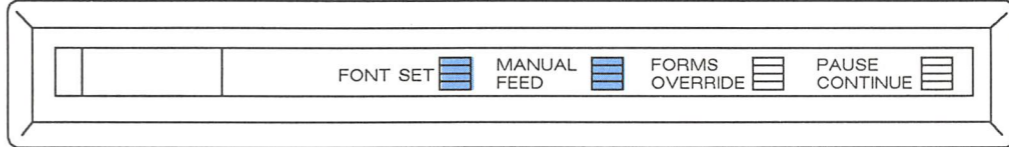
PRESS ONCE, THEN PRESS WITH FORMS OVERRIDE TO START A SELF-TEST.

PRESS TO STOP THE SELF-TEST.

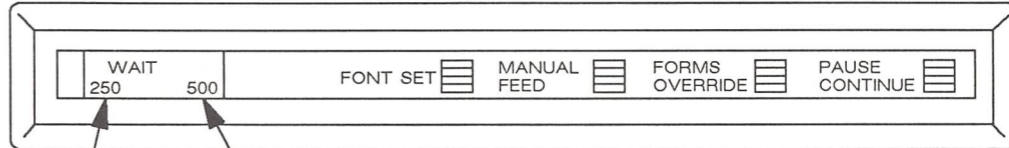
PAGE COUNT

Follow these steps to view the PC cartridge page count (up to 7,000 pages) on the lower left side of the display and the printed page count (up to 1,000,000 pages) on the lower right of the display.

- 1 With one hand, press and hold **FONT SET** and **MANUAL FEED**. With the other hand, turn the power on.



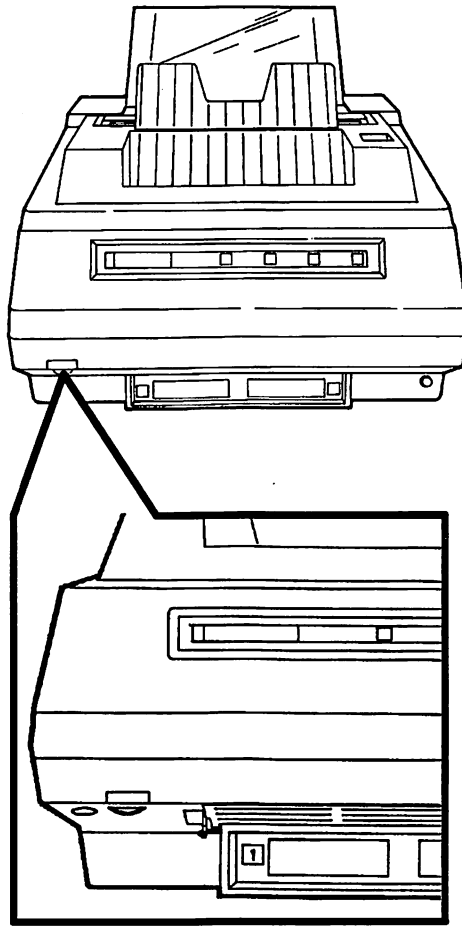
- 2 Release **FONT SET** and **MANUAL FEED**.
- 3 "WAIT" is indicated on the upper half of the display. Then the PC cartridge page count and the printed page count show on the lower half of the display.



PC CARTRIDGE PAGE COUNT PRINTED PAGE COUNT

PRINT DENSITY DIAL

The print density dial allows you to make minor changes to the lightness or darkness of print. Turn the dial to the right for lighter print or to the left for darker print. The recommended setting is at the center position.

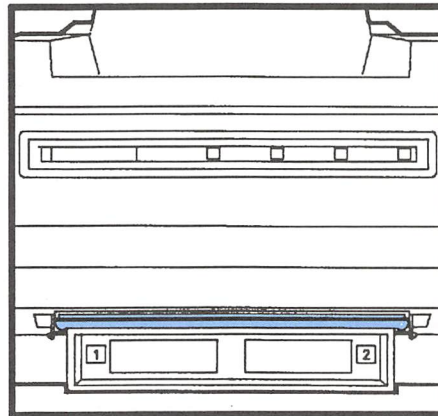


FACE-UP SLOT

The face-up slot allows printed sheets or transparencies to exit the printer face-up and uncollated. To open the slot, simply press the two tabs toward each other.

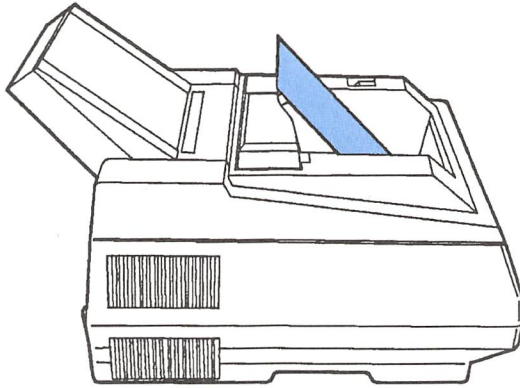
If you decide to use the face-up slot, always open it before printing begins to avoid the possibility of a paper jam. You must use the face-up slot when printing transparencies.

An optional 25-sheet capacity paper tray is available as an extension of the face-up slot. The tray lets printed pages stack face-up and uncollated. The part number for this option is #4808.



FACE-DOWN BIN

Printed sheets automatically feed to the face-down bin. This large capacity output bin holds up to 250 collated, face-down, printed sheets.



PRINTER OPTIONS

Contact your dealer to order any of the printer options listed below.

- Second Hopper
Model 5804
(Some models have the second hopper as standard equipment.)
- Image/Graphics Board (1.3-MB Memory)
Model 5881
- 15-Amperes Power Supply
Model 5813
- Face-Up Tray
Model 4808

RECOMMENDED PAPER AND TRANSPARENCIES

Recommended paper weight is 16 lb. to 20 lb. for automatic feed from the hopper and 16 lb. to 24 lb. for the manual feed slot and optional second hopper.

Use any of the following paper or transparency sizes when loading either hopper for automatic feed.

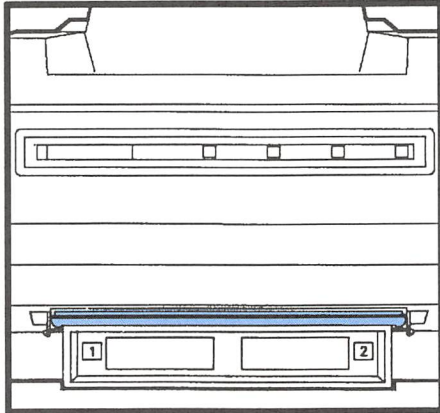
- Letter – 8.5 in. x 11 in. (216 mm x 279 mm)
- Legal – 8.5 in. x 14 in. (216 mm x 356 mm)
- A4 – 8.27 in. x 11.69 in. (210 mm x 297 mm)
- B5 – 7.17 in. x 10.12 in. (182 mm x 257 mm)

When inserting sheets in the manual feed slot, use paper or transparency sizes within the following ranges.

- Width – 5.5 in. to 8.5 in. (140 mm x 216 mm)
- Length – 5.8 in. to 14 in. (147 mm x 356 mm)

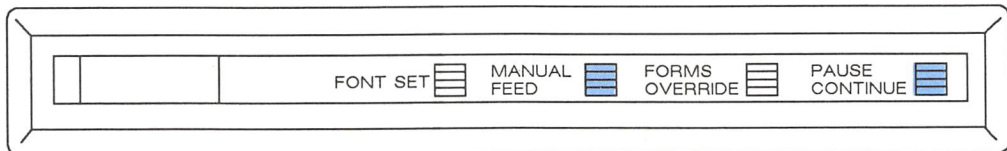
MANUAL FEED SLOT

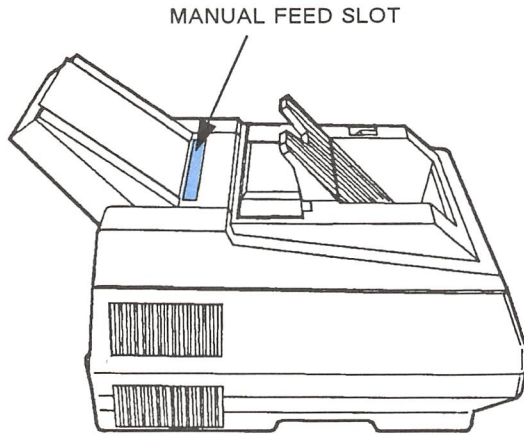
Use the manual feed slot when you want to print individual legal size sheets or transparencies. If you use smaller paper or transparencies, the printable area is smaller and some of the data may not be printed.



- 1 Turn the power on.
- 2 Open the face-up slot if you intend to print transparencies (see "FACE-UP SLOT").

- 3 Press **PAUSE CONTINUE**.
- 4 Then press **MANUAL FEED**.



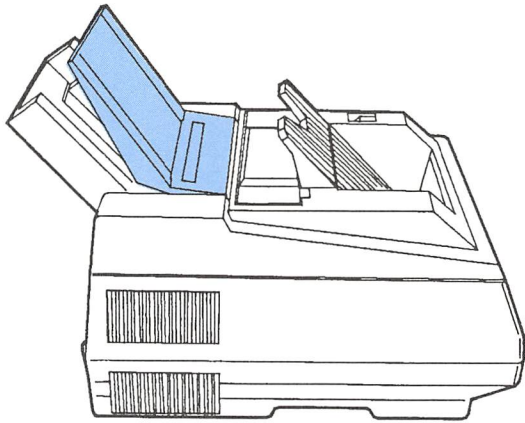


- 5 Insert one sheet or transparency at a time in the manual feed slot.

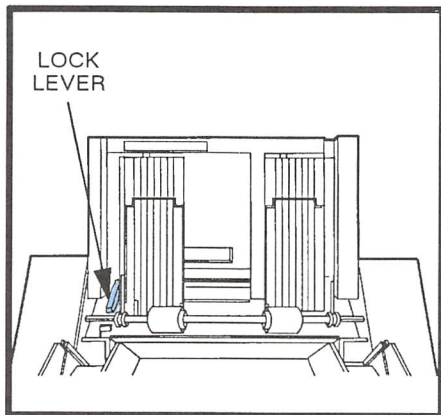
You can also control manual paper or transparency feed through software. See your technical reference guide for a complete list of escape sequences and control codes.

LOADING THE FIRST HOPPER

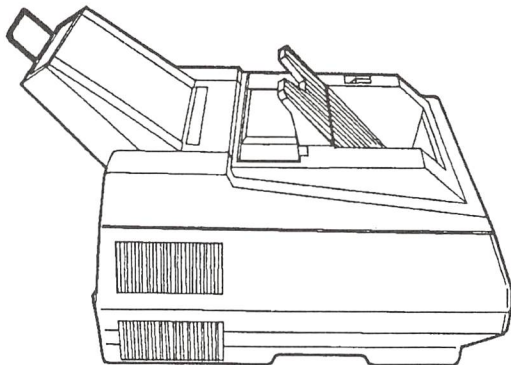
Follow these steps to load paper or transparencies in the first hopper.



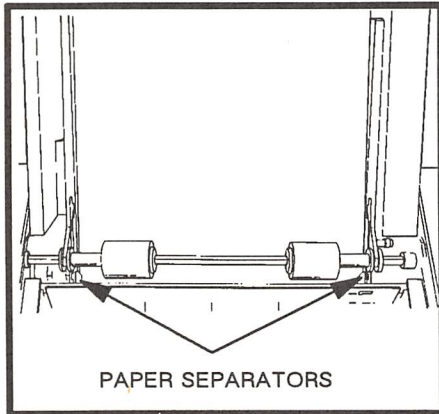
- 1 Make sure the sheet guide is installed (see “SHEET GUIDE” for instructions).
- 2 Open the hopper cover.



- 3 Pull the lock lever forward.

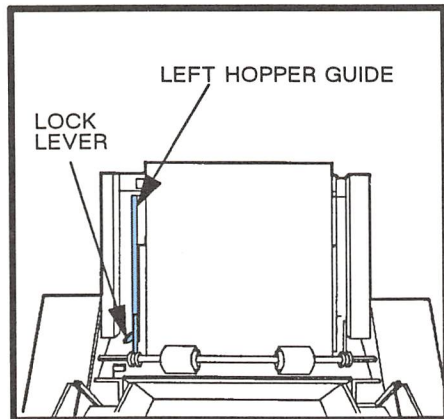


- 4 When loading legal-size paper or transparencies, pull up the extension bar.



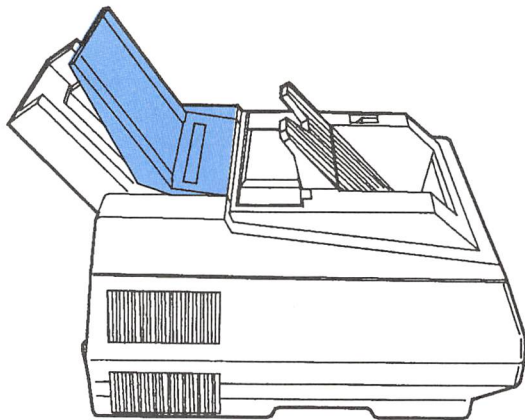
- 5 Place up to 250 sheets of paper or transparencies in the hopper (see "RECOMMENDED PAPER AND TRANSPARENCIES").

Be sure that the paper or transparencies fit under the two paper separators at the bottom of the hopper.

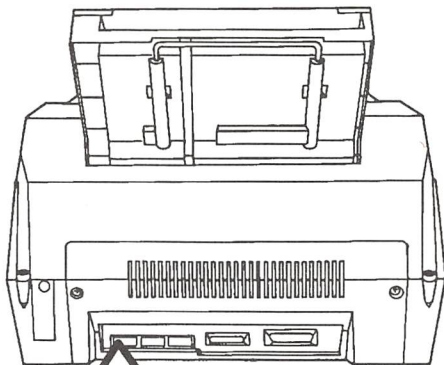


- 6 Adjust the left hopper guide to snugly fit the width of the paper or transparencies.
- 7 Push the lock lever backward.

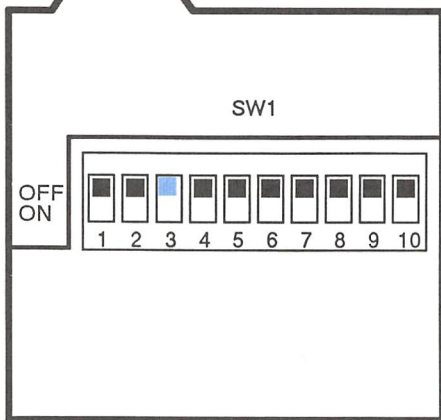
If the left paper guide does not touch the left side of the paper, a paper size error may appear on the display.

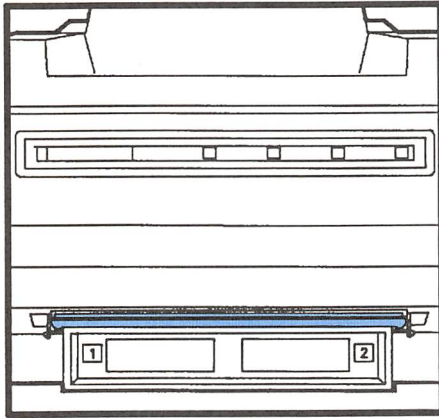


8 Close the hopper cover.



9 Set switch 1-3 on the rear of the printer, ON (down) for legal-size paper or OFF (up) for letter-size paper.

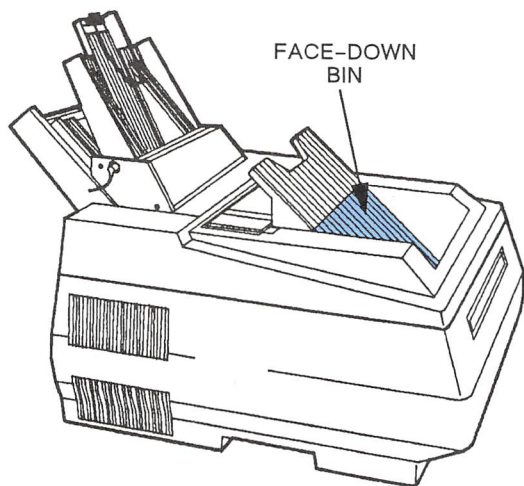




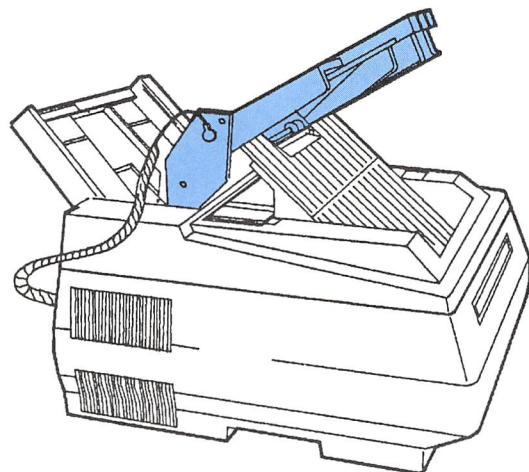
- 10 Open the face-up slot if you plan to print transparencies (see "FACE-UP SLOT").

LOADING THE FIRST HOPPER (WITH THE OPTIONAL SECOND HOPPER INSTALLED)

If your printer has an optional second hopper, use these instructions to load paper in the first hopper.



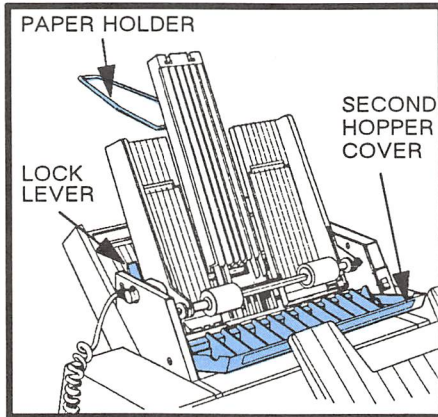
- 1 Remove any paper from the face-down bin.



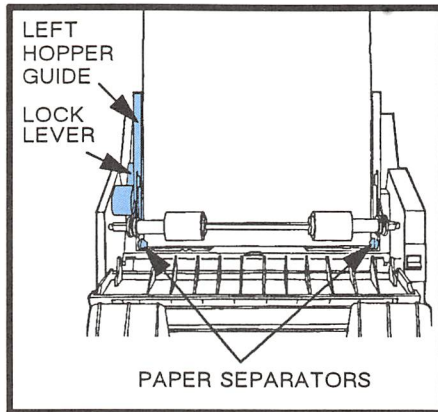
- 2 Pull the second hopper forward.
- 3 Follow steps 2 through 10 of the previous section.
- 4 Push the second hopper back to its original position.

LOADING THE OPTIONAL SECOND HOPPER

Follow these steps to load paper or transparencies in the optional second hopper.

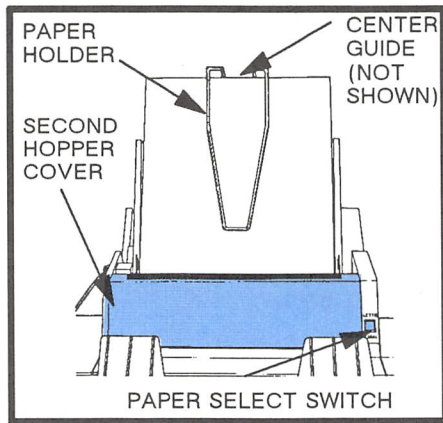


- 1 Squeeze the sides of the paper holder together and flip the holder backward.
- 2 Open the second hopper cover.
- 3 Pull the lock lever backward.

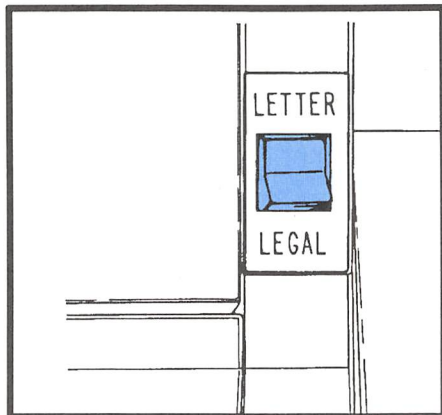


- 4 Place up to 250 sheets or transparencies in the hopper (see "RECOMMENDED PAPER AND TRANSPARENCIES").
Be sure that the paper or transparencies fit under the two paper separators at the bottom of the hopper.
- 5 Adjust the left hopper guide to snugly fit the width of the paper.
- 6 Push the lock lever backward.

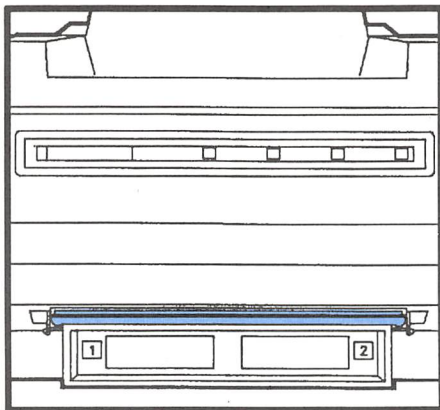
If the left paper guide does not touch the left side of the paper, a paper size error may appear on the display.



- 7 Close the second hopper cover.
- 8 Flip the paper holder back to its original position.
- 9 Adjust the height of the center guide to the size of the paper or transparencies.



- 10 Set the paper select switch on the right side of the second hopper to the type of paper you are using.



- 11 Open the face-up slot if you plan to print transparencies (see "FACE-UP SLOT").

SELECTING THE OPTIONAL SECOND HOPPER

If your printer has a second hopper, you may select to feed paper from the first or second hopper. Follow these instructions to select the second hopper through the control panel.

You can also perform this function through software. See your LC 800 Series technical reference guide for a complete list of control codes and escape sequences.

1 Be sure the paper or transparencies are in the second hopper.

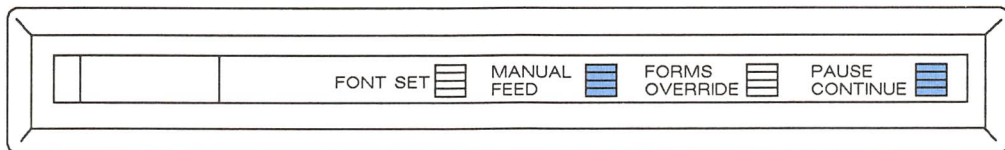
2 Turn the power on.
“WAIT” blinks for about two minutes.

Next “WARM UP” blinks on the upper half of the display and the name of the first resident font appears on the lower half of the display.

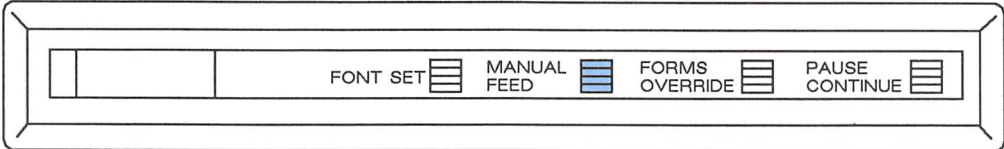
Then “CONT” and the size of the paper in the first hopper are indicated on the upper half of the display. The lower half of the display remains unchanged.

3 To activate paper feed from the second hopper, press **PAUSE** **CONTINUE** followed by **MANUAL FEED**.

Select “SECOND HPR”, the size of the paper in the second hopper, and the name of the first resident font display.



- 4 To reselect the first hopper and put the printer in a pause state, press **MANUAL FEED**.

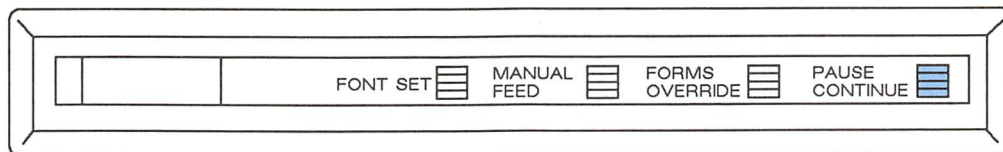


FONT SELECTION

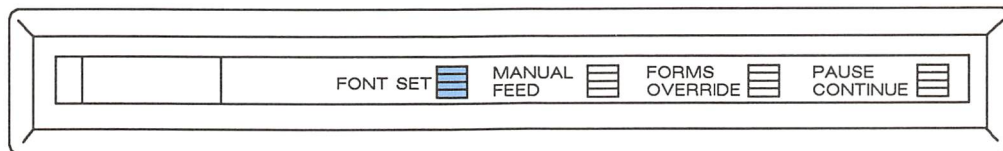
The printer has four built-in (resident) fonts. Optional cartridges containing one, two, or four fonts are also available to increase your choice of print sizes and styles.

Follow these steps for font selection through the control panel. You can also perform this function through software.

- 1 Be sure the power is on.
- 2 To select a font other than the one indicated on the lower half of the display, press **PAUSE** **CONTINUE**.



- 3 Then press **FONT SET** repeatedly until the name of the desired font is displayed.



Resident fonts are selected and displayed first, followed by any optional fonts. Portrait indicates vertical printing. Landscape indicates horizontal printing.

- Resident Fonts LC 850/LC 815
 - Courier 10-pitch portrait
 - Courier 12-pitch landscape
 - Courier Italic 10-pitch portrait
 - Courier Symbol 10-pitch portrait

- Resident Fonts LC 860Plus
 - Courier 10-pitch landscape
 - Courier 10-pitch portrait
 - Lineprinter 16.66-pitch portrait
 - Letter Gothic 2-pitch portrait

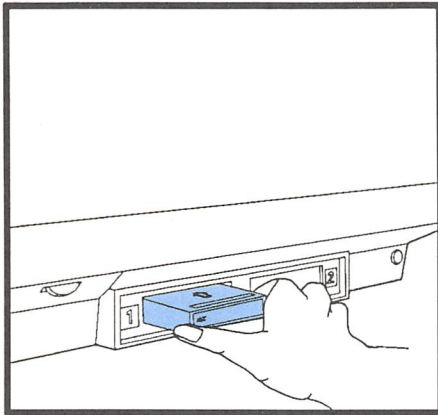
- Optional fonts
 - Font cartridge in slot 1; Optional
 - Font cartridge in slot 2; Optional

INSERTING AN OPTIONAL FONT CARTRIDGE

You can purchase optional font cartridges containing one, two, or four fonts from your printer dealer.

Follow these instructions when inserting a font cartridge.

In newer versions of printer firmware, it is not necessary to power down to install font cartridges. In older versions an error will be displayed. In this case, power down prior to cartridge installation.



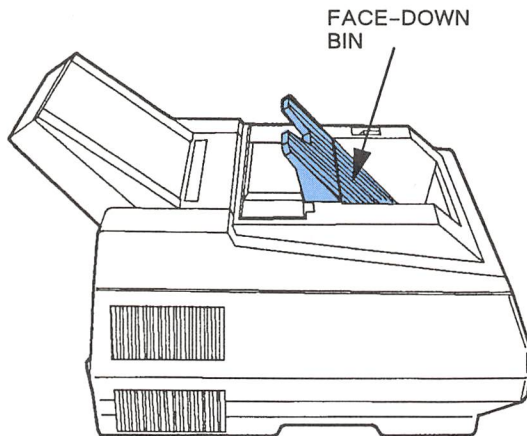
- 1 Insert one or two font cartridges into the slot(s) in the front of the printer. You can use either slot.
- 2 Turn the power on.
“WAIT” displays for about two minutes.
Next, “WARM UP” blinks on the upper half of the display and the name of the first resident font appears on the lower half of the display.
Then “CONT” and the paper size appear on the upper half of the display. The lower half of the display remains unchanged.
- 3 To select a font other than the one indicated on the lower half of the display, see “FONT SELECTION.”



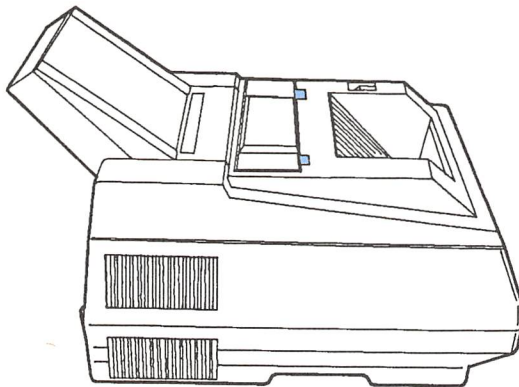
Maintaining Your Printer

ADDING TONER

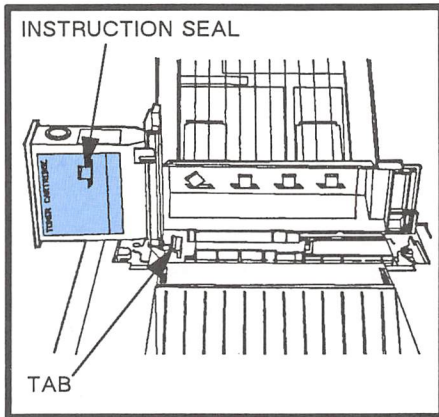
The toner in one disposable toner cartridge lasts for approximately 3,000 pages. When the toner supply begins to decrease, "TONER NEAR END" displays to warn you that about 250 more pages will be printed before the toner runs out. Once the toner is depleted, "TONER EMPTY" displays and printing stops. Follow these steps to add toner.



- 1 Remove any paper from the face-down bin.
- 2 Press the tabs and pull up to remove the sheet guide.

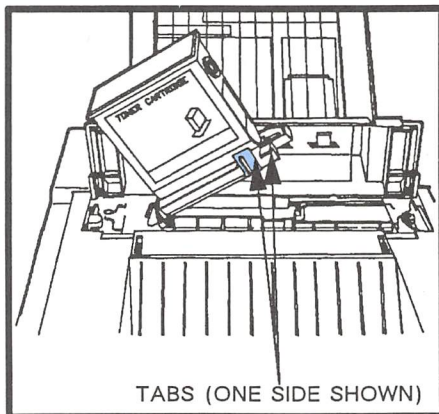


- 3 Press the toner cover tabs and lift to open the toner cover.
- 4 Vigorously shake the toner cartridge up and down several times.

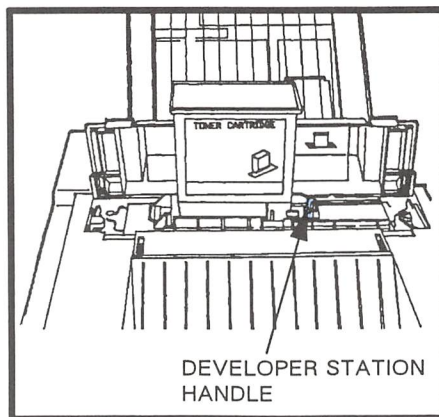


5 Hold the toner cartridge so that the instruction seal faces the front of the printer.

6 Tip the cartridge on its left side and slide it under the tab on top of the developer station.

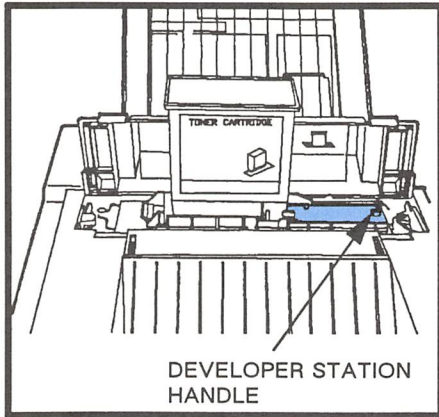


7 While pressing the tabs in on either side of the cartridge, move the cartridge to an upright position on the developer station.

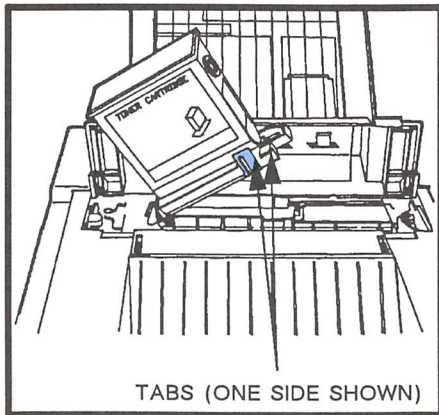


8 Tap the top of the cartridge several times to allow toner to flow easily into the developer station.

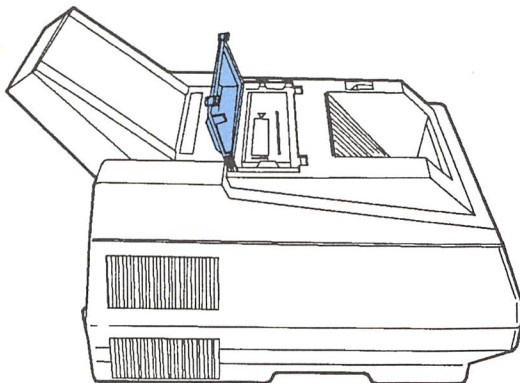
9 Pull the developer station handle all the way out to the right side of the printer. The toner empties into the developer station.



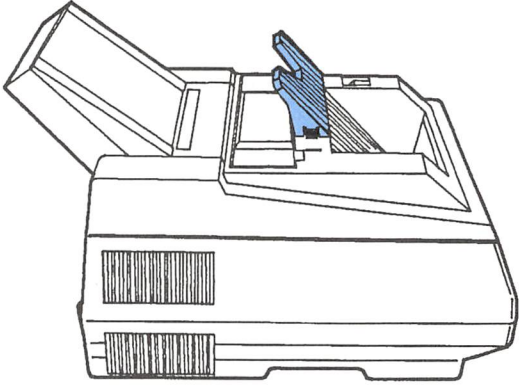
- 10 Push the developer station handle all the way in, back to its original position.



- 11 While pressing in the tabs on either side of the cartridge, lift the empty toner cartridge off the developer station and discard it.

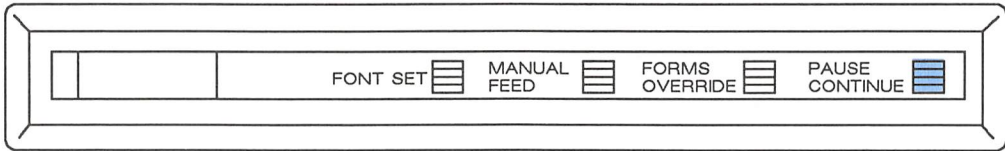


- 12 Close the toner cover.



- 13 Replace the sheet guide and any paper you wish to return to the face-down bin.

- 14 Press **PAUSE CONTINUE** to continue printing.

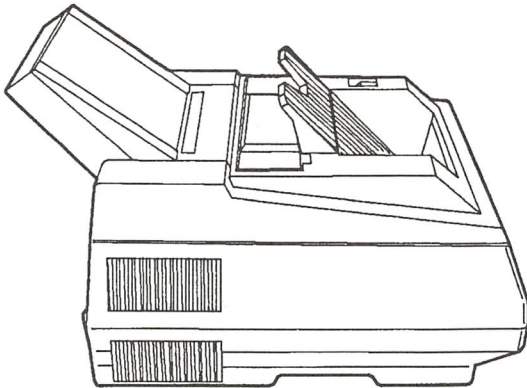


REPLACING THE PC CARTRIDGE

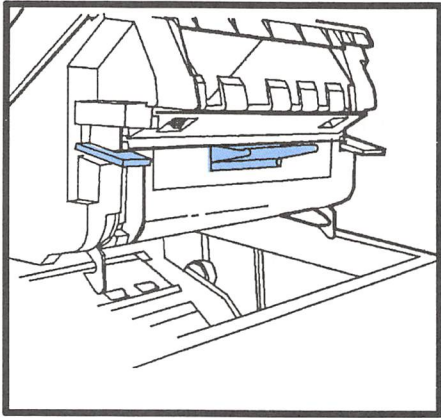
The photoconductor (PC) cartridge shipped with your printer lasts for approximately 7,000 pages. When the PC cartridge begins to run low, “PC NEAR END” displays to warn you that only 100 more sheets will be printed with the present PC cartridge installed.

Once the cartridge is completely depleted, the printer stops and “PC LIFE” displays. Follow these steps to install a new PC cartridge.

To maintain consistent print quality observe the “PC NEAR END” warning. Replace the PC cartridge before “PC LIFE” displays and the printer stops.

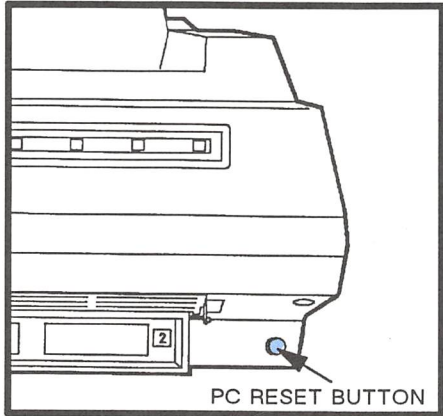


- 1 Make sure the power is on.
- 2 Pull the release lever forward to open the upper unit.



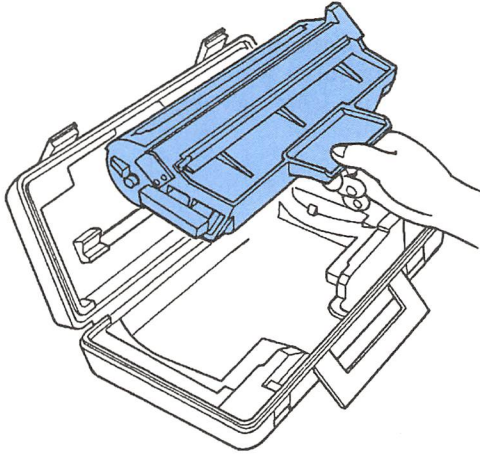
- 3 Push and hold up the cartridge release lever.
- 4 While holding up the cartridge release lever, pull the handle to slide the PC cartridge out of the printer.
- 5 Discard the PC cartridge.

The disposable PC cartridge is not hazardous to your health or to the environment.



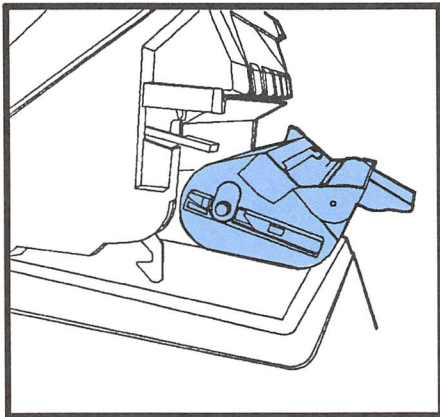
- 6 Press the PC reset button on the lower right front of the printer to reset the copy count to zero.

The copy count can only be reset when the PC cartridge is removed from the printer.

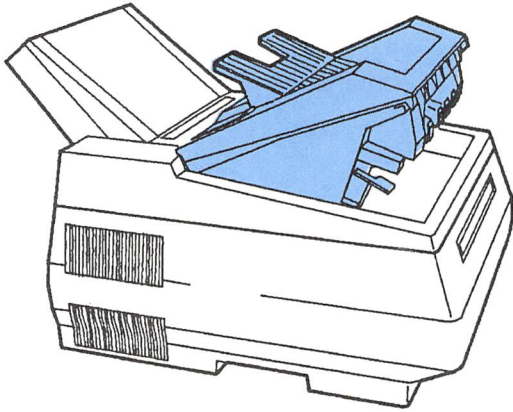


- 7 Remove the new PC cartridge from its case.

Keep the PC cartridge case closed until you are ready to install the cartridge in the printer. Do not touch the blue PC drum or expose it to light for more than 60 seconds at a time.



- 8 Slide the PC cartridge along the guides inside the upper unit until you hear both sides lock firmly in place.



- 9 Close the upper unit immediately to protect the PC drum from light exposure.

Save the PC cartridge case and its contents. If you need to move the printer, remove the PC cartridge and store it in the cartridge case before packing the printer.

It is highly recommended at every PC cartridge change that the printer is cleaned and the felt cleaning pad and separator belt are replaced. See the following sections.

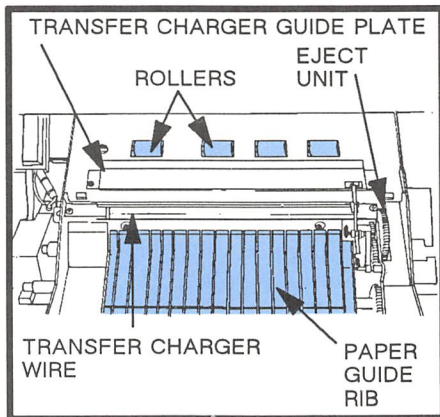
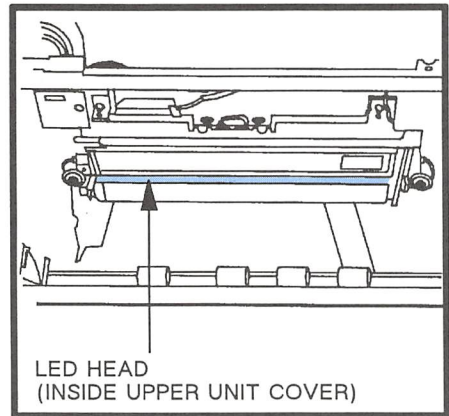
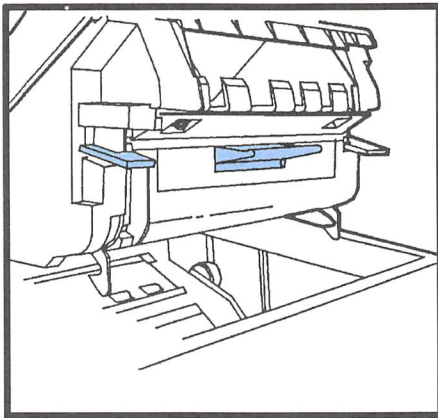
REPLACING THE DEVELOPER STATION

The developer station inside your printer will operate correctly for approximately 100,000 pages. When the developer station needs to be replaced, a message is displayed indicating that it is time to call your service representative for a printer checkup.

CLEANING

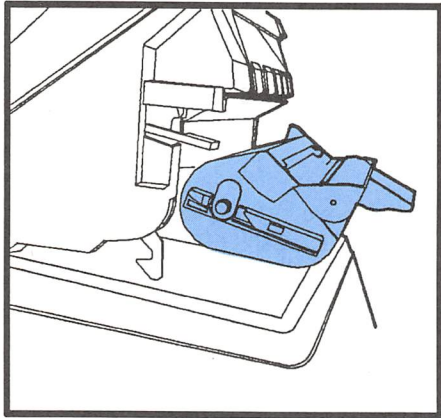
Clean the following items, as directed, when smudges or lines begin to appear on printed sheets.

- Transfer Charger Wire
- Transfer Charger Guide Plate
- Paper Guide Rib
- Rollers
- LED Head
- Eject Unit



- 1 Turn off and unplug the printer.
- 2 Remove the PC cartridge (see "REPLACING THE PC CARTRIDGE") and leave the upper unit open.
- 3 Using a soft, very clean cloth first clean the lens of the LED head.
Next clean the four rollers, transfer charger guide plate, and paper guide rib.
- 4 Push open the eject unit.
Use a soft cloth to clean the eject unit.

Handle the transfer charger wire carefully to prevent breakage.



- 5 Dip the cotton swab provided in the PC cartridge case in alcohol.
Rub it over the transfer charger wire.
- 6 Insert the PC cartridge in the printer and close the upper unit.

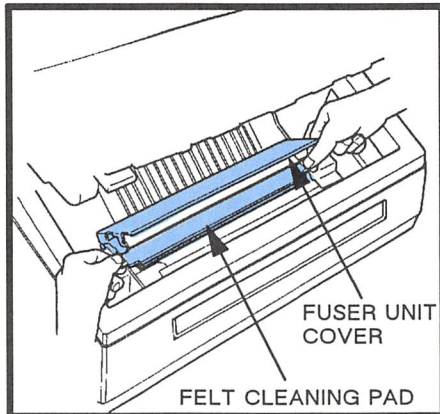
If smudges and streaks persist after cleaning, see the next section.

REPLACING THE FELT CLEANING PAD AND SEPARATOR BELT

An extra felt cleaning pad and separator belt are provided in the PC cartridge case. Change both items if print quality is unacceptable after cleaning.

Felt Cleaning Pad

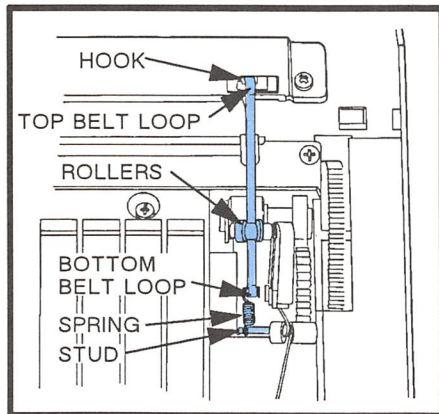
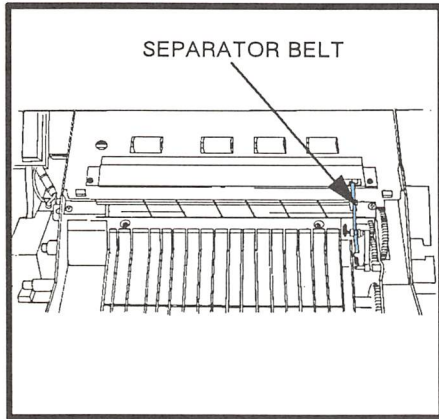
- 1 Turn off and unplug the power cord from the rear of the printer.
- 2 Remove the PC cartridge (see "REPLACING THE PC CARTRIDGE") and leave the upper unit open.
- 3 Open the fuser unit's cover.
- 4 Lift the old felt cleaning pad to remove it.



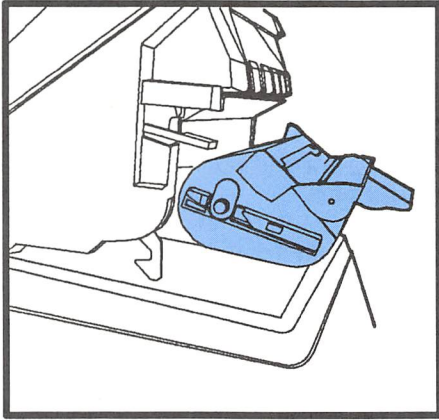
The heat roller under the felt cleaning pad is very hot. Never touch it, even when power is off.

- 5 Insert the new felt cleaning pad.
- 6 Close the fuser unit's cover.
- 7 Change the separator belt (see the next section).

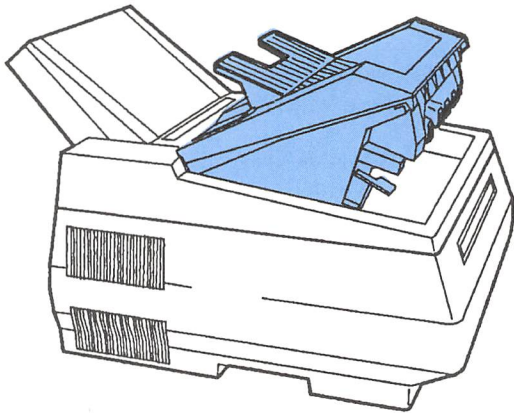
Separator Belt



- 1 Slide the bottom separator belt loop off the hooked end of the spring.
- 2 Carefully remove the separator belt from under the rollers.
- 3 Slide the top separator belt loop off the hook.
- 4 Lift the separator belt out of the printer.
- 5 Discard the old belt, or clean it with a soft cloth.
- 6 Slide the top separator belt loop onto the hook.
- 7 Slip the separator belt under the rollers.
- 8 Slide the hooked end of the spring through the bottom separator belt loop.



- 9 Insert the PC cartridge in the printer.



- 10 Close the upper unit.

PRINT QUALITY MAINTENANCE

Here are some suggestions for maintaining the highest print quality from your printer.

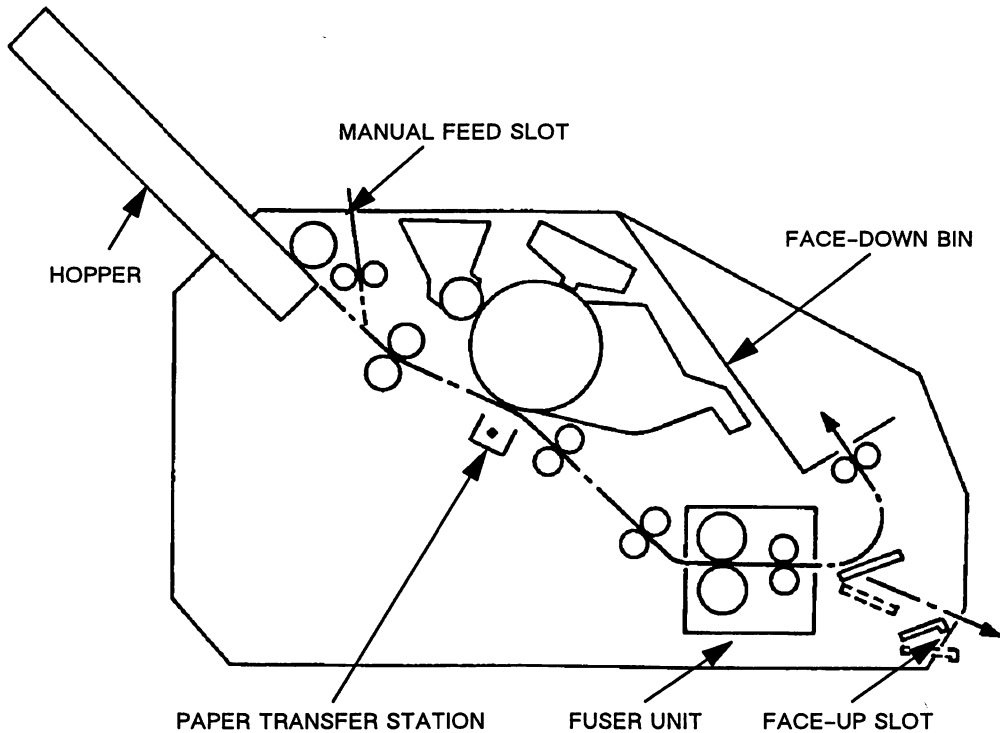
- Immediately replace the PC cartridge or add toner when the display indicates that replacement is necessary.
- Use high-quality paper or transparencies to obtain sharp, crisp characters and maximum contrast (see “RECOMMENDED PAPER AND TRANSPARENCIES”).

PROBLEM SOLVING

Although your printer is highly reliable, simple problems can occur. The printer's display aids you in detecting and solving these problems.

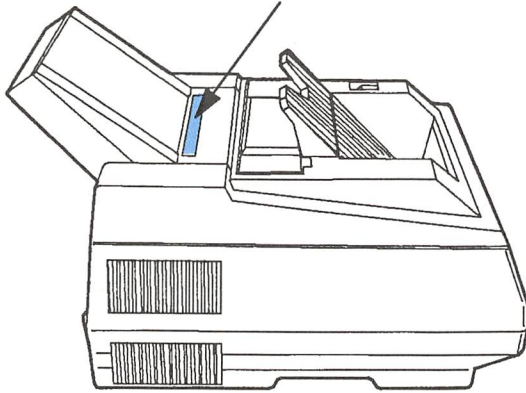
Paper Jam

When the paper path is blocked, a paper jam occurs and "PAPER JAM" displays. The locations of potential paper jam areas are shown below.

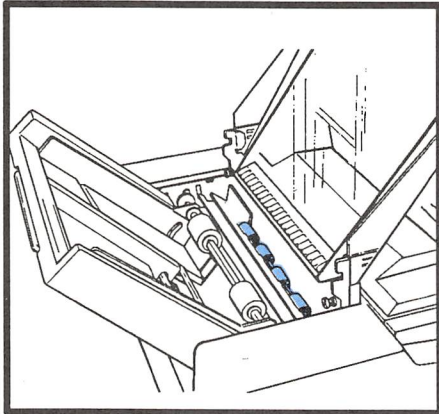


Follow these steps in sequence to check each area for jammed paper. Once a jam inside the printer is cleared, be sure to insert the PC cartridge and close the upper unit.

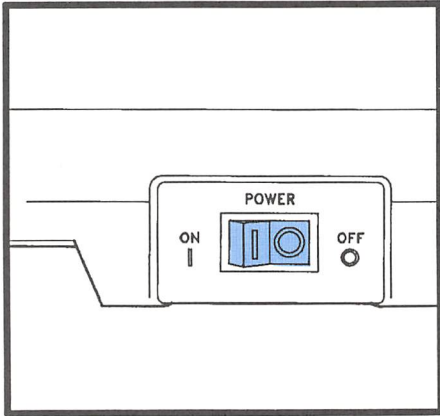
SECOND HOPPER/MANUAL FEED SLOT



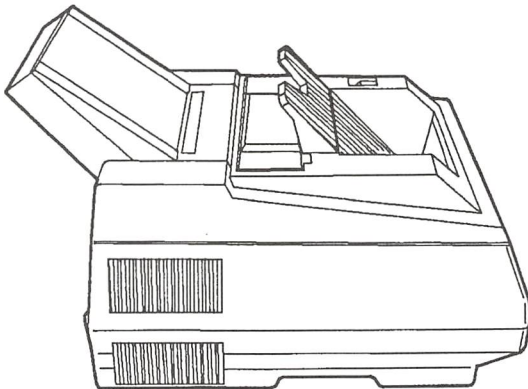
- 1 Pull the jammed paper up to remove it from the manual feed slot.



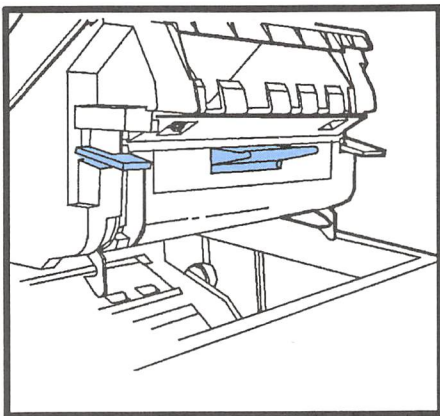
- 2 Open the hopper cover and remove the jammed paper from around the rollers.



- 3 Turn the power off to safely complete the remaining steps.

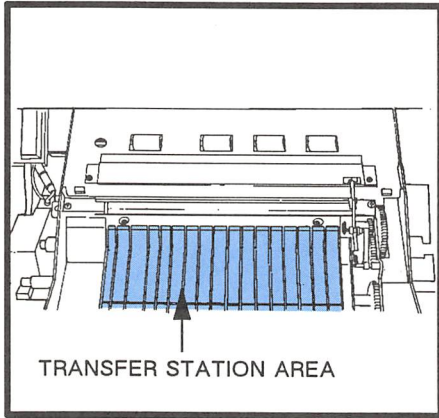


- 4 Pull the release lever forward to open the upper unit.

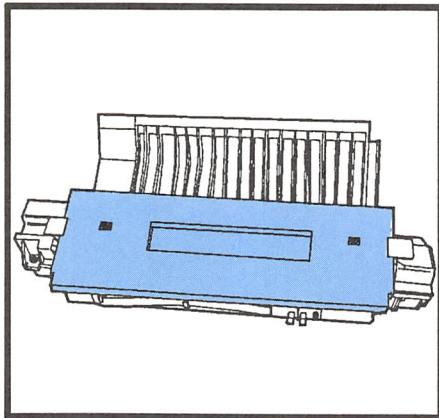


- 5 While holding the cartridge release lever up, remove the PC cartridge.

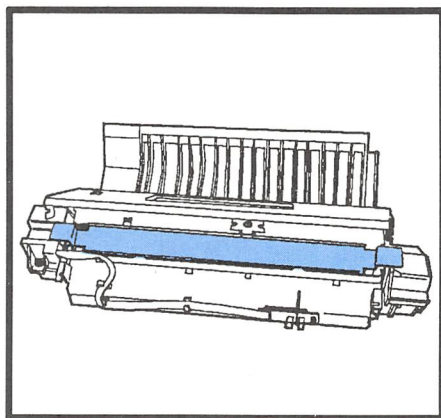
Immediately place the PC cartridge in its case to protect the PC drum.



- 6 Remove the jammed paper from the paper transfer station.

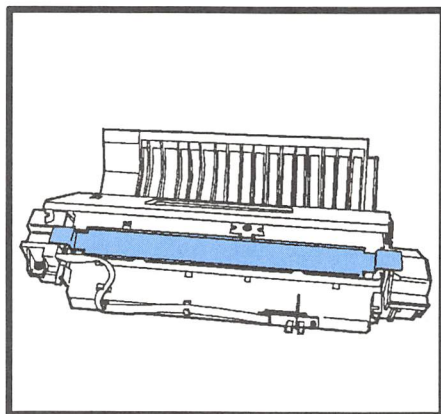


- 7 Open the fuser unit cover.

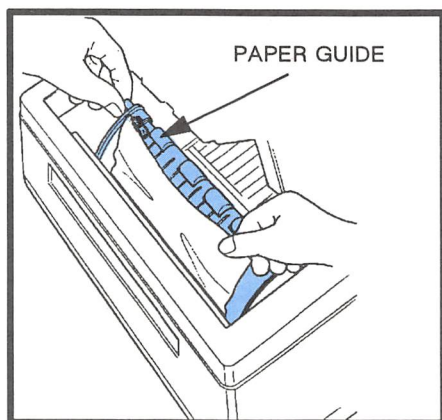


- 8 Lift the felt cleaning pad and remove the jammed paper from around the heat roller.

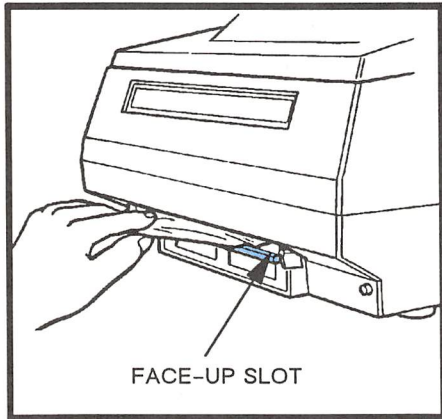
Do not touch the heat roller under the felt cleaning pad, it is extremely hot.



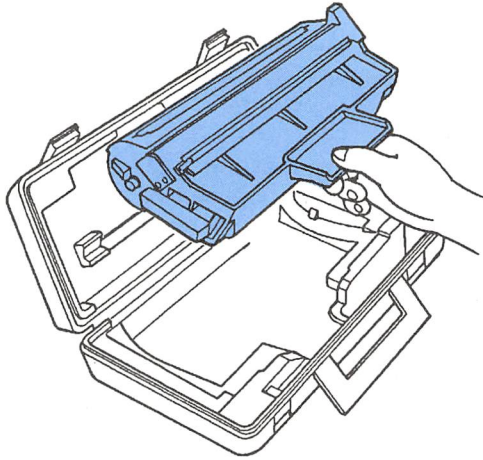
- 9 Replace the cleaning pad and close the fuser unit's cover.



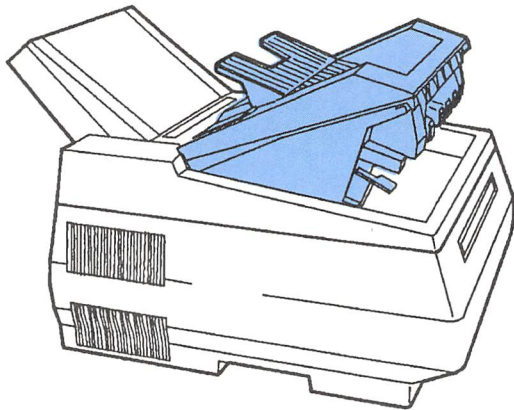
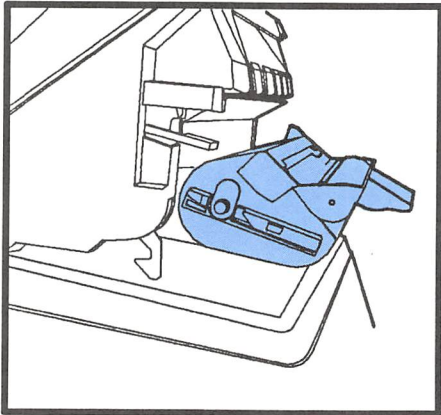
- 10 Push the paper guide toward the rear of the printer and remove any paper that is jammed at the top or behind it.



- 11 Remove any paper that may be jammed as it exits the printer through the face-up slot.
- 12 Be sure that the face-up slot is completely opened or closed.



- 13 Remove the PC cartridge from its case, insert it in the printer, and close the upper unit.



Print Quality

The table below gives solutions to simple print quality problems.

Problem Solving — Print Quality

PROBLEM	POSSIBLE CAUSE	SOLUTION
Printing is too light.	The print density dial is set too far to the right.	Move the print density to the left.
	The transfer charger wire is dirty.	Clean the transfer charger wire.
	Toner has spilled on the lens of the LED head.	Clean the LED head with a soft cloth.
Characters are faded or clipped.	Unsuitable paper or transparencies have been loaded.	Use recommended paper or transparencies.
	The transfer charger wire is dirty.	Clean the transfer charger wire.
	The PC drum is malfunctioning.	Replace the PC cartridge.
Background is blurry, dark or contains a dark strip.	The PC cartridge has been exposed to light for over one minute.	Replace the PC cartridge.
Page is dirty.	Toner has spilled or built up.	Perform cleaning procedures.
	The surface of the PC drum is damaged.	Replace the PC cartridge.
Characters are shifted vertically.	The hopper guide is set narrower than the paper width.	Set the hopper guide slightly wider than the paper width.
Print rubs off.	Unsuitable paper or transparencies have been loaded.	Use recommended paper or transparencies.

Problem Solving — Print Quality (cont'd)

PROBLEM	POSSIBLE CAUSE	SOLUTION
Stain or black stripe on left side of paper.	Toner leaked onto the feed roller or separator belt.	Clean the feed roller or separator belt.
	The separator rollers are dirty.	Wipe the separator rollers with a cotton swab dipped in alcohol.
Dirt on reverse side of paper.	Toner leaked onto the feed roller or separator belt.	Clean the feed roller or separator belt.
	Toner leaked onto the transfer charger wire.	Wipe the toner off the transfer charger wire with a cotton swab.
	Toner leaked into the manual feed slot.	Wipe the toner off the manual feed slot with a soft cloth.
	The felt cleaning pad is dirty.	Replace the felt cleaning pad in the fuser unit.

Operator Messages

The table below lists operator messages that may display, along with corrective actions.

Problem Solving — Operator Messages

MESSAGE	SOLUTION
OP MESSAGE PAPER EMPTY	Load paper in the hopper and press PAUSE CONTINUE or press MANUAL FEED to switch from automatic paper feed to manual paper feed.
OP MESSAGE PAPER JAM	Remove jammed paper from the hopper or manual feed slot. Turn power off. Remove the PC cartridge and put it in its case. Remove jammed paper from inside the printer. Insert the PC cartridge in the printer.
OP MESSAGE COVER OPEN	Close the toner cover and/or upper unit. Press PAUSE CONTINUE.
CONT or PAUSE TONER NEAR END	Be prepared to add toner. "TONER EMPTY" will display after 250 more page print.
OP MESSAGE TONER EMPTY	Add toner. Press PAUSE CONTINUE.

Problem Solving — Operator Messages (cont'd)

MESSAGE	SOLUTION
CONT or PAUSE PC NEAR END	Be prepared to replace the PC cartridge. “PC LIFE” will display after 100 more pages print out.
OP MESSAGE PC LIFE	Open the upper unit and remove the old PC cartridge. Press the PC reset button. Install a new PC cartridge and close the upper unit. Press PAUSE CONTINUE.
OP MESSAGE PAPER SIZE	Load recommended paper. Adjust the left hopper guide to snugly fit the width of the paper. Push the lock lever backward. Set switch 1–3 ON (down) for legal-size paper or OFF (up) for letter-size paper. Wrong page length is set in software. Refer to technical reference guide and manual supplied with software.
OP MESSAGE OVERRUN PRINT	Press PAUSE CONTINUE. Check the font cartridge for proper insertion. If the font cartridge is inserted correctly, call your service representative.

Problem Solving — Operator Messages (cont'd)

MESSAGE	SOLUTION
OP MESSAGE INVALID DATA	Press PAUSE CONTINUE. Be sure that each page contains only 256 lines of data.
OP MESSAGE DATA OVERFLOW	Press PAUSE CONTINUE. Be sure that no more than 80 bytes of data are downloaded from the host computer.
OP MESSAGE PC SENSE	Install the PC cartridge.
OP MESSAGE SERVICE CALL	Call your service representative.

Error Messages

The table below lists error messages that may display, along with corrective actions. For messages not listed, see your technical reference guide for further information or call your service representative.

Problem Solving — Error Messages

MESSAGE	SOLUTION
ERROR CASSETTE 1	Turn power off. Insert the font cartridge correctly. Turn power on.
ERROR CASSETTE 2	Same as "ERROR CASSETTE 1."
ERROR FUSER TEMP	Turn power off and then on. If the same message displays, call your service representative.
ERROR FUSER TEMP	Turn power off and then on. If the same message displays, call your service representative.
ERROR LED HEAD	Turn power off and then on. If the same message displays, call your service representative.
ERROR FAN	Turn power off and then on. If the same message displays, call your service representative.

Problem Solving — Error Messages (cont'd)

MESSAGE	SOLUTION
ERROR INTERFACE	Press FONT SET to display the type of interface error. Call your service representative.
ERROR CPU A	Turn power off and then on. If the same message displays, call your service representative.
ERROR CPU B	Turn power off. Check the font cartridge for proper insertion. If the font cartridge is inserted correctly, call your service representative.
ERROR CPU C	Turn power off and then on. If the same message displays, call your service representative.

NOTES



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Telefax: 089/937776 or 937778
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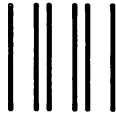
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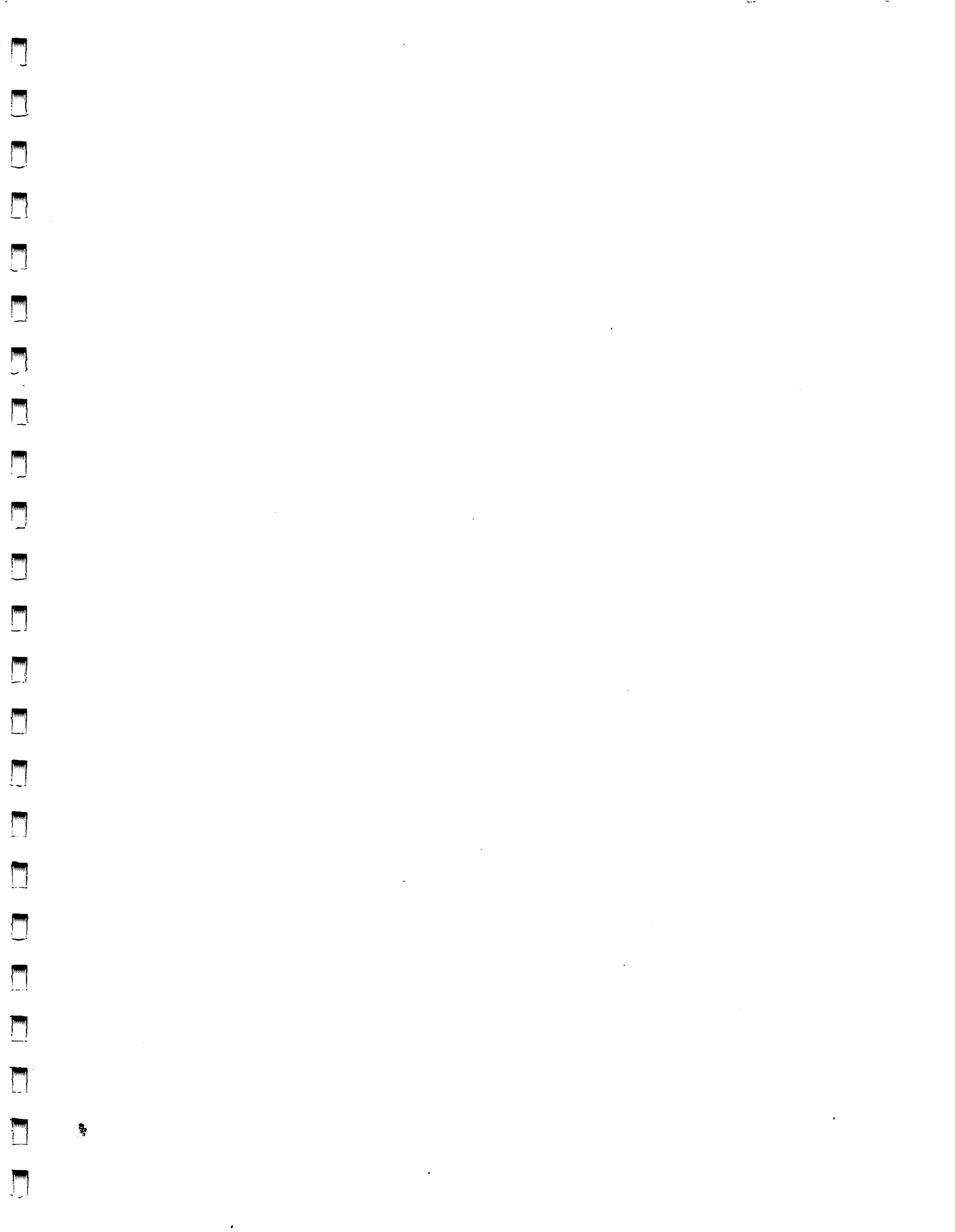
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