Printer Parts

edge guides

paper guide

paper guide cover

printer cover

paper release lever

front cover (closed)

control panel

ribbon cartridge

paper thickness lever

shield plate

knob

parallel interface

tractor

paper tension unit

power cord

power switch
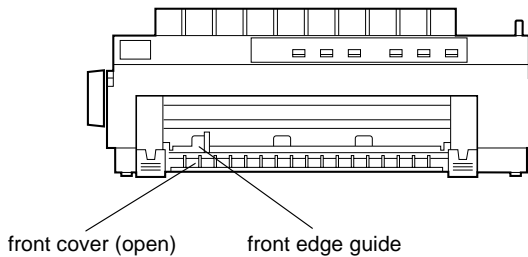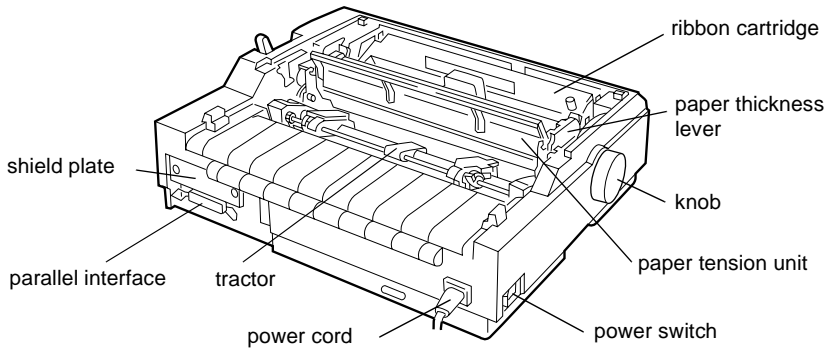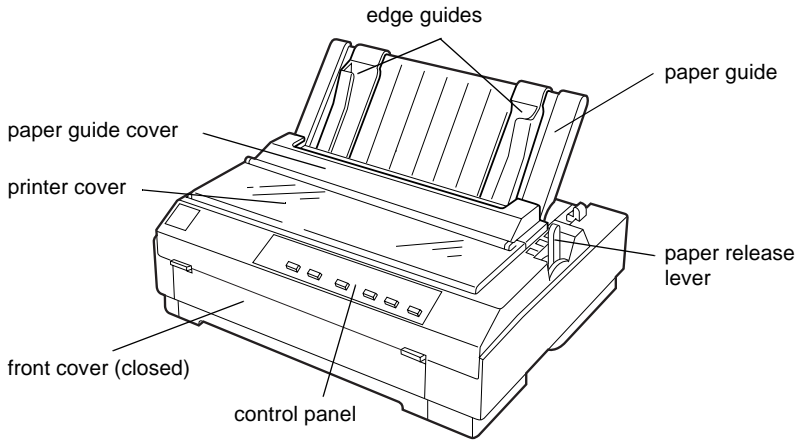
front cover (open)

front edge guide

Control Panel Buttons and Lights

Font button
Selects the font.
See Chapter 5.

Font lights
Indicate which font is selected.

Condensed button
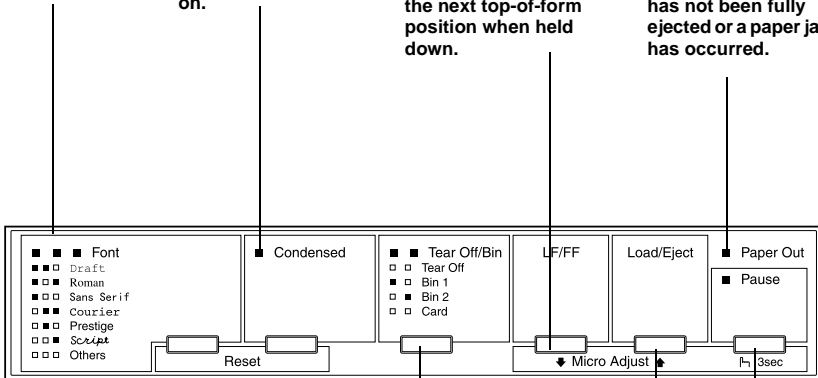Turns on and off the condensed mode.

Condensed light
Lights up when the condensed mode is on.

LF/FF button
- Feeds paper line by line when pressing shortly.
- Ejects a single sheet or advances continuous paper to the next top-of-form position when held down.

Paper Out light
- On when no paper is loaded in the selected paper source or paper is not loaded correctly.
- Flashes when paper has not been fully ejected or a paper jam has occurred.

■ ■ ■ Font	■ Condensed	■ ■ Tear Off/Bin	LF/FF	Load/Eject	■ ■ Paper Out
■ ■ □ Draft		□ □ Tear Off			■ Pause
■ ■ □ Roman		□ ■ Bin 1			
■ ■ □ Sans Serif		□ ■ Bin 2			
■ ■ □ Courier		□ □ Card			
□ ■ □ Prestige					
□ ■ □ Script					
□ □ □ Others					

Reset   Micro Adjust ↓ ↑   ↵ 3sec

Tear Off/Bin button
- Advances continuous paper to the tear-off position.
- Feeds continuous paper backward from the tear-off position to the top-of-form position.
- Selects a cut-sheet feeder bin when the cut-sheet feeder is installed.
- Turns on the card mode to print on postcards and envelopes. See Chapter 3.

Tear Off/Bin lights
- □ □ when continuous paper is in the tear-off position.
- ■ □ when bin 1 of the optional cut-sheet feeder is selected.
- □ ■ when bin 2 of the optional cut-sheet feeder is selected.
- □ □ when the printer is in the card mode.

□ = On
□̈ = Flashing
■ = Off

Load/Eject button
- Loads a single sheet of paper.
- Ejects a single sheet of paper if a sheet is loaded.
- Loads continuous paper from the standby position.
- Feeds continuous paper backward to the standby position.

Pause button
Stops printing temporarily, and resumes printing when pressed again. When pressed for three seconds, turns on the *micro adjust mode. To turn off, press again.

Pause light
- On when the printer is paused.
- Flashes when the printer is in the *micro adjust mode.
- Flashes when the print head has overheated.

*Micro Adjust mode
When you hold down the Pause button for three seconds, the printer enters the micro adjust mode. In this mode, you can press the LF/FF↓ and Load/Eject↑ buttons to adjust the top-of-form or tear-off position. See Chapter 2.

EPSON®

24-Pin Dot Matrix Printer

LQ-580

User's Guide

Contents

Chapter 3 Printing on Single Sheets

Chapter 4 Using the Printer Software

Chapter 5 Changing Printer Settings From the Printer's Control Panel

Chapter 6 Using EPSON Status Monitor 3

Chapter 7 Troubleshooting

Appendix A Enhancing Your Printer With Options

Appendix B Cleaning and Transporting the Printer

Appendix C Specifications

Appendix D Customer Support Information

Glossary

Index

Getting to Know Your Printer

Your EPSON® LQ-580 24-pin dot matrix printer provides high-quality printing and great performance in a compact design. Features include:

❏ A variety of paper paths to suit your printing needs

❏ The ability to handle a wide range of paper types, including continuous paper, multipart forms with one original and up to four copies, labels, single sheets, envelopes, and postcards

❏ High-speed printing of up to 400 characters per second at 10 characters per inch

Your printer also comes with printer driver software, the EPSON Status Monitor 3 utility for Microsoft® Windows® 95, 98, or NT 4.0 that lets you check the status of your printer quickly and easily, and other software. In addition, many options are available to suit your individual needs.

Easy-to-Use Features

This section highlights some easy-to-use features that you'll find helpful.

❏ Use the **tear-off feature** to save paper.

If you load paper in the push tractor, you can use the tear-off feature to advance your continuous paper to the printer's tear-off edge when you finish printing. Then you can easily tear off printed sheets and save paper normally lost between documents. For more information, see Chapter 2.
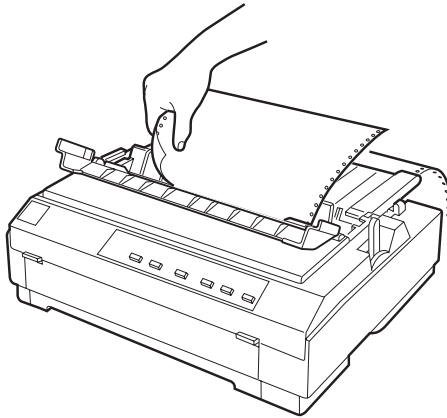
❏ Use the **paper release lever** to change the paper path without removing continuous paper from the push tractor.

When using the paper release lever, you can easily switch to printing on single sheets without removing the continuous paper loaded in the push tractor. For more information, see Chapter 2.

paper release lever
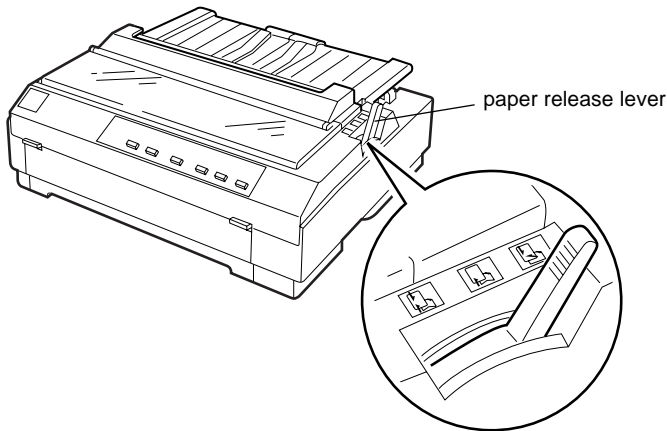
❏ Use the **micro adjust feature** to adjust the top-of-form and tear-off positions. (See the Glossary for explanations of the top-of-form and tear-off positions.)

The micro adjust feature allows you to move the paper forward or backward in 1/180-inch increments so that you can make precise adjustments to the top-of-form and tear-off positions. For more information, see Chapter 2.

Available Paper Paths

Your printer provides a variety of paper paths for printing on continuous and single-sheet paper. As described below, paper can be fed into the printer from the top, front, bottom, or rear. You can select the paper path that best suits your current printing needs.
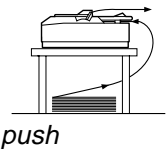
Printing on continuous paper

You can choose from two tractor positions (push and pull) and three paper entry slots (front, rear, and bottom) for continuous paper printing. This section helps you determine which paper paths and tractor positions are best for your continuous paper printing needs. See the appropriate sections in Chapter 2 for tractor installation and paper loading instructions.

Using the push tractor

If you often need to tear off sheets of continuous paper (for example, if you are printing purchase orders or sales slips), it is best to use the push tractor. This allows you to use the printer's tear-off edge to easily tear off printed sheets of continuous paper at the perforation. Also, when continuous paper is loaded on the push tractor, you can load single sheets of paper from the paper guide without removing the continuous paper from the tractor.

The tractor is installed in the rear push position when the printer is shipped. See the table below for details about the corresponding paper-feeding path.

Tractor position	Description
push	**Caution:** *Do not load continuous paper with labels in the rear slot; the labels may come off their backing sheet inside the printer and cause a paper jam.*
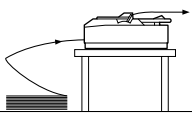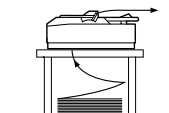
Using a pull tractor
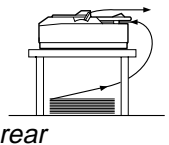
If you often print on thick or heavy continuous paper, such as multipart forms or continuous paper with labels, use a tractor in the pull position. The pull tractor provides you with the best paper jam prevention, and allows you to load continuous paper from the front, rear, or bottom of the printer. However, you cannot use the tear-off feature with the pull tractor.

Note:
If you plan to use a tractor in the pull position, you can remove the tractor from the rear push position and reinstall it in the pull position, or you can purchase an optional tractor unit (C800202) and install it in the pull position. See Chapter 2 for instructions.

You can use the front, bottom, or rear paper slot with the pull tractor.

Paper slot	Description
front	*If you print on thick paper such as multipart forms or continuous paper with labels, use the front paper slot because this paper path is almost straight. This reduces the chance of paper jams.*
bottom	*The bottom paper slot has the straightest paper path, so it is the best slot to use when printing on thick paper, such as multipart forms or continuous paper with labels.* ***Note:*** *When loading paper in the bottom slot, be sure to use a printer stand with an opening large enough for the paper to feed through it without obstruction.*

rear	You can also load continuous paper from the rear pull tractor position. **Note:** *Paper loaded from the rear slot results in a curved paper path, which may affect loading performance, so use the front or bottom slot whenever possible.* **Caution:** *Do not load continuous paper with labels in the rear slot; the labels may come off their backing sheet inside the printer and cause a paper jam.*

Using the push and pull tractor in combination

You can improve paper feeding and reduce paper jams by using two tractors at the same time. This is especially helpful for printing on continuous preprinted forms or multipart forms and for printing high-quality graphics.

Combination	Description
rear push and pull	To use the push tractor with the pull tractor, you need to purchase the optional pull tractor (C800202) and install it in the pull position. **Caution:** *Do not load continuous paper with labels onto the push tractor even when it is used in combination with the pull tractor. If you load continuous paper with labels onto the rear push/pull tractor, the labels may come off their backing sheet inside the printer and cause a paper jam.*

Note:
For more information on how to use two tractors in the push and pull combination, see "Using two tractors in the push/pull combination" on page 2-22.

Printing on single sheets

You can load single sheets from the top or the front of the printer. You can load ordinary single sheets from either position, even with continuous paper already loaded in the push tractor.

This section helps you determine which paper slot best suits your single-sheet printing needs. See Chapter 3 for paper loading instructions.

Loading paper in the top slot

You can load ordinary single sheets, envelopes, or postcards in the top slot.
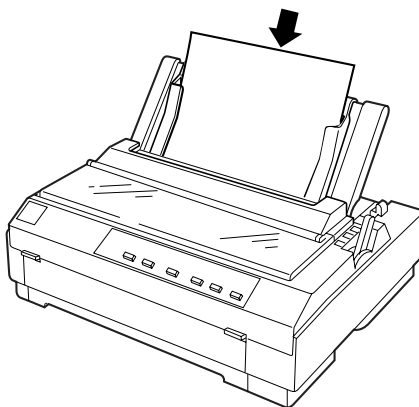
Note:
Load envelopes in the top slot only.

Loading paper in the front slot

You can load ordinary single sheets, single-sheet multipart forms, or postcards in the front slot.
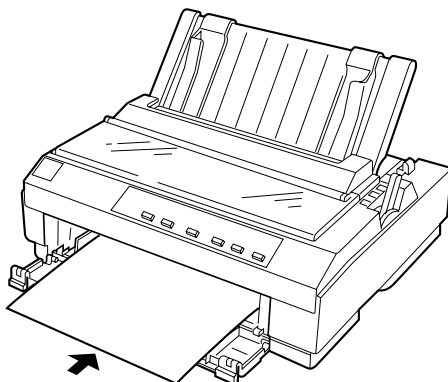
Note:
Always use the front paper slot to load single-sheet multipart forms.

Options

Your printer comes with everything necessary to print on continuous paper and single sheets using a variety of paper paths. By adding options, such as a cut-sheet feeder, pull tractor unit, roll paper holder, or front sheet guide, you can further expand your printer's versatility. Optional interface cards are also available to supplement your printer's built-in parallel interface. For more information on options for your printer, see Appendix A, "Enhancing Your Printer With Options."

Ribbon Cartridge

Your printer uses the following ribbon cartridges:

EPSON black ribbon cartridge   #7753

EPSON film ribbon cartridge   #7768

When printing becomes faint, you need to replace the ribbon cartridge. Genuine EPSON ribbon cartridges are designed and manufactured to work properly with your EPSON printer. They ensure proper operation and long life of the print head and other printer parts.

To replace a used ribbon cartridge, follow the instructions in "Installing or Replacing the Ribbon Cartridge" on page 1-5.

Note:
❏ *Use the optional film ribbon cartridge when you want especially high quality printing. For everyday operations, use the standard black ribbon cartridge.*

❏ *EPSON recommends the use of original EPSON ribbon cartridges only. Other products not manufactured by EPSON may cause damage to your printer not covered by EPSON's warranties.*

Important Safety Instructions

Read all of these instructions and save them for later reference. Follow all warnings and instructions marked on the printer.

❏ Do not place the printer on an unstable surface or near a radiator or heat source.

❏ Place the printer on a flat surface. The printer will not operate properly if it is tilted or at an angle.

❏ Do not block or cover the openings in the printer's cabinet. Do not insert objects through the slots.

❏ Use only the type of power source indicated on the printer's label.

❏ Connect all equipment to properly grounded power outlets. Avoid using outlets on the same circuit as photocopiers or air control systems that regularly switch on and off.

❏ Do not use a damaged or frayed power cord.

❏ If you use an extension cord with the printer, make sure the total ampere rating of all devices plugged into the extension cord does not exceed the cord's ampere rating. Also, make sure the total of all devices plugged into the wall outlet does not exceed the wall outlet's ampere rating.

❏ Unplug the printer before cleaning, and clean it with a damp cloth only.

❏ Do not spill liquid on the printer.

❏ Except as specifically explained in this guide, do not attempt to service the printer yourself.

❏ Unplug the printer and refer servicing to qualified personnel under the following conditions:

If the power cord or plug is damaged; if liquid has entered the printer; if the printer has been dropped or the cabinet damaged; or if the printer does not operate normally or exhibits a distinct change in performance. Adjust only those controls that are covered by the operating instructions.

❏ Printer parts marked with this symbol may be hot. Turn off the printer and let it cool for a few minutes before you touch any printer part marked with this symbol.

❏ If you plan to use the printer in Germany, observe the following:

To provide adequate short-circuit protection and over-current protection for this printer, the building installation must be protected by a 16 amp circuit breaker.

Print Head Caution Symbol

The symbol on the print head indicates that this part may be hot. Never touch the print head just after the printer has been used. Let the print head cool for a few minutes before touching it.

ENERGY STAR Compliance

As an ENERGY STAR Partner, EPSON has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

The International ENERGY STAR Office Equipment program is a voluntary partnership with the computer and office equipment industry to promote the introduction of energy-efficient personal computers, monitors, printers, fax machines, copiers, and scanners in an effort to reduce air pollution caused by power generation.

How To Use Your Manuals

This *User's Guide* provides detailed information on setting up and using your printer. The *Quick Reference Guide* that also comes with the printer summarizes basic information on how to use the printer.

Warnings, Cautions, and Notes

This guide uses the following conventions:

> *Warnings*
> *must be followed to avoid bodily injury.*

> *Cautions*
> *must be observed to avoid damage to your equipment.*

Notes
contain important information and useful tips on the operation of your printer.

Chapter 1

Setting Up the Printer

Unpacking the Printer

Besides this guide, your printer box should include an EPSON printer software CD-ROM, a Notice Sheet, and the following items:
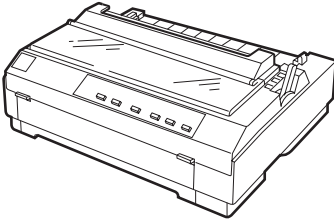
printer

paper guide
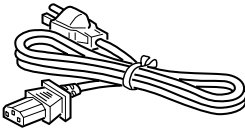
power cord
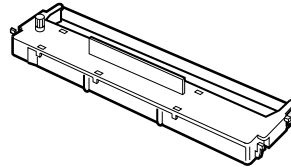
ribbon cartridge

Note:
Depending on your printer model, the power cord may be permanently attached to the printer. Also, the shape of the power cord plug varies depending on the country of purchase; be sure the plug you have is the right one for your location.

Caution:
There are several models of the printer designed for different voltages, and it is not possible to adjust the printer for use with another voltage. If the label on the back of the printer does not show the correct voltage for your country, contact your dealer.

You must remove all protective materials packed around and inside your printer before you set it up and turn on the power. Follow the directions on the Notice Sheet (packed with the printer) to remove these materials.

Save all packing and protective materials in case you need to ship the printer in the future. It should always be transported in its original packaging or equivalent materials.

Choosing a Place for the Printer

Follow the guidelines below when selecting a location for your printer.

❏ Place the printer on a flat, stable surface. The printer will not operate properly if it is tilted or at an angle.

❏ Place the printer where you can easily connect it to a network interface cable, if necessary.

❏ Leave adequate room around the printer for easy operation and maintenance.

❏ Avoid using or storing the printer in places subject to rapid changes in temperature and humidity. Keep it away from direct sunlight, strong light, heat sources, or excessive moisture or dust.

❏ Avoid places subject to shocks and vibrations.

❏ Place the printer near a wall outlet where you can easily unplug the power cord.

❏ Avoid electrical outlets controlled by wall switches or automatic timers. An interruption in power can erase information in the memory of your printer or computer. Also avoid outlets on the same circuit as large motors or other appliances that can cause voltage fluctuations.

❏ Keep the entire computer system away from potential sources of electromagnetic interference, such as loudspeakers or the base units of cordless telephones.

❏ Use a grounded power outlet; do not use an adapter plug.

❏ Make sure the paper path is clear and unobstructed before you print on continuous paper. (See the next section.)

If you plan to use a printer stand, follow these guidelines:

❏ Use a stand that supports at least 20 kg.

❏ Never use a stand that tilts the printer. The printer should always be kept level.

❏ Position your printer's power cord and interface cable so they do not interfere with paper feeding. If possible, secure the cables to a leg of the printer stand.

Positioning the continuous paper supply

Before using continuous paper, make sure you line up your paper supply with the tractor feeder so the paper feeds smoothly into the printer, as shown below.

rear   front   bottom
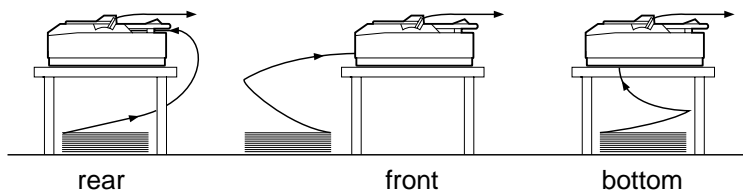
Installing or Replacing the Ribbon Cartridge

EPSON recommends the use of genuine EPSON black ribbon cartridges (#7753) or EPSON film ribbon cartridge (#7768). Products not manufactured by EPSON may cause damage to your printer not covered by warranties.

![Warning icon] **Warning:**
You will need to move the print head by hand to install or replace the ribbon cartridge. If you have just used the printer, the print head may be hot; let it cool for a few minutes before touching it.

1. Make sure the printer is turned off.
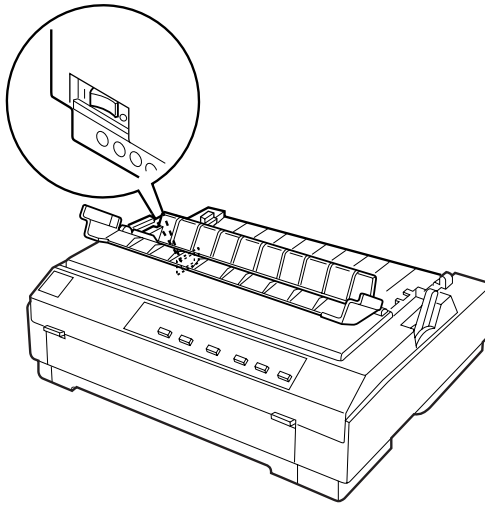
![Caution icon] **Caution:**
Moving the print head while the printer is on may damage the printer.

2. If the printer is connected to an electrical outlet, unplug it from the outlet.

3. Lift the printer cover by its back edge and then pull it straight up and off.
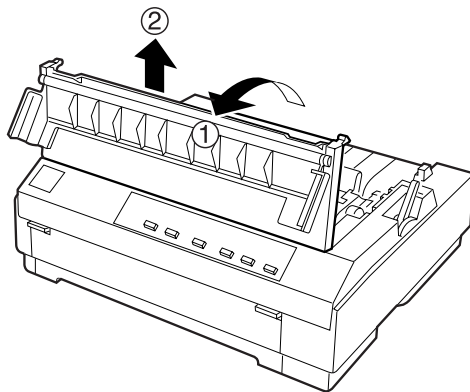
4. Push up the tabs on each side of the paper tension unit and lift the unit up and off the printer. Store the paper tension unit in a safe place.
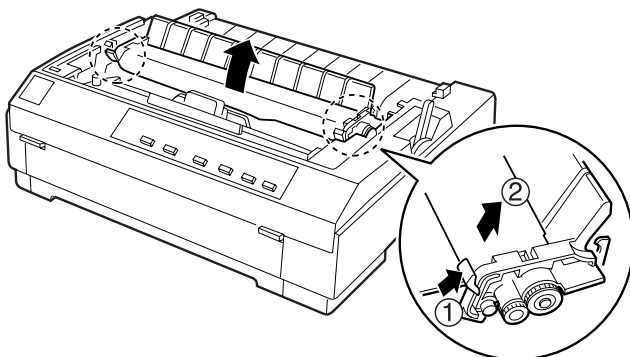
Note:
When the pull tractor is installed, it is not necessary to remove the paper tension unit.

5. Make sure that the print head is not hot; if it is, let it cool for a few minutes before touching it. Then slide the print head to the middle of the printer by hand.
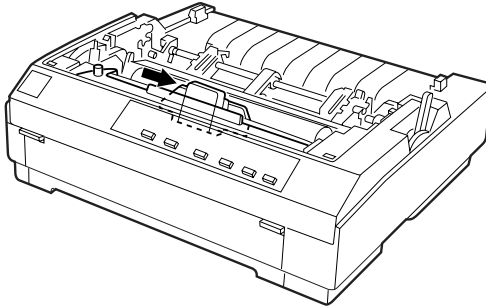
6. If a used ribbon cartridge is installed, grasp the cartridge by its handle and pull it straight up. Properly dispose of the used ribbon cartridge.
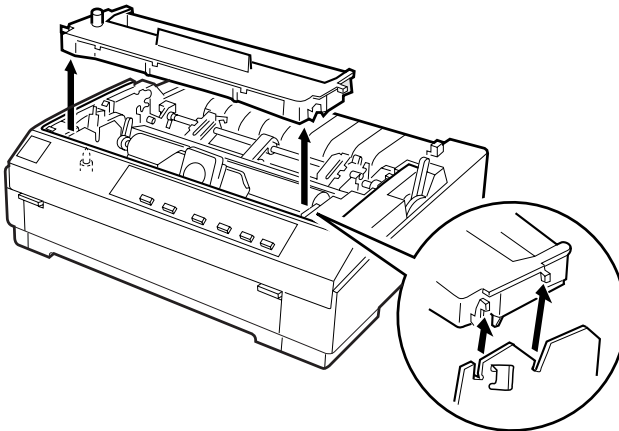
7. Remove the new ribbon cartridge from the package. Turn the ribbon-tightening knob in the direction of the arrow to remove any slack in the ribbon.

ribbon-tightening knob
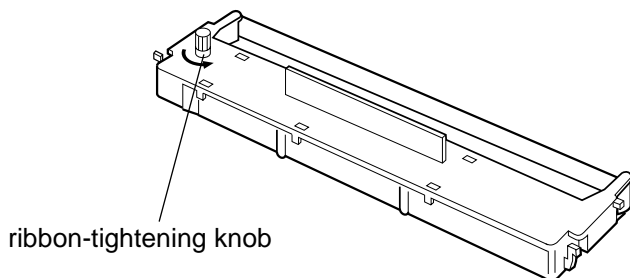
8. Hold the ribbon cartridge by its handle and push it firmly down into position; then press on both ends of the cartridge to make sure the plastic hooks fit into the slots.
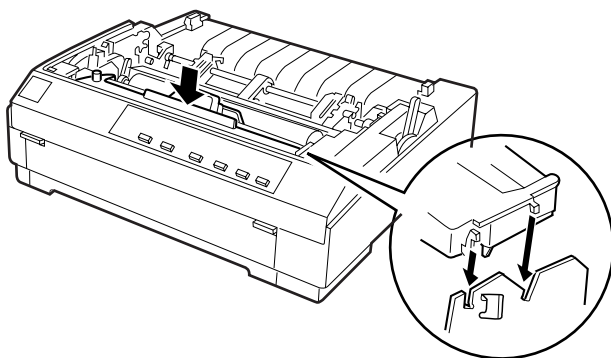
9. Use a pointed object, such as a ball point pen, to guide the ribbon between the print head and ribbon guide. Turn the ribbon-tightening knob to help feed the ribbon into place.
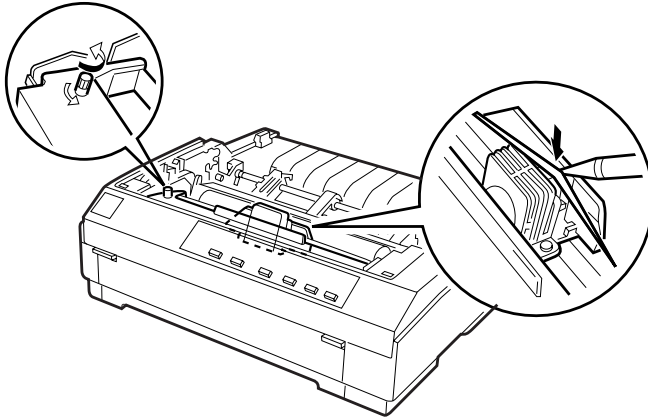
10. Slide the print head from side to side to make sure it moves smoothly. Also check that the ribbon is not twisted or creased.
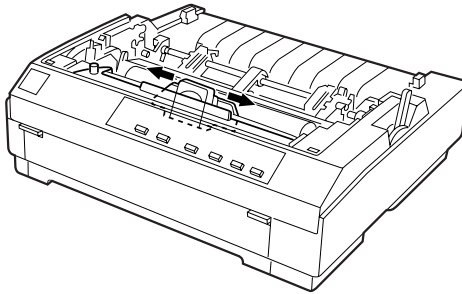
11. To replace the paper tension unit, lower it onto the printer's mounting pegs. Then press down both ends of the unit until it clicks into place.
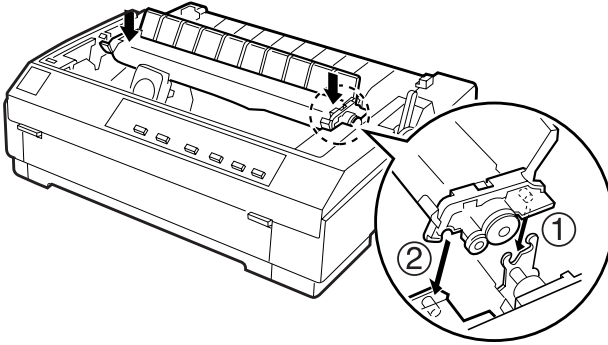
12. Replace the printer cover by first inserting the front tabs into the slots on the printer and then lowering the cover into place. Push it down until it clicks.
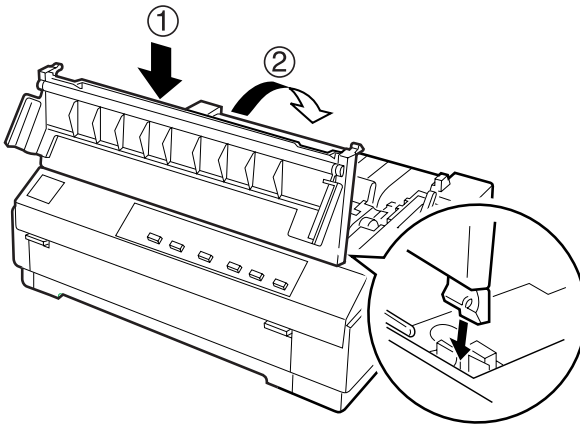
Note:
You install the optional #7768 film ribbon cartridge the same way you install the ribbon cartridge. However, you should follow the guidelines below when using a film ribbon:

❏ *Print on ordinary paper only.*

❏ *Move the paper-thickness lever to the next lowest position.*

Attaching the Paper Guide

To install the paper guide follow these steps:

1. Make sure the paper guide cover is open as shown below. Attach the paper guide by sliding the slots on the bottom of the paper guide over the printer's pegs. Then tilt the guide back until it stops.

paper tension unit
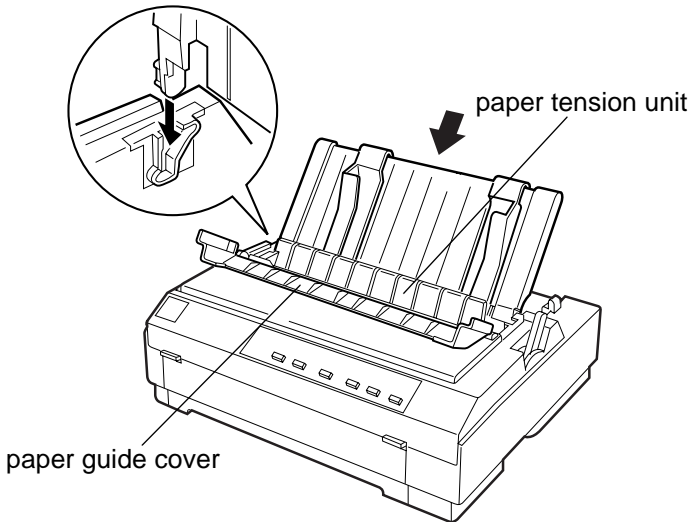
paper guide cover

> **⚠ Caution:**
> *Make sure to slide the slots on the bottom of the paper guide over the printer's pegs on each side of the printer.*

2. Close the paper guide cover.
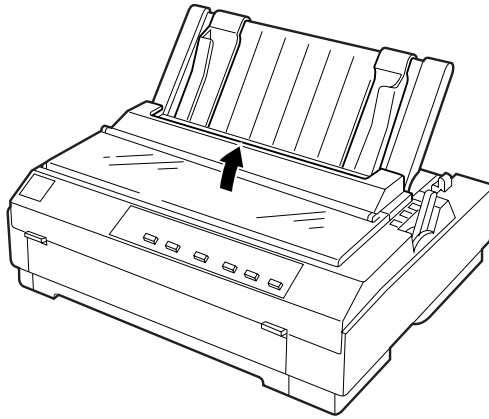
Plugging in the Printer

1. Make sure the printer is turned off.
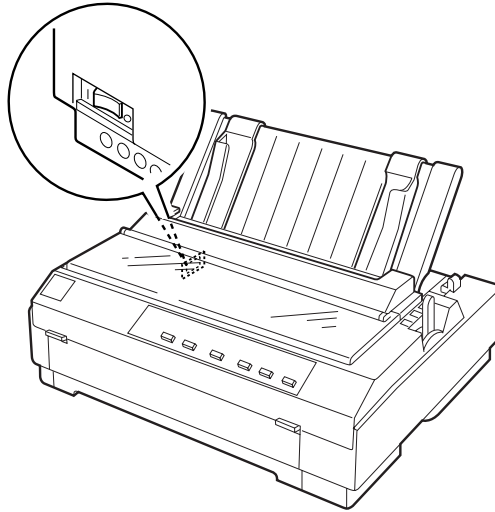
2. Check the label on the back of the printer to make sure its voltage matches that of your electrical outlet. Also make sure the plug on your printer's power cord matches your electrical outlet.

    ⚠ *Warning:*
    It is not possible to change the printer's voltage. If the rated voltage and your outlet voltage do not match, contact your dealer for assistance. Do not plug in the power cord.

3. If the power cord is not attached to the printer, plug the appropriate end into the AC inlet on the back of the printer.

4. Plug the power cord into a properly grounded electrical outlet.

Connecting the Printer to Your Computer

Your printer has two separate interface connections: an IEEE-1284 compatible parallel interface and Type B optional interface. See "Optional interface cards" on page A-3 for more information.

If your computer requires a different type of printer interface, you should be able to use one of the optional interfaces described on "Optional interface cards" on page A-3.

Follow the steps below to connect the printer to your computer using a parallel interface connector, or a ground wire connector.

1. Make sure both the printer and computer are turned off.

2. Plug the cable connector securely into the parallel interface connector.

parallel interface
connector
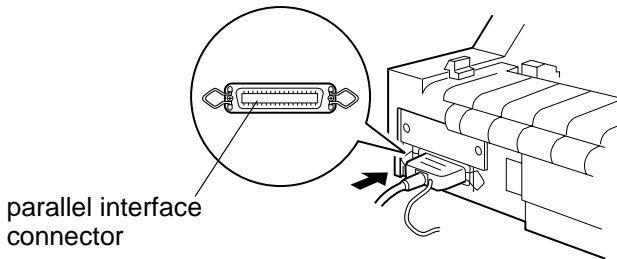
3. Squeeze the wire clips together until they lock in place on both sides of the connector.
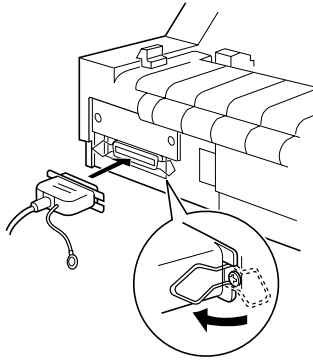
4. If your cable has a ground wire, connect it to the printer's ground connector as shown below.
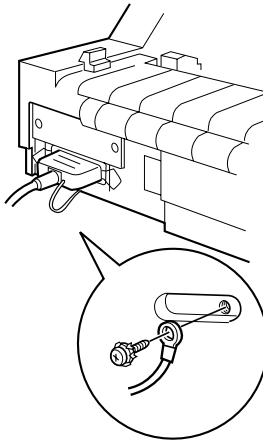
5. Plug the other end of the cable into the computer.

After you connect the printer to your computer, install the printer software as described in the next section.

Installing the Printer Software

After you connect the printer to your computer, you need to install the software included on the EPSON printer software CD-ROM shipped with your printer.

Your printer software includes:

❏ Printer driver
The printer driver is the software that runs, or "drives," your printer. With it, you can make printer settings such as print quality, resolution, and paper size.

❏ EPSON Status Monitor 3 (Windows 95, 98, or NT 4.0 only)
The EPSON Status Monitor 3 notifies you of printer errors and displays printer status information.

❏ EPSON Remote! (a DOS-based printer setup utility)
The EPSON Remote! utility allows you to easily change the printer's default settings from the computer screen. See "Using the EPSON Remote! Utility" on page 4-32.

To install the printer software, see "Installing the printer software in Windows 95, 98, or NT 4.0" or "Installing the printer software in Windows 3.1 or NT 3.5x" in this section. If you are using DOS, see "For DOS programs" on page 1-21.

Installing the printer software in Windows 95, 98, or NT 4.0

Follow the steps below to install the printer software in Windows 95, 98, or NT 4.0:

Note:
❏ *Installing the printer software for Windows NT 4.0 may require network administration privileges. Ask your administrator for more information.*

❏ *If you wish to make a diskette version of the printer software on your CD-ROM, insert the CD and run the EPSETUP program. In the dialog box that appears, click the* **Driver disk creation utility** *button and follow the on-screen instructions.*

❏ *If you are using the diskette version of the EPSON software, make a backup copy of the EPSON printer software disk or disks before you begin installation.*

1. Make sure that the printer and computer are switched off.

2. Switch the PC on. Windows starts automatically. Then switch the printer on.

3. Insert the CD-ROM containing the printer software into the CD-ROM drive. TheAutoPlay function of the CD-ROM drive automatically starts the installation program on the CD-ROM.

   If the installation program does not start automatically, click on **Start** and then on **Run**. In the **Run** dialog box, enter the drive letter of your CD-ROM drive in the command line (e.g. **E:**), followed by the command **START.EXE** (e.g. **E:\START.EXE**) and click on the **OK** button.

Note:
If your CD-ROM drive has a drive letter other than "E", substitute the appropriate letter. The installation program starts. The subsequent procedure is menu-driven, i.e., you can select the relevant options from a list simply by clicking with the mouse. The remainder of the installation is automatic and you do not need to enter any more information.

4. Select the desired options and follow the on-screeen instructions.

5. After the printer software has been successfully installed, click on the button identified by a door icon to exit the installation program.

Note:
❏ *If the New Hardware Found screen or any other wizard appears when you turn on your computer, click* **Cancel** *and follow the steps above.*

❏ *Installation time varies depending on your computer.*

For information on opening and using the software, see Chapter 4, "Using the Printer Software." When you install the printer driver on Windows 95, 98 or NT 4.0, EPSON Status Monitor 3 will also be installed. See Chapter 6 for information on installing and using the Status Monitor.

Installing the printer software in Windows 3.1 or NT 3.5x

Follow the steps below to install the printer software in Windows 3.1 or NT 3.5x systems.

Note:
Installing the printer software on Windows NT 3.5x may require network administration privileges. Ask your administrator for more information.

1. Make sure Windows 3.1 is running and the Program Manager window is open.

2. Insert the EPSON printer software CD shipped with your printer in the CD-ROM drive.

   Note:
   If your system does not have a CD-ROM drive, you can make a floppy disk version from which to install the printer software.

3. From the **File** menu, choose **Run**. The **Run** dialog box appears. In the Command Line box, type **E:\START** and click **OK**.
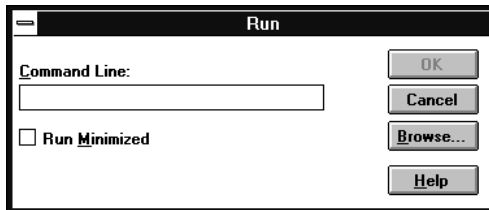
   Note:
   *If your CD-ROM drive has a drive letter other than "**E**", substitute the appropriate letter.*

The installation program starts. The subsequent procedure is menu-driven, i.e., you can select the relevant options from a list simply by clicking with the mouse. The remainder of the installation is automatic and you do not need to enter any more information.

4. Select the desired options and follow the on-screen instructions.

5. After the printer software has been successfully installed, click on the button identified by a door icon to exit the installation program. The installation program automatically selects this printer as the default printer for Windows applications.

For information on opening and using the software, see Chapter 4, "Using the Printer Software."

For DOS programs

To control the printer from DOS application programs, you need to select the printer you are using or another available printer from the printer list of your application.

Choose the EPSON LQ-580 printer at the appropriate step in the setup or installation procedure of your DOS application program. If the list in your application does not include the LQ-580 printer, choose the first available printer from this list:

LQ-580
LQ-870
LQ-570/570+
LQ-850+
LQ-850
LQ-510/550
LQ-200
LQ-500
LQ-860+
LQ-2550
LQ-2500
LQ-800
LQ-1500

Note:
If your application does not list a suitable alternative, contact the software manufacturer to see if an update is available.

Chapter 2

Printing on Continuous Paper

2

Setting the Paper Release Lever

There are several ways you can load continuous paper in the printer, including the push tractor. Use the paper release lever to indicate the paper source you want to use, as described in the table below.

Note:
To decide which paper source and paper path best suits your printing needs, see "Available Paper Paths" on page 4.

paper release lever
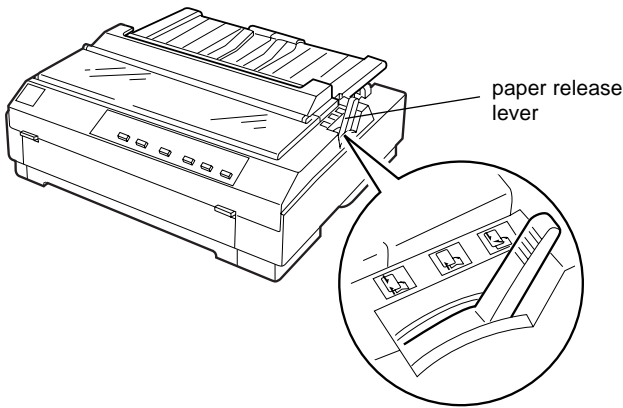
The table below describes each paper release lever position.

Paper release lever position	Description
	Single-sheet position For loading single-sheet paper from the top or front slot. For information on loading single sheets, see Chapter 3.
PUSH	**Push tractor position** For loading continuous paper from the tractor installed in the push position. Also set the lever to this position when using the push and pull tractor in combination.
PULL	**Pull tractor position** For loading continuous paper from the tractor installed on top of the printer in the pull position. When the tractor is in the pull position, you can load paper in the front, rear, or bottom slot.

Setting the Paper Thickness Lever

Setting the paper thickness lever allows the printer to accommodate various thicknesses of paper. The paper thickness lever is located under the printer cover. You can select one of eight positions identified by the scale next to the lever.

paper thickness lever
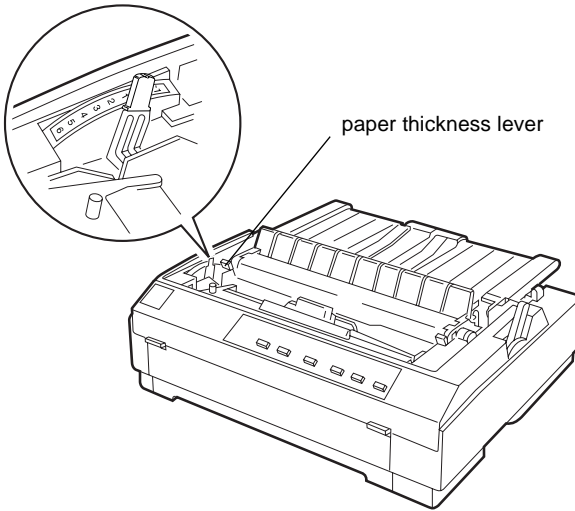
Use the following table to set the paper thickness lever to match the thickness of your paper.

Paper type*	Lever position
Ordinary (single sheets or continuous paper)	-1 or 0

Carbonless multipart forms with:
  2 parts (original + 1 copy)
  3 parts (original + 2 copies)
  4 parts (original + 3 copies)
  5 parts (original + 4 copies)
	
	1
	2
	3
	5

Continuous paper with labels**	2
Postcard	2
Envelopes	2 to 6

* See Appendix C for complete paper specifications.

** Continuous paper with labels cannot be used with the push tractor. To use them, install the tractor unit in the pull position.

Note:
❏ *If the printed image is smeared, you may need to set the paper thickness lever one position higher to improve print quality.*

❏ *If the printed image is faint or has many gaps, you may need to set the paper thickness lever one position lower to improve print quality.*

Using the Push Tractor

To use the push tractor, load continuous paper in the rear slot. For information on when to use the push tractor, see "Available Paper Paths" on page 4.

Note:
The tractor is installed in the push position when the printer is shipped. If a tractor is not installed in the push position, go to "Reinstalling the tractor in the push position" on page 2-13.

Loading paper onto the push tractor

If a tractor is installed in the pull position, you need to remove it and install the paper tension unit as described on "Removing the pull tractor" on page 2-24 before using the push tractor.

Note:
To avoid paper jams, it is best to load thick multipart forms using the front or bottom slot and the pull tractor.

c *Caution:*
Do not load continuous paper with labels in the rear paper slot; the labels may come off their backing sheet inside the printer and cause a paper jam.

To load paper onto the push tractor, follow these steps:

1. Make sure the printer is turned off.

2. Open the paper guide cover and remove the paper guide by holding both edges and lifting it up.
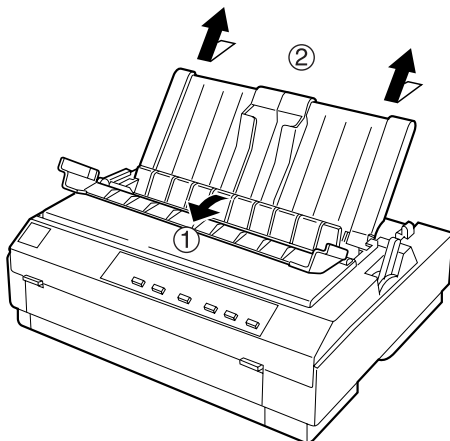
3. Set the paper release lever to the push tractor position. Set the paper thickness lever (located under the printer cover) to the proper position for your paper's thickness.
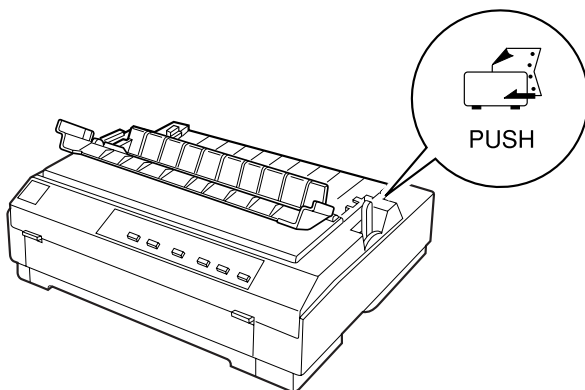
4. Release the left and right sprockets by pulling the sprocket lock levers forward.
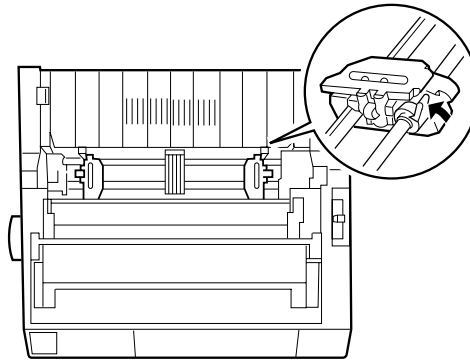
front of the printer

5. Slide the left sprocket to the left margin of the paper using the scale on the printer. (Printing starts at the "0" mark.) Then push the lever back to lock it in place.
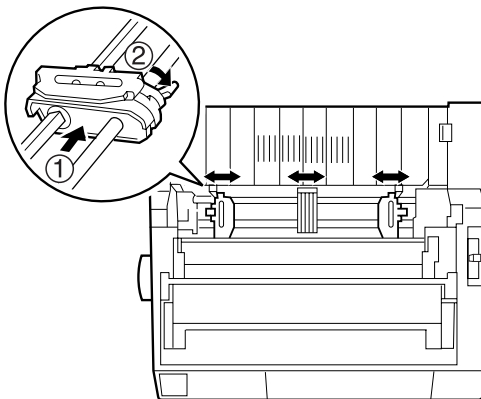
front of the printer

Note:
See Appendix C, "Paper alignment" and "Printable area," for more information on the left margin position.

6. Slide the right sprocket to match the width of your paper, but do not lock it. Move the paper support midway between the two sprockets as shown in step 5.

7. Make sure your paper has a clean, straight edge. Then open both sprocket covers and fit the first three holes of the paper, printable side down, over the tractor pins. Then close the sprocket covers.
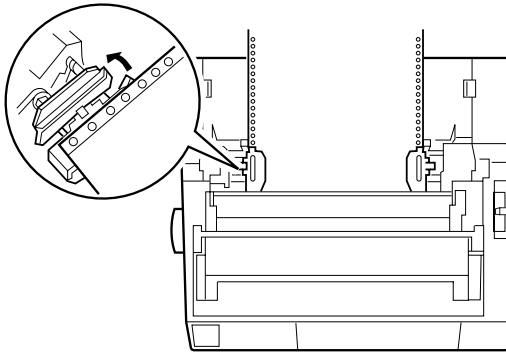
front of the printer

8. Slide the right sprocket to remove any slack in the paper; then lock it in place by pushing the sprocket lock down.

9. Attach the paper guide as described on "Attaching the Paper Guide" on page 1-11. After installing the paper guide, grab the center section of the paper guide, lift it up and lay it flat.

10. Slide the edge guides to the middle of the paper guide. Then close the paper guide cover.
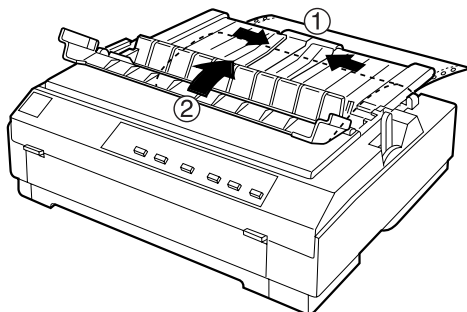
11. Turn on the printer. You may need to check and change the printer driver settings as described in Chapter 4. When the printer receives data, it automatically loads the paper and starts printing. The printed pages are fed over the paper guide toward the back of the printer.
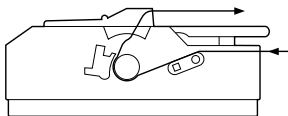
12. After you finish printing, follow the steps in the next section to tear off your printed document. If the first printed line on your page appears too high or low, you can change its position by using the micro adjust feature. See "Adjusting the Top-of-Form Position" on page 2-31.

⚠ *Caution:*
Never use the knob to adjust the top-of-form position; this may damage the printer or cause it to lose the top-of-form position.

Removing a printed document from the push tractor

To remove the printed document, follow these steps:

1. Make sure the Tear Off/Bin lights are flashing. (This indicates your paper is at the current tear-off position.) You may need to press the **Tear Off/Bin** button.

2. Open the paper guide cover, and tear off the printed document using the tear-off edge of the paper tension unit.

Note:
If your paper's perforation is not properly aligned with the tear-off edge, you can adjust the tear-off position using the micro adjust feature. See "Adjusting the tear-off position" on page 2-35.

Caution:
Never use the knob to adjust the tear-off position; this may damage the printer or cause it to lose the tear-off position.

3. Close the paper guide cover.

    When you resume printing, the printer automatically feeds the paper back to the top-of-form position and starts printing.

To feed continuous paper to the standby position where you can remove the paper, press the **Load/Eject** button. (See the Glossary for an explanation of the standby position.) Then open the sprocket covers of the tractor and remove the paper.

> **Caution:**
> *Always tear off your printed document before you press the* **Load/Eject** *button. Reverse feeding several pages at a time may cause a paper jam.*

Removing the push tractor

To remove the tractor from the push position, follow these steps:

1. Remove any paper from the tractor as described in the previous section.

2. Turn off the printer.

3. Remove the paper guide by holding both edges and lifting it up.

4. Press the tractor's lock tabs, tilt the tractor up, and lift it out of the printer.
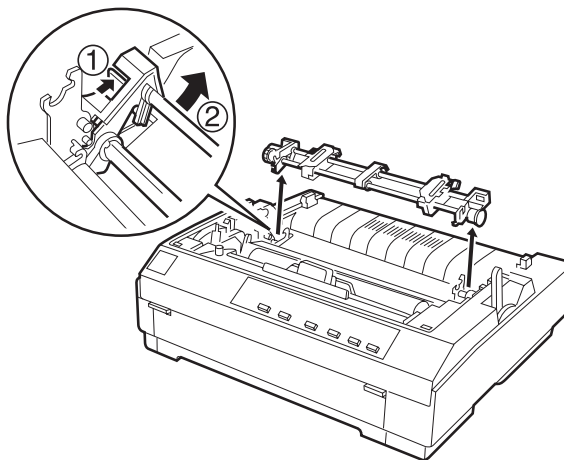
Reinstalling the tractor in the push position

If a tractor is installed in the pull position, you need to remove it and install the paper tension unit as described on "Removing the pull tractor" on page 2-24 before using the push tractor.

To reinstall the tractor in the push position, follow these steps:

1. Make sure the printer is turned off.

2. Remove the paper guide by holding both edges and lifting it up.

3. Hook the tractor's hooks on the pins inside the printer and press down both ends of the tractor to make sure that it is firmly seated.
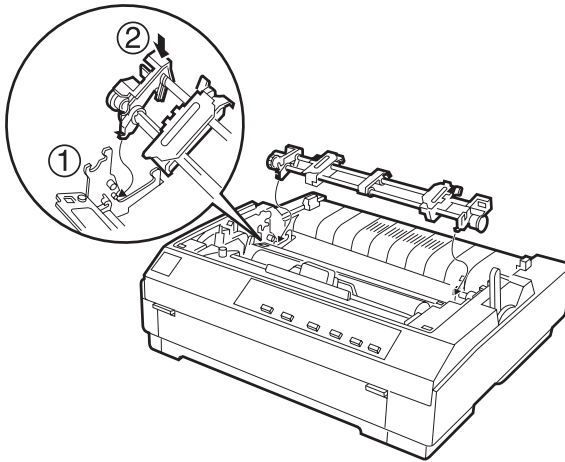
You are now ready to load continuous paper onto the push tractor. To remove the tractor, see "Removing the push tractor" on page 2-12.

Using the Tractor in the Pull Position

Using the tractor in the pull position is ideal for printing on thick and heavy continuous paper, such as multipart forms or continuous paper with labels. However, you cannot use the tear-off feature with the pull tractor.

Because thick paper requires a straight paper path to avoid paper jams, you should load paper in the front or bottom slot when using the pull tractor.

> **Caution:**
> *Do not load continuous paper with labels in the rear paper slot; the labels may come off their backing sheet inside the printer and cause a paper jam.*

To further reduce the chance of paper jams and improve the performance of continuous paper, you can use two tractors in combination. When using this printing method, load the paper onto both the push tractor and the pull tractor. See "Using two tractors in the push/pull combination" on page 2-22.

Installing the tractor in the pull position

To install a tractor in the pull position, you must either remove the push tractor or purchase the optional pull tractor (C800202). To remove the push tractor, see "Removing the push tractor" on page 2-12.

To install a tractor in the pull position, follow these steps:

1. Make sure the printer is turned off. Then lift the printer cover up and off the printer.

2. Push up the tabs on each side of the paper tension unit and lift the unit up and off the printer. Store the paper tension unit in a safe place.
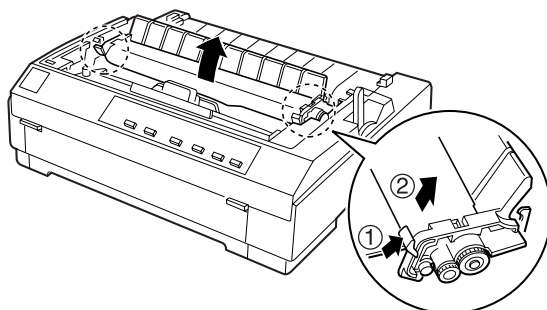
3. Lower the tractor into the printer's mounting slots and press down both ends of the tractor to make sure that it is firmly seated.
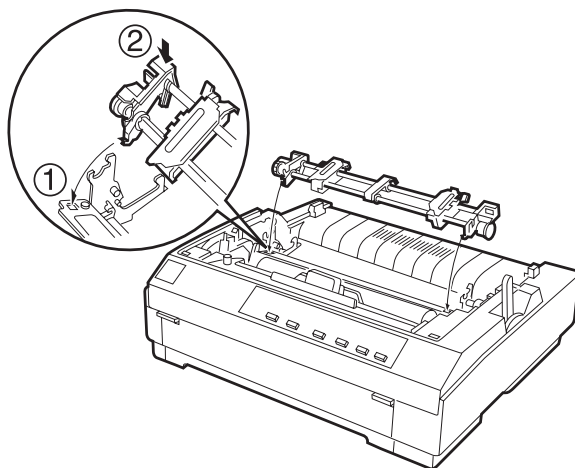
You are now ready to load continuous paper onto the pull tractor as described in the next section. To remove the pull tractor, see "Removing the pull tractor" on page 2-24.

Loading paper onto the pull tractor

When using the pull tractor, load continuous paper in the front or bottom slot, if possible; loading paper in the rear slot may increase the chance of a paper jam.

> **Caution:**
> *Do not load continuous paper with labels in the rear paper slot; the labels may come off their backing sheet inside the printer and cause a paper jam.*

To load paper onto the pull tractor, follow these steps:

1. Make sure the printer is turned off, and the printer cover is removed. Also check that the tractor is installed in the pull position.

2. Slide the edge guides to the middle of the paper guide. Lift the center section of the paper guide up and lay it flat.

3. Set the paper release lever to the pull tractor position. Set the paper thickness lever to the proper position for your paper's thickness.
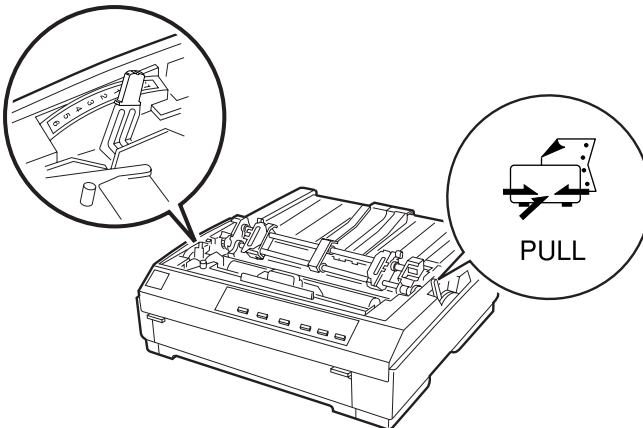
PULL

4. Release the left and right sprockets by pulling the sprocket lock levers forward.
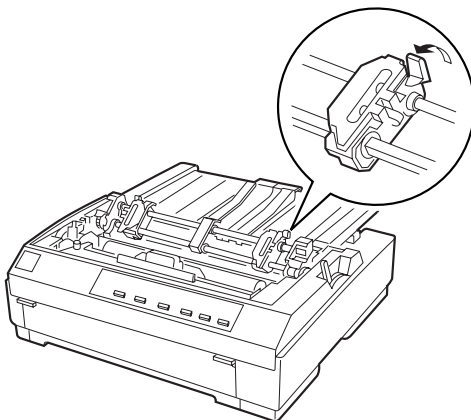
5. Slide the left sprocket to the left margin of the paper using the scale on the paper guide as a guide. (Printing starts at the arrow mark.) Then push the lever back to lock it in place.
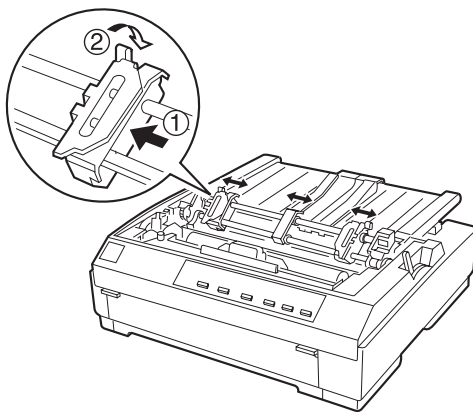
Note:
See Appendix C, "Paper alignment" and "Printable area," for more information on the left margin position.

6. Slide the right sprocket to match the width of your paper, but do not lock it. Move the paper support midway between the two sprockets as shown in step 5.

7. Make sure your paper has a clean, straight edge. Then open both sprocket covers.

8. Insert the paper into the front, bottom, or rear paper slot as described below until it emerges between the platen and the ribbon guide. Then pull up the paper until the perforation between the first and second pages is even with the top of the printer's ribbon.

Before you load paper in the front slot, open the front cover and remove it. Then load paper printable side up.
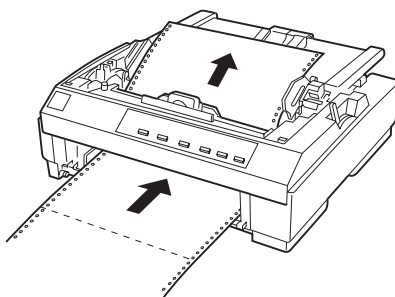
Load paper in the bottom slot printable side up (forward).
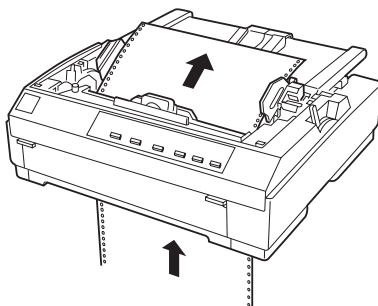
Before you load paper in the rear slot, remove the paper guide. Then load paper in the rear slot, printable side down and attach the paper guide.
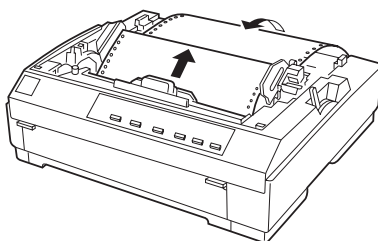
9. Fit three holes on each side of the paper over the tractor pins on both sprockets. Then close the sprocket covers.

10. Slide the right sprocket to remove any slack in the paper, then lock it in place by pushing the sprocket lock down.

11. If you use the front slot, attach the front cover with the continuous paper positioned as shown below. Then close it.
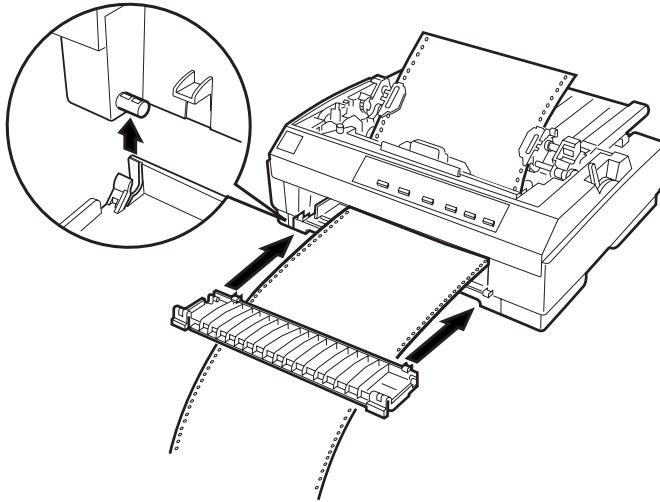
12. If you use the rear slot, replace the paper guide and make sure the edge guides are together in the middle of the paper guide and lift the center section of the paper guide up and lay it flat.

13. Turn on the printer.

14. Remove any slack in the paper and adjust the top-of-form position (the position where the printer will start printing) by pressing the **LF/FF** button or using the micro adjust feature. (To use the micro adjust feature, see "Adjusting the Top-of-Form Position" on page 2-31.) The printer will start printing at the current position without advancing the paper.

> ⚠️ *Caution:*
> ❏ *Never use the knob to remove slack in the paper or to adjust the top-of-form position; this may damage the printer or cause it to lose the top-of-form position.*
>
> ❏ *Always remove any slack from the paper; otherwise print quality may be reduced.*

15. Attach the printer cover and close the paper guide cover.

16. You may need to check and change the printer driver settings as described in Chapter 4. Then send a print job to the printer. The printer starts printing from the current position without advancing the paper. The printed pages are fed over the paper guide toward the back of the printer.
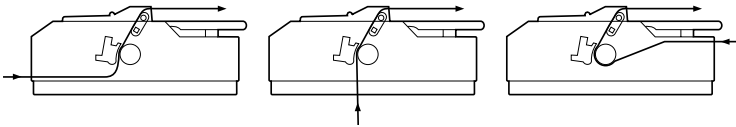
17. After you finish printing, open the paper guide cover; then tear off the printed document at the perforation nearest the paper exit slot.
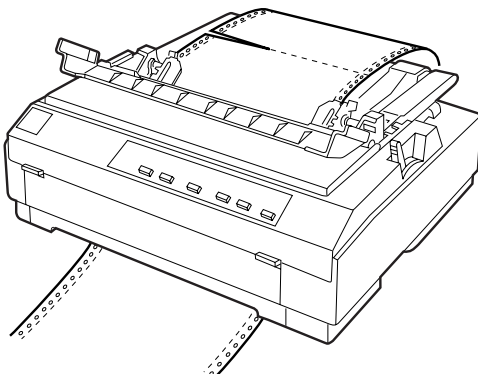
Removing the paper from the pull tractor

1. After you finish printing, tear off the supply of paper at the perforation nearest the paper entry slot.
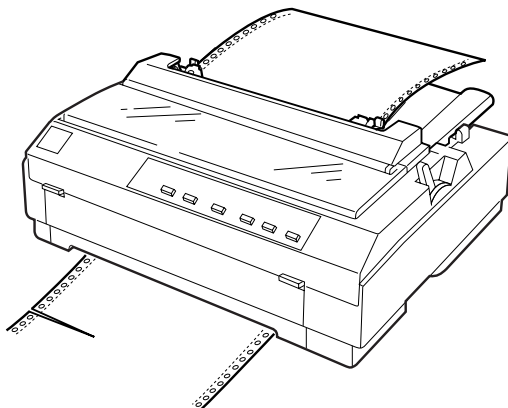
2. To eject the paper, hold down the **LF/FF** button.

Using two tractors in the push/pull combination

To improve continuous paper feeding and reduce paper jams, you can use two tractors at the same time. When using two tractors in combination, you can load paper in the rear paper slot onto both the push tractor and the pull tractor.

To use the push tractor with the pull tractor, you need to purchase the optional pull tractor (C800202). Install the optional pull tractor as described in "Installing the tractor in the pull position" on page 2-14.

To load paper onto two tractors, follow these steps:

1. Remove the printer cover and paper guide.

2. Make sure one tractor is in the push position and one tractor is in the pull position as described earlier in this chapter.

3. Set the paper release lever to the push tractor position. Set the paper thickness lever to the proper position for your paper's thickness.

4. Load continuous paper onto the push tractor as described earlier in this chapter.

5. Turn on the printer. Press the **Load/Eject** button to advance the paper to the top-of-form position. Then press the **LF/FF** button until the perforation between the first and second page is even with the top of the printer's ribbon.

   ⚠ *Caution:*
   Never use the knob to move the paper; this may damage the printer or cause it to lose the top-of-form position.

6. Load the paper onto the pull tractor's sprockets as described in "Loading paper onto the pull tractor" on page 2-16.

7. Set the paper release lever to the pull tractor position. Then remove any slack in the paper between the push and pull tractor using the micro adjust feature (described on "Adjusting the Top-of-Form Position" on page 2-31.) if necessary.

8. Move the paper release lever back to the push tractor position you set in step 2.

9. When the printer receives data, it will start printing at the current position. If necessary, follow the steps in "Adjusting the Top-of-Form Position" on page 2-31 to adjust the current position of the paper.

> *Caution*
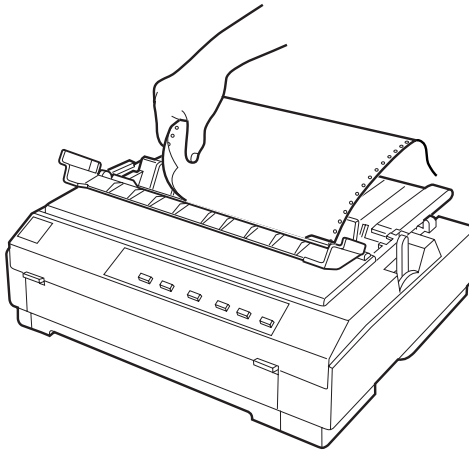> ❏ *Never use the knob to remove slack in the paper or to adjust the top-of-form position; this may damage the printer or cause it to lose the top-of-form position.*
>
> ❏ *Always remove any slack from the paper; otherwise print quality may be reduced.*

10. Attach the paper guide. Then slide the edge guides to the middle of the paper guide. Lift the center section of the paper guide up and lay it flat.

11. Attach the printer cover and close the paper guide cover.

12. You may need to check and change the printer driver settings as described in Chapter 4. Then send a print job to the printer. The printer starts printing from the current position without advancing the paper. The printed pages are fed over the paper guide toward the back of the printer.
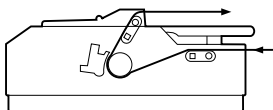
13. After you finish printing, open the paper guide cover; then tear off the printed document at the perforation nearest the paper exit slot.

To remove the paper from the tractor, follow the steps under "Removing the paper from the pull tractor" on page 2-21.

Removing the pull tractor

To remove the tractor from the pull position, follow these steps:

1. Remove any paper loaded on the pull tractor as described on "Removing the paper from the pull tractor" on page 2-21.

2. Turn off the printer. Then remove the printer cover and lift the paper guide up and off the printer.

3. Press the tractor's lock tabs, tilt the tractor toward you, and lift it off the printer.
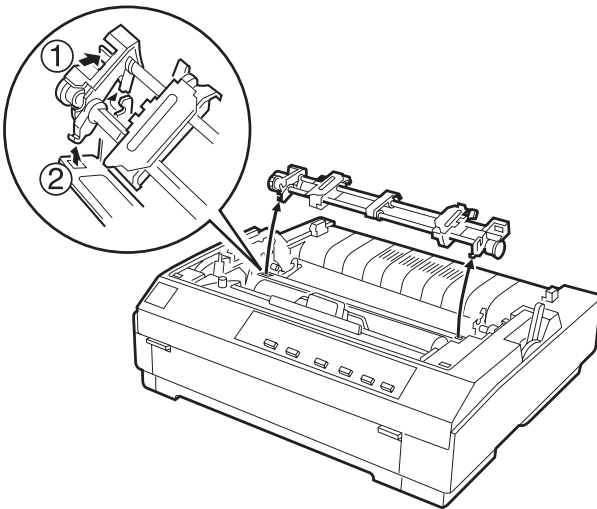
4. Store the tractor in a safe place, or install it in the push position as described on "Reinstalling the tractor in the push position" on page 2-13.

5. To replace the paper tension unit, lower it onto the printer's mounting pegs. Then press down both ends of the unit until it clicks into place.
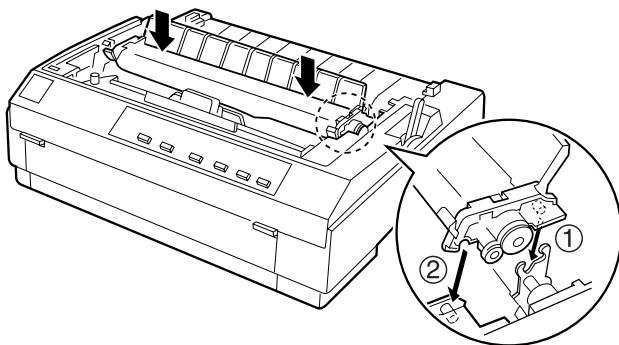
6. Replace the paper guide and the printer cover. Then close the paper guide cover.

Loading Multipart Forms

You can use carbonless multipart forms of up to five parts (four copies in addition to the original). Make sure you set the paper thickness lever to the proper position based on the number of layers in your form.

For best results with thick paper, such as multipart forms, select a straight or almost straight paper path. It is best to load multipart forms using the front or bottom slot and the pull tractor.

Except for setting the paper thickness lever, you load multipart forms the same way you load ordinary continuous paper. For details, see the sections on loading continuous paper earlier in this chapter.

Note:
❏ *Be sure your multipart forms do not exceed 0.39 mm in thickness for the printable area and 0.76 mm for the perforated edges.*

❏ *Do not load paper that is damaged, curled, or wrinkled.*

❏ *If you are using crimp bound paper, be sure the protruding side of the crimp faces away from the print head when you print. Hitting the crimp protrusion with print head could severely damage the print head.*

Loading Continuous Paper With Labels

When printing on labels, use only the type of labels that are mounted on continuous backing sheets with sprocket holes for use with a tractor feeder. Do not try to print on single sheets with labels because the printer may not feed labels on a shiny backing sheet properly.

Thick paper, such as continuous paper with labels, requires a straight or almost straight paper path. When you load labels, be sure to use the tractor in the pull position and load the labels in the front or bottom.

You load labels the same way you load ordinary continuous paper, except you must set the paper thickness lever to 2 before printing on labels. See "Loading paper onto the pull tractor" on page 2-16 for more information.

Caution:
❏ *Do not load continuous paper with labels in the rear paper slot because the paper path from the rear slot is curved; labels may come off their backing sheet inside the printer and cause a paper jam.*

❏ *Because labels are sensitive to temperature and humidity, use them only under normal operating conditions, as follows:*

Temperature   15 to 25 °C

Humidity   30 to 60% RH

❏ *Do not load continuous paper with labels that is damaged, curled, or wrinkled.*

❏ *Do not leave labels loaded in the printer between jobs; they may curl around the platen and jam when you resume printing.*

Removing continuous paper with labels

To avoid peeling labels off the backing sheet and jamming the printer, follow the steps below when you remove continuous paper with labels from the printer.

1. Tear off the supply of continuous labels at the perforation nearest the paper entry slot.
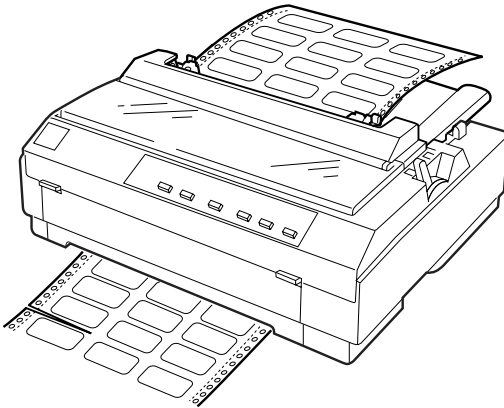
2. Hold down the **LF/FF** button to eject the remaining labels from the printer.

> *Caution:*
> *Never press the **Load/Eject** or **Tear Off/Bin** button. When fed backward, labels can easily come off the backing sheet and cause a paper jam.*

Switching Between Printing on Continuous Paper and Printing on Single Sheets

You can easily switch back and forth between printing on continuous paper with the push tractor and printing on single sheets without having to remove or reload the continuous paper.

Switching to printing on single sheets

To switch from printing on continuous paper with the push tractor to printing on single sheets, follow these steps:

Note:
If a tractor is in the pull position, remove any continuous paper from it before switching to single-sheet printing. See "Removing the paper from the pull tractor" on page 2-21.

1. If any printed pages remain in the printer, press the **Tear Off/ Bin** button to advance the paper to the tear-off position. Then tear off the printed pages.

    Caution:
    ❏ *Tear off your printed document before you press the* **Load/Eject** *button in the next step. Reverse feeding several pages at a time may cause a paper jam.*

    ❏ *Never use the knob to eject paper while the printer is on; this may damage the printer or cause it to lose the tear-off position.*

2. Press the **Load/Eject** button to feed the continuous paper backward to the standby position. The paper is still attached to the push tractor but is no longer in the paper path.

3. Load single sheets in the top or front cover as described in Chapter 3.

Switching to printing on continuous paper

To switch from printing on single sheets to printing on continuous paper with the push tractor, follow these steps:

1. If a single sheet remains in the printer, press the **Load/Eject** button to eject it.

   ⚠️ ***Caution:***
   Never use the knob to eject paper while the printer is on; this may damage the printer or cause it to lose the top-of-form position.

2. Make sure that the tractor is installed in the push position. To install the tractor in the position, see "Reinstalling the tractor in the push position" on page 2-13.

3. Load continuous paper onto the push tractor as described earlier in this chapter.

The printer loads your continuous paper automatically when you begin printing.

Adjusting the Top-of-Form Position

The top-of-form position is the position on the page where the printer starts printing. If your printing appears too high or low on the page, you can use the micro adjust feature to adjust the top-of-form position. Follow these steps:

> **Caution:**
> *Never use the knob to adjust the top-of-form position; this may damage the printer or cause it to lose the top-of-form position.*

Note:
❏ *Your top-of-form position setting remains in effect until you change it, even if you turn off the printer.*

❏ *The top margin setting made in some application software overrides the top-of-form position setting you make with the micro adjust feature. If necessary, adjust the top-of-form position in your software.*

1. Make sure printer is turned on.

2. If necessary, load paper as described earlier in this chapter. If you load paper onto the push tractor, press the **Load/Eject** button to advance the paper to the current top-of-form position.

3. Lift the printer cover up and off the printer.

4. Hold down the **Pause** button for about three seconds. The Pause light starts flashing and the printer enters the micro adjust mode.

5. Press the **LF/FF** ⬇ button to move the top-of-form position up on the page, or press the **Load/Eject** ⬆ button to move the top-of-form position down on the page.

> ⚠ **Caution:**
> *Never use the knob to adjust the top-of-form position; this may damage the printer or cause it to lose the top-of-form position.*

plastic ribbon cover
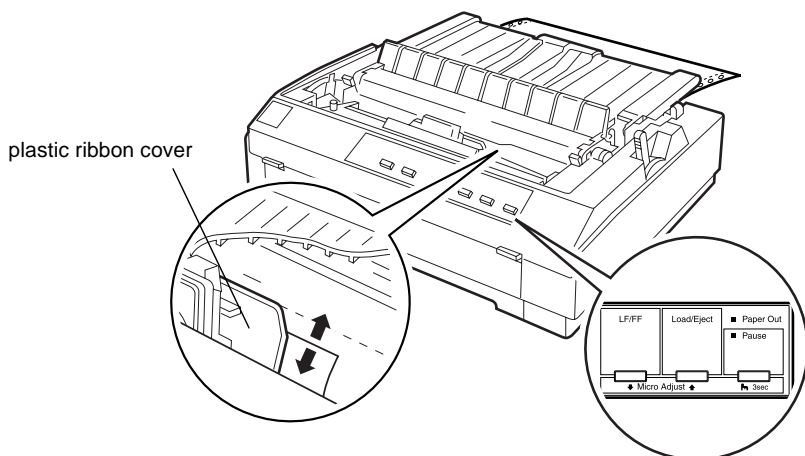
Note:
❏ *The printer has a minimum and a maximum top-of-form position. If you try to adjust it beyond these limits, the printer beeps and stops moving the paper.*

❏ *When the paper reaches the default top-of-form position, the printer also beeps and stops moving the paper briefly. You can use the default position as a reference point when adjusting the top-of-form position.*

To adjust the top-of-form position for continuous paper loaded on the pull tractor, see the following example:

First mark a point 6.5 mm above the paper's perforation; then position the paper so that the mark is even with the top edge of the plastic ribbon cover. This gives you an 8.5 mm margin on the next page, meaning the printer starts printing 8.5 mm below the perforation. If you mark a point 5.5 mm above the perforation, you get a 9.5 mm margin on the next page.
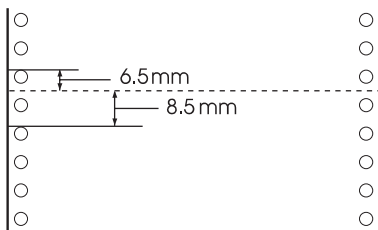
6. After you set the top-of-form position, press the **Pause** button to exit micro adjust mode.

Advancing the Paper to the Tear-Off Edge

If you use the push tractor, you can use the tear-off feature to advance your continuous paper to the printer's tear-off edge when you finish printing. You can then easily tear off the printed document. When you resume printing, the printer automatically feeds the paper back to the top-of-form position so that you can save the paper normally lost between documents.

As described below, you can use the tear-off feature in two ways: manually by pressing the printer's **Tear Off/Bin** button, or automatically by turning on the auto tear-off mode.

If the perforation between pages is not aligned with the tear-off edge, you can adjust the position of the perforation using the micro adjust feature. See "Adjusting the tear-off position" on page 2-35.

> ⚠ *Caution:*
> *Never use the tear-off feature (by pressing the* **Tear Off/Bin** *button or turning on the auto tear-off mode as described below) to feed continuous paper with labels backward; they may come off their backing sheet and jam the printer.*

Using the Tear Off/Bin button

After the printer finishes printing your document, check that the Tear Off/Bin lights are not flashing. Then press the **Tear Off/Bin** button. The printer advances the paper to the tear-off edge.

Note:
If the Tear Off/Bin lights are flashing, the paper is in the tear-off position. If you press the **Tear Off/Bin** *button again, the printer feeds your paper to the next top-of-form position.*

Advancing the paper to the tear-off position automatically

To automatically advance your printed documents to the tear-off position, you need to turn on the auto tear-off mode and select the appropriate page length for continuous paper in the default-setting mode. For instructions, see "Changing default settings" on page 5-10.

When auto tear-off is on, the printer automatically advances the paper to the tear-off position whenever it receives a full page of data or a form feed command followed by no more data.

Adjusting the tear-off position

If your paper's perforation is not aligned with the tear-off edge, you can use the micro adjust feature to move the perforation to the tear-off position. Follow these steps:

> *Caution:*
> *Never use the knob to adjust the tear-off position; this may damage the printer or cause it to lose the tear-off position.*

Note:
Your tear-off position setting remains in effect until you change it, even if you turn off the printer.

1. Make sure the **Tear Off/Bin** lights are flashing (the paper is at the current tear-off position). You may need to press the **Tear Off/Bin** button to advance the paper to the tear-off position.

2. Open the paper guide cover.

3. Hold down the **Pause** button for about three seconds. The Pause light begins flashing and the printer enters the micro adjust mode.

4. Press the **LF/FF** ↓ button to feed the paper backward, or press the **Load/Eject** ↑ button to feed the paper forward, until the paper perforation is aligned with the tear-off edge.
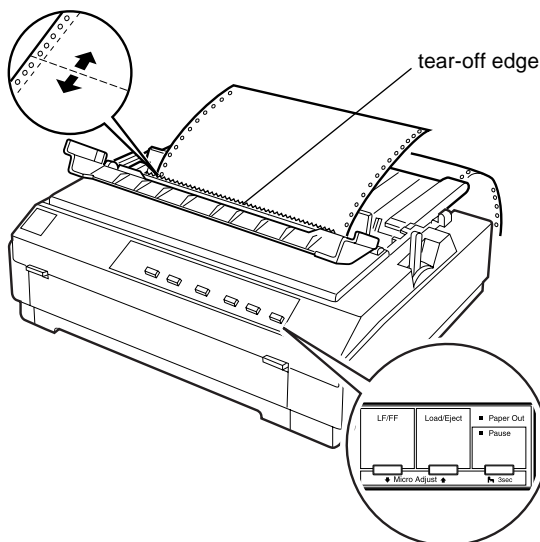
Note:
The printer has a minimum and a maximum tear-off position. If you try to adjust the tear-off position beyond these limits, the printer beeps and stops moving the paper.

5. After you set the tear-off position, press the **Pause** button to turn off the micro adjust mode.

6. Tear off the printed pages.

When you resume printing, the printer automatically feeds the paper back to the top-of-form position and begins printing.

Printing on Single Sheets

3

Using Single Sheets

Available paper types and paper slots

As shown below, you can load single-sheet paper one sheet at a time using the paper guide on top of the printer or the front cover. You can print on ordinary single sheets, single-sheet multipart forms, postcards, and envelopes. Your single-sheet paper may be from 100 to 257 mm wide.

Note:
❏ *To load a stack of single-sheet paper, use the optional cut-sheet feeder. See Appendix A, "Enhancing Your Printer With Options."*

❏ *For detailed specifications on the types of single-sheet paper you can use, see Appendix C.*
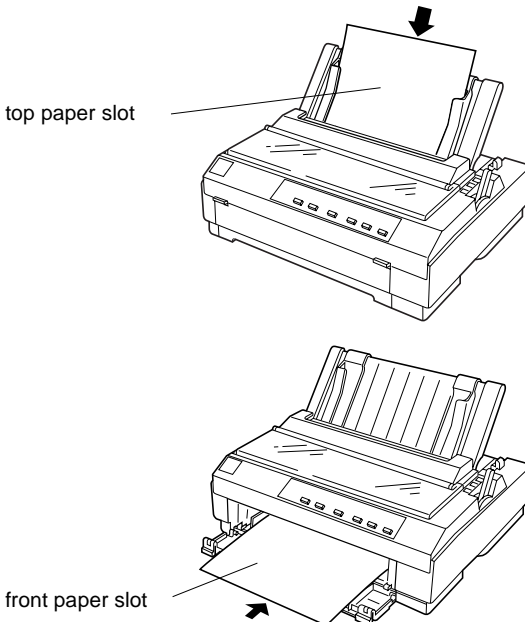
The table below shows the types of paper you can load in the top and front paper slots and the paper thickness lever setting for each paper type. For more information on the paper thickness lever, see "Setting the Paper Thickness Lever" on page 2-4.

Paper type	Available paper slots	Paper thickness lever position
Ordinary single-sheet paper	Top and front	-1 or 0

Multipart forms (carbonless)
  2 parts (original + 1 copy)
  3 parts (original + 2 copies)
  4 parts (original + 3 copies)
  5 parts (original + 4 copies)
	Front	1
		2
		3
		5

Postcards	Top and front	2
Envelopes	Top	2 to 6

Note:
❏ *If the printed image is smeared, you may need to set the paper thickness lever one position higher to improve print quality.*

❏ *If the printed image is faint or has many gaps, you may need to set the paper thickness lever one position lower to improve print quality.*

❏ *Do not load paper that is damaged, curled, or has been folded.*

Loading single-sheet multipart forms

You can load single-sheet multipart forms in the front paper slot only, as described in "Loading Single Sheets in the Front Paper Slot" on page 3-11. Be sure to follow these guidelines:

❑ Use only carbonless multipart forms bound as shown below.

fastened only at the
top by line gluing

ABCDEFG
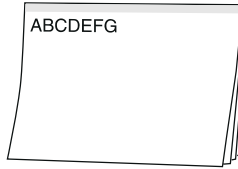
❑ You can use the front paper slot to load single-sheet multipart forms that are fastened at the top.

Insert the of form in the front slot, bound edge first and printable side up, as shown below.

printable side up
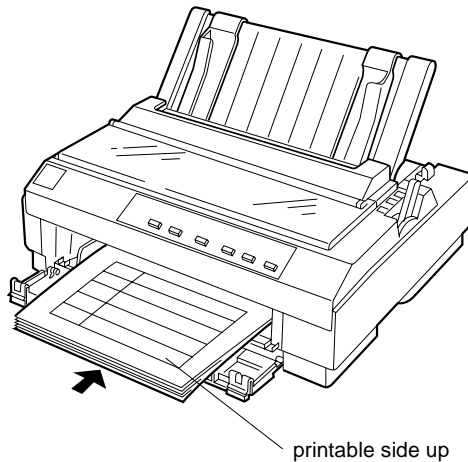
❏ Before printing, set the paper thickness lever (located under the printer cover) to the proper position for your paper. See the table on page 3-3, for details.

❏ Be sure your multipart forms do not exceed 0.39 mm in thickness.

Loading envelopes

You can load envelopes in the top paper slot only, as described in "Loading Single Sheets in the Top Paper Slot" on page 3-8. Also follow these guidelines:

❏ Load envelopes one at a time in the top slot, with the flap fold first and the flap side up.

flap side up, printable side down
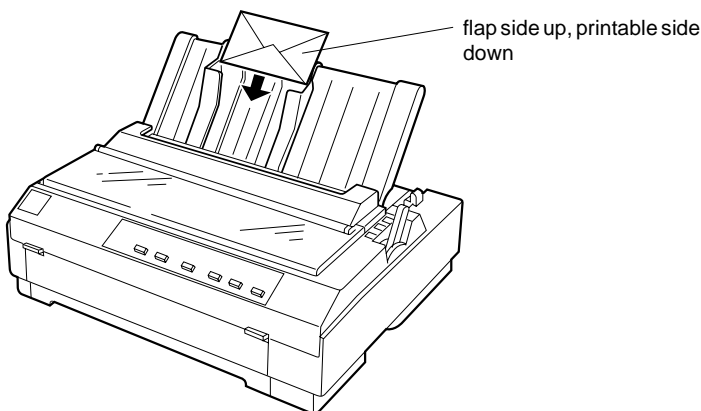
❏ Set the paper thickness lever (located under the printer cover) to position 2 or 6 to match the thickness of the envelope.

❏ Do not use envelopes that are curled or folded. Also avoid using envelopes that are too thin; they may curl during printing and become jammed.

❏ If you are using No. 6 envelopes, align the left edge of the envelope with the arrow mark on the printer.

Use envelopes only under normal temperature and humidity conditions, as follows:

Temperature   15 to 25 °C

Humidity   30 to 60% RH

> **❗ Caution:**
> *Because printing on the edge of an envelope may damage the print head, make sure the printing stays entirely within the printable area of your envelopes. See Appendix C for details on the printable area of envelopes.*

Loading postcards

You can load postcards one at a time in the top or front paper slot as described in "Loading Single Sheets in the Top Paper Slot" on page 3-8 or "Loading Single Sheets in the Front Paper Slot" on page 3-11. Also follow these guidelines:

❑ When you are loading postcards long edge first, always load them in the top slot.
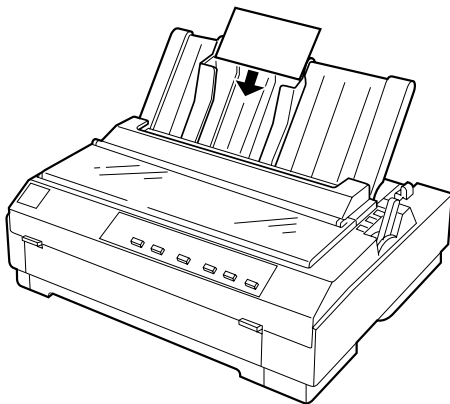
❏ Set the paper thickness lever (located under the printer cover) to position 2.

❏ Before printing, turn on the card mode by pressing the **Tear Off/Bin** button until both **Tear Off/Bin** lights are on. After you finish printing on postcards, press the **Tear Off/Bin** button once to exit the card mode. (Bin 1 of the optional cut-sheet feeder is selected.)

Use postcards only under normal temperature and humidity conditions, as follows:

Temperature   15 to 25 °C

Humidity   30 to 60% RH

Loading Single Sheets in the Top Paper Slot

To load paper in the top slot, follow these steps:

1. Make sure the paper guide is installed properly. If not, attach it as described on "Attaching the Paper Guide" on page 1-11.

2. Slide the left edge guide until it locks in place next to the arrow on the paper guide. Next adjust the right edge guide to match the width of your paper.
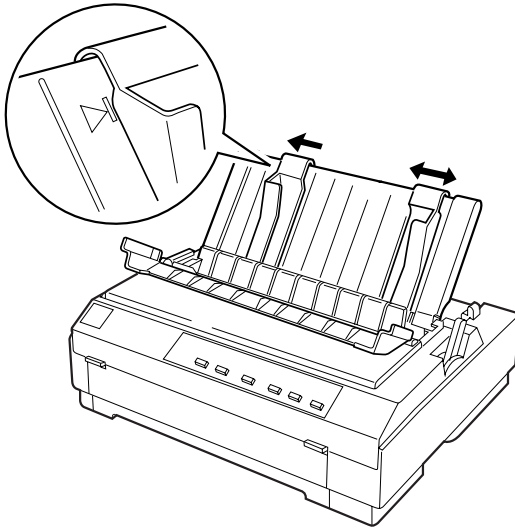
3. Set the paper release lever to the single-sheet position. Also set the paper thickness lever (located under the printer cover) to the proper position for your paper's thickness. (See the table on page 3-3.)
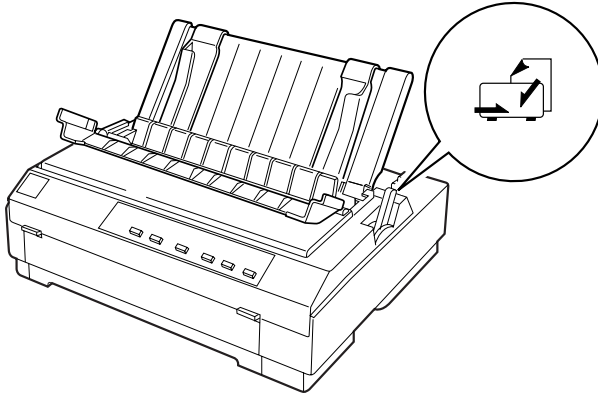
4. Close the paper guide cover.
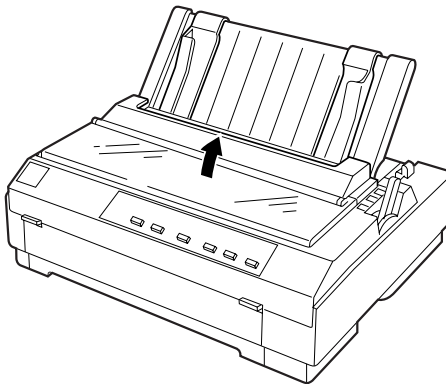
5. Turn on the printer, if necessary.

6. Insert a sheet of paper, printable side down, between the edge guides until it meets resistance. The printer feeds the paper automatically and is ready to print.
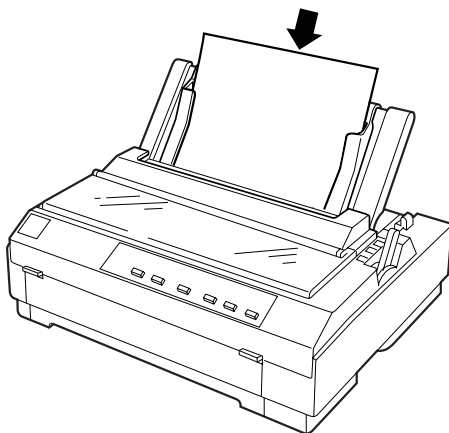
Note:
The time from when the paper is inserted until it feeds can be set with the default-setting mode's Manual feed time. For instructions, see "Changing default settings" on page 5-10.

7. Check the printer driver settings as described in Chapter 4, and change them if necessary. Then send a print job to the printer.

When the printer receives data, it prints the page and ejects it back onto the paper guide. To continue printing your document, remove the printed page and insert a new sheet of paper. If you need to eject a sheet, press the **Load/Eject** button.

If the first line on your page appears too high or low, you can fix this using the micro adjust feature. See "Adjusting the Top-of-Form Position" on page 2-31.

Caution:
Never use the knob to adjust the top-of-form position or eject a sheet when the printer is on; this may damage the printer or cause it to lose the top-of-form position.

Loading Single Sheets in the Front Paper Slot

To load paper in the front paper slot, follow these steps:

1. Make sure the paper guide is installed properly. If not, attach it as described on "Attaching the Paper Guide" on page 1-11.

2. Make sure the paper guide cover is closed.

3. If the front cover is closed, open it by pulling the tabs at both ends of the cover. Slide the edge guide until it locks in place next to the arrow on the paper guide.
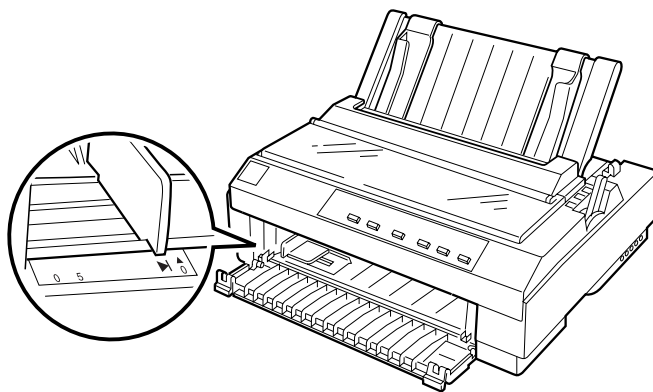
4. Set the paper release lever to the single-sheet position. Also set the paper thickness lever (located under the printer cover) to the proper position for your paper's thickness. (See the table on page 3-3.)
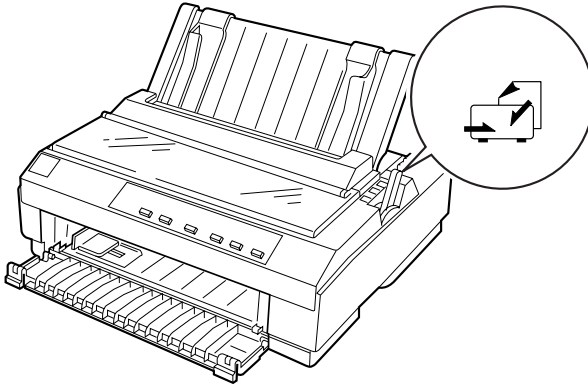
5. Turn on the printer, if necessary.

6. Making sure it is aligned with the edge guide, load the paper, printable side up, until it meets resistance. The printer feeds the paper automatically and is ready to print.
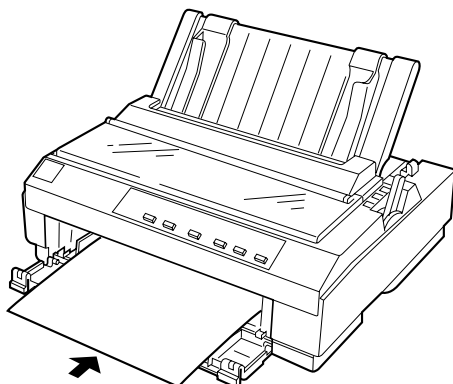
Note:
The time from when the paper is inserted until it feeds can be set with the default-setting mode's Manual feed time. For instructions, see "Changing default settings" on page 5-10.

7. You may need to check and change the printer driver settings as described in Chapter 4. Then send a print job to the printer.

When the printer receives data, it prints the page and ejects it onto the paper guide on top of the printer. To continue printing your document, remove the printed page and insert a new sheet of paper in the front cover. If you need to eject a sheet, press the **Load/Eject** button.

If the first line on your page appears too high or low, you can fix this using the micro adjust feature. See "Adjusting the Top-of-Form Position" on page 2-31.

▌ *Caution:*
Never use the knob to adjust the top-of-form position or eject a sheet when the printer is on; this may damage the printer or cause it to lose the top-of-form position.

Chapter 4

Using the Printer Software

4

About Your Printer Software

The EPSON printer software that comes with your printer includes the printer driver software, the EPSON Remote! utility, and the EPSON Status Monitor 3 utility for Windows 95, 98 and NT 4.0.

As described in Chapter 1, a printer driver is software that allows your computer to control the printer. You need to install the printer driver so your Windows software applications can take full advantage of the printer's capabilities.

Note:
Before proceeding, make sure you have installed the printer driver on your PC as described in Chapter 1.

EPSON Remote! is a DOS-based printer setup utility that allows you to easily change the printer's default settings from the computer screen. To use the EPSON Remote! utility with DOS, see "Using the EPSON Remote! Utility" on page 4-32.

The EPSON Status Monitor 3 utility program is available for Windows 95, 98 and NT 4.0. It allows you to monitor the status of your printer, alerts you when errors occur, and provides you with troubleshooting tips. To use the Status Monitor, see Chapter 6, "Using EPSON Status Monitor 3."

To use the printer driver, see the appropriate page below, depending on your Windows version.

Using the Printer Driver With Windows 95 and 98

You can access the printer driver from your Windows applications or from the Start menu. When you access the printer driver from a Windows application, any settings you make apply only to the application you are using. See "Accessing the printer driver from Windows applications" below. When you access the printer driver from the Start menu, the printer driver settings you make apply to all your applications. See "Accessing the printer driver from the Start menu" on page 4-6. To check and change printer driver settings, see "Printer driver settings overview" on page 4-6.

4

Note:
While many Windows applications override the settings made with the printer driver, some do not, so you must verify that the printer driver settings match your requirements.

Accessing the printer driver from Windows applications

To access the printer driver from a Windows application, follow the steps on the next page.

Note:
The steps on the next page provide general guidelines on accessing the printer driver. How you access the printer driver may differ depending on your application. See your application manual for details.

1. Select **Print Setup** or **Print** from the **File** menu of your application software. The **Print** or **Print Setup** dialog box appears.

2. Make sure that your printer is selected and then click **Printer**, **Setup**, **Properties**, or **Options**. (You may need to click a combination of these buttons.) The **Properties** window appears, and you see the **Paper**, **Graphics**, and **Device Options** menu. These menus contain the printer driver settings.
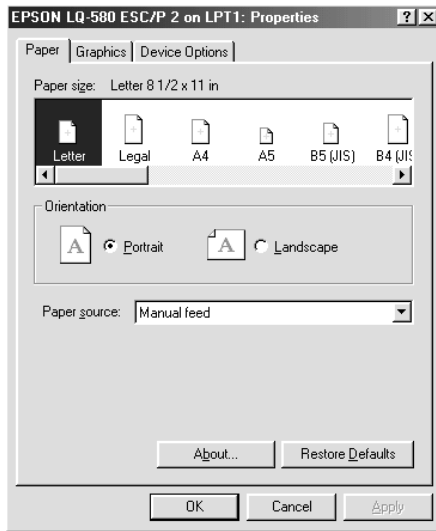
3. To view a menu, click the corresponding tab at the top of the window. See "Printer driver settings overview" below for detailed information about the settings.

Accessing the printer driver from the Start menu

To access the printer driver from the Start menu, follow these steps:

1. Click the **Start** button, and then point to **Settings**.

2. Click **Printers**.

3. Right-click your printer icon, and click **Properties**. The screen displays the **Properties** window, which contains the **Paper**, **Graphics**, and **Device Options** menus. These menus display the printer driver settings.

4. To view a menu, click the corresponding tab at the top of the window. See the next section for detailed information about the printer driver settings.

Printer driver settings overview

Your printer driver has four menus: **Paper**, **Graphics**, **Device Options**, and **Utility**. The printer driver settings on each of these menus are described below. To open the menus, see the previous sections on accessing the printer driver.

When you finish making your printer driver settings, click **OK** to apply the settings, or click **Restore Defaults** to return the settings to their default values.

Paper menu
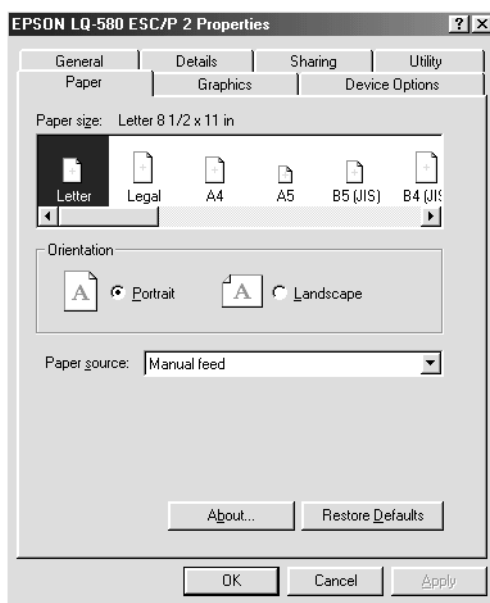
❑ Paper size   Select the size of the paper you want
                      to use. If you don't see your paper
                      size, use the scroll bar to scroll
                      through the list. If your paper size is
                      not included in the list, click **Custom**
                      and enter the paper size in the dialog
                      box that appears.

❑ Orientation   Select **Portrait** or **Landscape**.

❑ Paper source   Click the paper source you want to
                      use.

Graphics menu
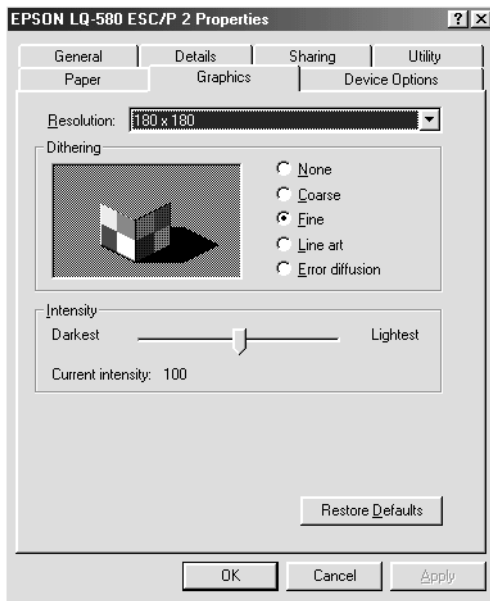
❏ Resolution	Click the printing resolution you want. The higher the resolution you select, the more detailed your printout will be; however, increasing the resolution slows printing.
❏ Dithering	You can leave this option set to **Fine**, which is the default setting, or select another dithering pattern depending on the kind of printout you want. The display to the left of the dithering options shows the effect of your selection.
❏ Intensity	Move the slider to make your printout lighter or darker.

Device Options menu

EPSON LQ-580 ESC/P 2 Properties

| General | Details | Sharing | Utility |
| Paper | Graphics | Device Options |

Print quality: High Speed - Default

❏ Print quality   Select a print quality option from the
Print quality list.
If you turn on High Speed, you will
enter bi-directional printing mode and
printing speed will increase.
Turning High Speed off will return the
printer to uni-directional printing
mode. Printing speed will decrease,
but printing precision will improve.
Default printing uses the settings
stored in the printer.

Once you've checked your printer driver settings and changed
them if necessary, you are ready to print with continuous paper
as described in Chapter 2, or with single sheets as described in
Chapter 3.

To use the utilities, click the **Utility** tab in the printer software window, then click the button for the utility you want to use.

❏ EPSON Status Monitor 3   You can access EPSON Status Monitor 3 when you click this button. Whenever you monitor the printer, make sure there is a checkmark in the **Monitor the printing status** check box.

Note:
This utility is available only when:

❏ *The printer is connected directly to the host computer via the parallel port [LPT1].*

❏ *Your system is configured to support bidirectional communication.*

❏ Monitoring   Click this button to open the
    Preferences   **Monitoring Preferences** dialog box
                    where you can make settings for
                    EPSON Status Monitor 3.

4

You can change the following settings:

Select Notification	Displays the error item check box ON/OFF status. Turn on this check box to display the selected error notification.
Select Shortcut icon	The selected icons are displayed in the task tray on the PC screen. The setting example is shown on the right window. By clicking the shortcut icon, you can access the Monitoring Preferences dialog easily.
Receive error notification for shared printers	Error notification for a shared printer can be received when this check box is turned on.
Allow monitoring of shared printer	When this check box is turned on, a shared printer can be monitored by other PCs.

Note:
Click the **Default** *button to revert all items to the default settings.*

Using the Printer Driver With Windows 3.1

You can access the printer driver from your Windows applications or from the Control Panel. When you access the printer driver from a Windows application, any settings you make apply only to the application you are using. See "Accessing the printer driver from Windows applications," below. When you access the printer driver from the Control Panel, the printer driver settings you make apply to all your applications. See "Accessing the printer driver from the Control Panel" on page 4-15. To check and change printer driver settings, see "Printer driver settings overview" on page 4-15.

Note:
While many Windows applications override the settings made with the printer driver, some do not, so you must verify that the printer driver settings match your requirements.

Accessing the printer driver from Windows applications

To access the printer driver from a Windows application, follow the steps on the next page.

Note:
The steps on the next page provide general guidelines on accessing the printer driver. How you access the printer driver may differ depending on your application. See your application manual for details.

1. Select **Print Setup** or **Print** from the **File** menu of your application software. The **Print** or **Print Setup** dialog box appears. See "Printer driver settings overview" on page 4-15 for detailed information about the settings in this dialog box.

2. Make sure that your printer is selected and then click **Printer**, **Setup**, or **Options**. (You may need to click a combination of these buttons.) The **Options** dialog box appears. See "Printer driver settings overview" on page 4-15 for detailed information about the settings in this dialog box.
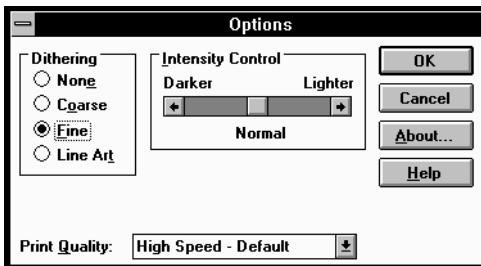
Accessing the printer driver from the Control Panel

To access the printer driver from the Control Panel, follow these steps:

1. In the Main window, double-click the **Control Panel** icon.

2. Double-click the **Printers** icon. The **Printers** dialog box appears.

3. Make sure your printer is highlighted, then click **Setup**. The **Print Setup** dialog box appears. To access more settings, you may need to click **Options**. See the next section for detailed information.

Printer driver settings overview

The printer driver settings are described in this section. To access the printer driver settings, see the previous sections on accessing the printer driver.

When you finish making your printer driver settings, click **OK** to apply the settings, or click **Cancel** to cancel your changes.

Print or Print Setup dialog box

> ❏ Resolution Click the printing resolution you want. The higher the resolution you select, the more detailed your printout will be; however, increasing the resolution slows printing. This setting is available only from the Control Panel.

> ❏ Orientation Select **Portrait** or **Landscape**. The diagram on the screen changes according to the orientation you select.

❏ Paper Size   Select the size of the paper you want to use. If you don't see your paper size, use the scroll bar to scroll through the list. If your paper size is not included in the list, click **User Defined Size** and enter the paper size in the dialog box that appears.

❏ Paper Source   Click the paper source you want to use.

Options dialog box

❏ Dithering   You can leave this option set to **Fine**, which is the default setting, or select another dithering pattern depending on the kind of printout you want.

❏ Intensity Control Move the slider to make your printout lighter or darker.

❏ Print quality   Select a print quality option from the Print quality list.
If you turn on High Speed, you will enter bi-directional printing mode and printing speed will increase.
Turning High Speed off will return the printer to uni-directional printing mode. Printing speed will decrease, but printing precision will improve.
Default printing uses the settings stored in the printer.

Once you've checked your printer driver settings and changed them if necessary, you are ready to print with continuous paper as described in Chapter 2, or with single sheets as described in Chapter 3.

Using the Printer Driver With Windows NT 4.0

You can access the printer driver from your Windows applications or from the Start menu. When you access the printer driver from a Windows application, any settings you make apply only to the application you are using. See "Accessing the printer driver from Windows applications" below. When you access the printer driver from the Start menu, the printer driver settings you make apply to all your applications. See "Accessing the printer driver from the Start menu" on page 4-19. To check and change printer driver settings, see "Printer driver settings overview" on page 4-20.

Note:
While many Windows applications override the settings made with the printer driver, some do not, so you must verify that the printer driver settings match your requirements.

Accessing the printer driver from Windows applications

To access the printer driver from a Windows application, follow the steps on the next page.

Note:
The steps on the next page provide general guidelines on accessing the printer driver. How you access the printer driver may differ depending on your application. See your application manual for details.

1. Select **Print Setup** or **Print** from the **File** menu of your application software. The **Print** or **Print Setup** dialog box appears.

2. Make sure that your printer is selected and then click **Printer**, **Setup**, **Properties**, or **Options**. (You may need to click a combination of these buttons.) The **Document Properties** window appears, and you see the **Page Setup** and **Advanced** menus. These menus contain the printer driver settings.
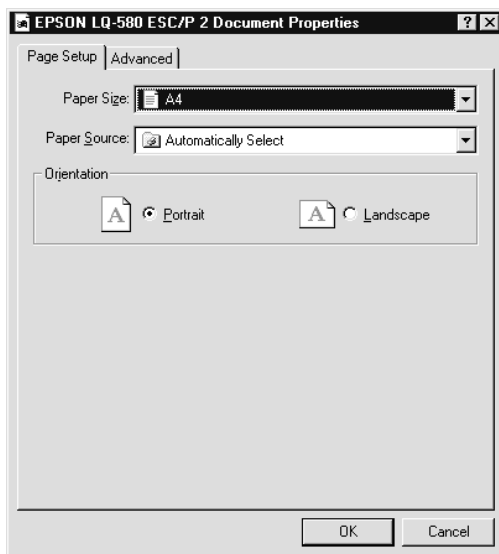
3. To view a menu, click the corresponding tab at the top of the window. See "Printer driver settings overview" below, for detailed information about the settings.

Accessing the printer driver from the Start menu

To access the printer driver from the Start menu, follow these steps:

1. Click the **Start** button, and then point to **Settings**.

2. Click **Printers**.

3. Right-click your printer icon, and click **Document Defaults**. The screen displays the **Default Document Properties** window, which contains the **Page Setup** and **Advanced** menus. These menus display the printer driver settings.

4. To view a menu, click the corresponding tab at the top of the window. See the next section for detailed information about the printer driver settings.

Printer driver settings overview

Your printer driver has two menus: **Page Setup** and **Advanced**. The printer driver settings on each of these menus are described below. To open these menus, see the previous sections on accessing the printer driver.

When you finish making your printer driver settings, click **OK** to apply the settings, or click **Cancel** to cancel your changes.

Page Setup menu
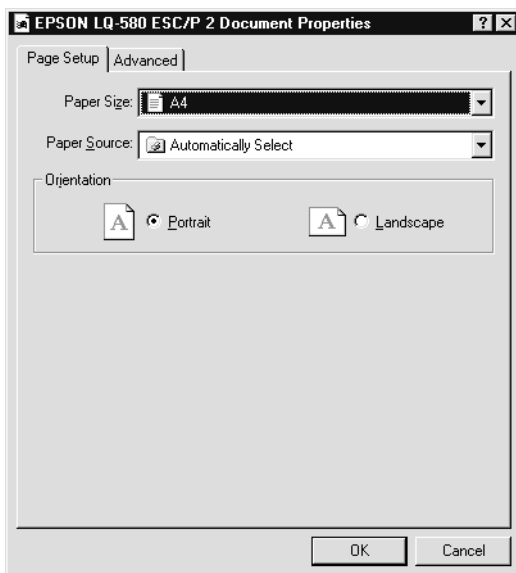
❏ Paper Size		Select the size of the paper you want to use from the **Paper Size** list.
❏ Paper Source		Select the paper source you want to use from the **Paper Source** list.
❏ Orientation		Select **Portrait** or **Landscape**.

Advanced menu
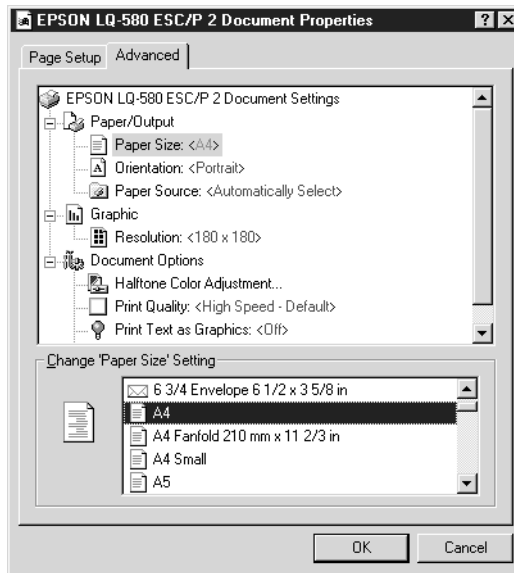
❏ Paper/Output

Check the **Paper Size**, **Orientation**, and **Paper Source** settings you made on the **Page Setup** menu and change them if necessary. Select the setting and then choose an option from the **Change Setting** list box.

❏ Graphic

Select **Resolution** and then choose the printing resolution from the **Change Setting** list box. The higher the resolution you select, the more detailed your printout will be; however, increasing the resolution slows printing.

❏ Document Options

Double-click **Halftone Color Adjustment** to open the **Halftone Color Adjustment** dialog box. Click **Print Quality** to select a Print quality option. Click **Print Text as Graphics** or **Metafile Spooling** and select **On** or **Off** in the **Change Setting** list box.

❏ Print quality

Select a print quality option from the Print quality list.
If you turn on High Speed, you will enter bi-directional printing mode and printing speed will increase. Turning High Speed off will return the printer to uni-directional printing mode. Printing speed will decrease, but printing precision will improve.
Default printing uses the settings stored in the printer.

Once you've checked your printer driver settings and changed them if necessary, you are ready to print with continuous paper as described in Chapter 2, or with single sheets as described in Chapter 3.

Utility menu

To use the utilities, click the **Utility** tab in the printer software window, then click the button for the utility you want to use. If you are using NT 4.0, you can open the printer software window by selecting **Properties** on the **File** menu in the **Printer** window.
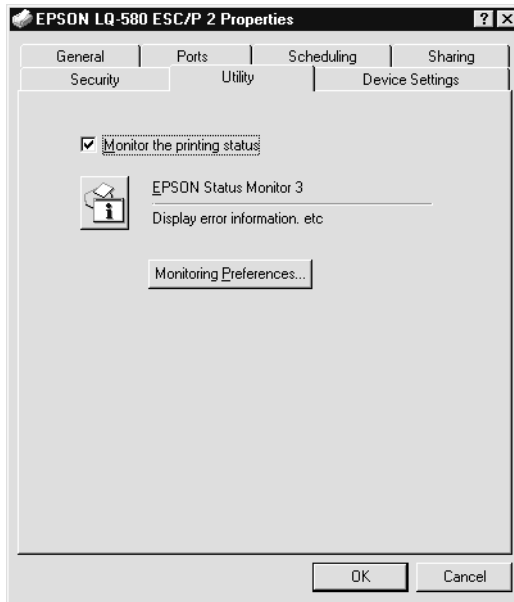
❏   EPSON Status   You can access EPSON Status Monitor
    Monitor 3   3 when you click this button.
                     Whenever you monitor the printer,
                     make sure there is a checkmark in the
                     Monitor the printing status check
                     box.

Note:
This utility is available only when:

❏   *The printer is connected directly to the host computer via the parallel port [LPT1].*

❏   *Your system is configured to support bidirectional communication.*

❏ Monitoring
   Preferences

Click this button to open the
Monitoring Preferences dialog box
where you can make settings for
EPSON Status Monitor 3.

You can change the following settings:

Select Notification	Displays the error item check box ON/OFF status. Turn on this check box to display the selected error notification.
Select Shortcut icon	The selected icons are displayed in the task tray on the PC screen. The setting example is shown on the right window. By clicking the shortcut icon, you can access the Monitoring Preferences dialog easily.
Receive error notification for shared printers	Error notification for a shared printer can be received when this check box is turned on.
Allow monitoring of shared printer	When this check box is turned on, a shared printer can be monitored by other PCs.

Note:
Click the Default button to revert all items to the default settings.

Using the Printer Driver With Windows NT 3.5x

You can access the printer driver from your Windows applications or from the Control Panel. When you access the printer driver from a Windows application, any settings you make apply only to the application you are using. See "Accessing the printer driver from Windows applications" below. When you access the printer driver from the Control Panel, the printer driver settings you make apply to all your applications. See "Accessing the printer driver from the Control Panel" on page 4-29. To check and change printer driver settings, see "Printer driver settings overview" on page 4-30.

Note:
While many Windows applications override the settings made with the printer driver, some do not, so you must verify that the printer driver settings match your requirements.

Accessing the printer driver from Windows applications

To access the printer driver from a Windows application, follow the steps on the next page.

Note:
The steps on the next page provide general guidelines on accessing the printer driver. How you access the printer driver may differ depending on your application. See your application manual for details.

1. Select **Print Setup** or **Print** from the **File** menu of your application software. The **Print** or **Print Setup** dialog box appears.

2. Make sure that your printer is selected and then click **Printer**, **Setup**, **Properties**, or **Options**. (You may need to click a combination of these buttons.) The screen displays the **Document Properties** dialog box, which contains the **Form** and **Orientation** printer driver settings. See "Printer driver settings overview" on page 4-30 for detailed information about these settings.
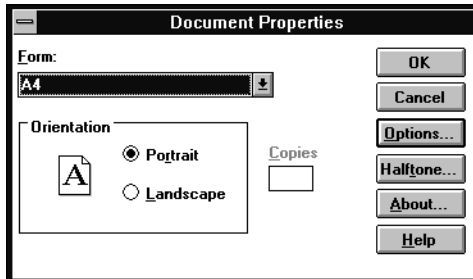
3. Click **Options** (or a similar button) to view the **Advanced Document Properties** dialog box, which includes the **Graphics Resolution**, **Color**, and **Optimizations** printer driver settings. See "Document Properties dialog box" on page 4-30 for detailed information about these settings.
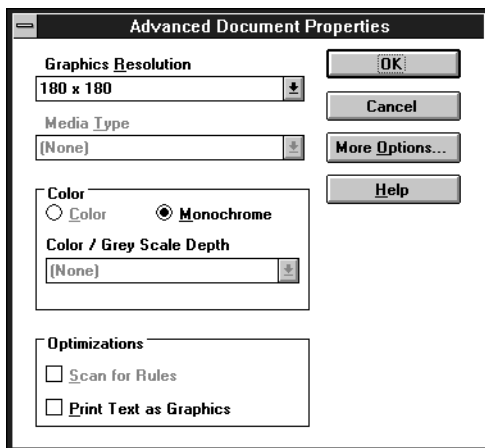
Accessing the printer driver from the Control Panel

To access the printer driver from the Control Panel, follow these steps:

1. In the Main window, double-click the **Print Manager** icon. The Print Manager window opens.

2. Make sure your printer is highlighted, then click **Printer** and select **Properties**. The **Printer Properties** dialog box appears.

3. Click the **Details** button, then click **Job Default**. You see the **Document Properties** dialog box, which includes the **Form** and **Orientation** printer driver settings. See "Printer driver settings overview" on page 4-30 for detailed information about these settings.

4. Click **Options** to open the **Advanced Document Properties** dialog box, which contains the **Graphics Resolution**, **Color**, and **Optimizations** printer driver settings. See "Printer driver settings overview" on page 4-30 for detailed information about these settings.

Printer driver settings overview

Your printer driver has two dialog boxes: **Document Properties** and **Advanced Document Properties**. The printer driver settings in each of these dialog boxes are described below. To open these dialog boxes, see the previous sections on accessing the printer driver.

When you finish making your printer driver settings, click **OK** to apply the settings, or click **Cancel** to cancel your changes.

Document Properties dialog box

❏ Form   Select the type of paper you want to use. If you don't see your paper type, select it from the **Form** list.

❏ Orientation   Select **Portrait** or **Landscape**. The diagram on the screen changes according to the orientation you select.

Click the **Halftone** button to set the brightness and contrast, input the RGB gamma, or make other settings. The **Halftone Color Adjustment** dialog box appears. For details, click **Help** in this dialog box.

Advanced Document Properties dialog box

❏ Graphics Resolution — Select a printing resolution option from the **Graphics Resolution** list. The higher the resolution you select, the more detailed your printout will be; however, increasing the resolution slows printing.

❏ Color — Only monochrome printing is available.

❏ Optimizations — Click a check box to turn the corresponding option on or off.

❏ Print quality — Select a print quality option from the Print quality list.
If you turn on High Speed, you will enter bi-directional printing mode and printing speed will increase. Turning High Speed off will return the printer to uni-directional printing mode. Printing speed will decrease, but printing precision will improve.
Default printing uses the settings stored in the printer.
This item will appear when you click **More Options...**

Once you've checked your printer driver settings and changed them if necessary, you are ready to print with continuous paper as described in Chapter 2, or with single sheets as described in Chapter 3.

Using the EPSON Remote! Utility

The EPSON Remote! utility allows you to easily change the printer's default settings from your computer's DOS prompt.

Installing EPSON Remote!

Follow the steps below to install EPSON Remote!

Note:
If you want to install EPSON Remote!, you must start your computer in DOS mode. Do not open a DOS window from Windows.

1. Insert the printer software CD-ROM in a disk drive.

2. At the DOS prompt, type **D:\SETUP. (**If you inserted the disk in a drive other than drive D, substitute the appropriate letter.**)** Then press **Enter**.

3. Select your printer's name in the **Printer Model** window and press **Enter**. **C:\EPUTIL** appears as the default directory.

4. Press **Enter** again. The EPSON Remote! utility is copied to the C:\EPUTIL directory.

Accessing EPSON Remote!

To access EPSON Remote!, type **C:\PRNSET** at the DOS prompt and press **Enter**. Then follow the on-screen instructions to use this utility. You can also access EPSON Remote! by typing **C:\PANEL** at the DOS prompt and pressing **Enter**. The PRNSET and PANEL access methods differ slightly. The PANEL method opens a condensed version of EPSON Remote! that only provides the most often used settings.

Chapter 5

Changing Printer Settings From the Printer's Control Panel

5

Selecting a Built-In Font and Pitch

Your printer comes with the twelve built-in fonts shown in the table below. You can also change the pitch by turning the condensed mode on or off. You can select the font and pitch using the buttons on the printer's control panel as described below.

Note:
Settings you make in your application programs usually override settings you make from the printer's control panel. For best results, use your application to select a font and pitch.

Font	Sample
Draft	ABCDEFGHIJKLMNOPQRSTUVW
Roman	ABCDEFGHIJKLMNOPQRSTUVW
Sans Serif	ABCDEFGHIJKLMNOPQRSTUVW
Courier	ABCDEFGHIJKLMNOPQRSTUVW
Prestige	ABCDEFGHIJKLMNOPQRSTUVW
Script	ABCDEFGHIJKLMNOPQRSTUVW
OCR-B	ABCDEFGHIJKLMNOPQRSTUVW
Orator	ABCDEFGHIJKLMNOPQRSTUVW
Orator-S	ABCDEFGHIJKLMNOPQRSTUVW
Script C	ABCDEFGHIJKLMNOPQRSTUVW
Roman T	ABCDEFGHIJKLMNOPQRSTUVW
Sans Serif H	ABCDEFGHIJKLMNOPQRSTUVW

Follow these steps to select a built-in font or pitch using the buttons on the printer's control panel:

1. Make sure that the printer is not printing. If it is, wait until printing has finished.

2. To select a font, press the Font button until the three Font lights indicate the font you want as shown below.

Font lights	Font
■ ■ □	Draft
■ □ ■	Roman
■ □ □	Sans Serif
□ ■ ■	Courier
□ ■ □	Prestige
□ □ ■	Script
□ □ □	Others

□ = On, ■ = Off

* others means the font selected in the default-setting mode

Note:
The Font button cannot directly select OCR-B, Orator, Orator-S, Script-C, Roman-T, or Sans Serif H. To select one of these fonts, you must first use the default-setting mode to register it as the "other" font. Note that the default "other" setting is Roman-T.

3. Press the **Condensed** button to turn the condensed mode on or off. The table below shows normal and condensed printing.

Condensed mode	Sample
Off	This is condensed
On	This is condensed

About Your Printer's Default Settings

The default settings control many printer functions. While you can often set these functions through your software or printer driver, you may sometimes need to change a default setting from the printer's control panel using the default-setting mode.

The following table lists the default settings and the options you can select in the default-setting mode. The settings are explained in detail after the table. For instructions on changing the default settings, see "Changing default settings" on page 5-10.

Settings	Options
Page length for tractor*	Length in inches: 3, 3.5, 4, 5.5, 6, 7, 8, 8.5, 11, 70/6, 12, 14, 17
Skip over perforation	On, Off
Auto tear-off	On, Off
Auto line feed	On, Off
Print direction	Bi-D, Uni-D, Auto
Software	ESC/P2, IBM 2390Plus
0 slash	0, 0
High speed draft	On, Off
I/F mode	Auto, Parallel, Optional
Auto I/F wait time	10 seconds, 30 seconds
Parallel I/F bidirectional mode	On, Off
Packet mode	Auto, Off
Auto CR (IBM 2390 Plus)**	On, Off
A.G.M. (IBM 2390 Plus)**	On, Off

Settings	Options
Character table*	Standard model: Italic, PC 437, PC 850, PC 860, PC 863, PC 865, PC 861, BRASCII, Abicomp, Roman 8, ISO Latin 1, PC 858, ISO 8859-15, All other models: Italic, PC 437, PC 850, PC 437 Greek, PC 853, PC 855, PC 852, PC 857, PC 864, PC 866, PC 869, MAZOWIA, Code MJK, ISO 8859-7, ISO Latin 1T, Bulgaria, PC 774, Estonia, ISO 8859-2, PC 866 LAT, PC 866 UKR, PC APTEC, PC 708, PC 720, PC AR864, PC 860, PC863, PC 865, PC 861, BRASCII, Abicomp, Roman 8, ISO Latin 1, PC 858, ISO 8859-15, PC 771
International character set for Italic table	Italic U.S.A., Italic France, Italic Germany, Italic U.K., Italic Denmark1, Italic Sweden, Italic Italy, Italic Spain1
Font	OCR-B, Orator, Orator-S, Script C, Roman T, Sans Serif H
Manual feed wait time	1 second, 1.5 seconds, 2 seconds, 3 seconds
Buzzer	On, Off
Roll paper	On, off

* The options available vary depending on the country of purchase.

** These settings take effect only when IBM 2390 Plus emulation is selected.

Page length for tractor

This setting allows you to set the page length (in inches) for continuous paper.

Skip over perforation

This feature is available only when continuous paper is selected. When you select **On**, the printer provides a 25.4 mm margin between the last line printed on one page and the first line printed on the next page. Because the program margin settings in most applications override margin settings made from the control panel, you should use this setting only if you cannot set your top and bottom margins using your application.

Auto tear off

When auto tear off is on and you are using continuous paper with the push tractor, the printer automatically advances the paper perforation to the tear-off position, where you can easily tear off the printed pages. When the printer receives the next print job, it automatically moves the unused paper back to the top-of-form position and starts printing, so you can use all of the next page.

When auto tear off is off and you are using continuous paper with the push tractor, you need to move the perforation to the tear-off position manually by pressing the **Tear Off/Bin** button. See "Advancing the Paper to the Tear-Off Edge" on page 2-34 for more information. (The tear-off feature is not available for paper loaded on the pull tractor.)

Auto line feed

When auto line feed is on, the printer accompanies each carriage return (CR) code received with a line feed code. When this feature is on, the print position moves to the next line. If the printer adds an extra line after every carriage return, select **Off**.

Print direction

You can select auto print direction (**Auto**), bidirectional printing (**Bi-D**), or unidirectional printing (**Uni-D**). Printing is normally bidirectional; however, unidirectional printing allows for precise vertical printing alignment, which is useful for printing graphics.

When set to **Auto**, the printer analyzes the data and uses unidirectional printing for any lines which require vertical printing alignment.

Software

When you select **ESC/P2**, the printer operates in the EPSON ESC/P2 mode. When you select **IBM 2390 Plus**, the printer emulates an IBM printer.

0 slash

The zero character has a slash (0) when this feature is on. It has no slash (0) when this feature is off. The slash allows you to easily distinguish between the uppercase letter "O" and a zero.

High speed draft

When you choose On, the printer prints up to 400 cps (characters per second) at 10 cpi (characters per inch). When you choose Off, the printer prints up to 300 cps at 10 cpi.

I/F (interface) mode

The printer comes with a built-in parallel interface and an interface slot in which you can install one optional interface. For information on using an optional interface, see "Optional interface cards" on page A-3.

If your printer is connected to only one computer, select **Parallel** or **Optional** for the interface mode, depending on the interface you use. If your printer is connected to two computers, select **Auto** (automatic) to allow the printer to automatically switch between interfaces depending on which one is receiving data.

Auto I/F (interface) wait time

This setting takes effect only if an optional interface is installed and the auto interface mode is selected. This setting determines how long the printer waits when it no longer receives data from an interface before it checks whether a print job is being sent through the other interface. You can specify **10 seconds** or **30 seconds** for the auto interface wait time.

Parallel I/F bidirectional mode

The Parallel Interface bidirectional transfer mode is used when this feature is on. If bidirectional transfer mode is unnecessary, turn this off.

Packet mode

Select **Auto** to use the IEEE-1284.4 packet transfer mode. If packet transfer mode is unnecessary, or if you cannot connect, turn this off.

Auto CR (carriage return)

This setting is available only in IBM 2390 Plus emulation mode. When auto carriage return is on, each line feed (LF) code or ESC J code is accompanied by a carriage return code. This moves the print position to the beginning of the next line. If the printer adds an extra line after every carriage return, select **Off**.

A.G.M. (Alternate Graphic Mode)

When A.G.M. is on, the printer can use some advanced graphics commands like those available in ESC/P2 mode. When you select IBM 2390 mode, this setting is available. The default setting is off.

Character table

You can select among 13 standard character tables as well as tables for 23 other countries. See Appendix C for character samples.

International character set for Italic table

You can select among several international character sets for the Italic character table. Each character set contains eight characters that vary depending on the country or language, so you can customize the Italic table to suit your printing needs. See Appendix C for character samples.

Font

You can select six fonts in default-setting mode. The following fonts are indicated on the control panel and can't be selected by default settings: Draft, Roman, Sans Serif, Courier, Prestige, and Script.

Manual feed wait time

This sets the amount of wait time between when paper is inserted into the paper guide and it is fed. If the paper feeds before you can adjust its position to your satisfaction, you can increase the wait time.

Buzzer (beeper)

The printer beeps when an error occurs. (See "Using the Error Indicators" on page 7-2 for more information on printer errors.) If you do not want the printer to beep when an error occurs, turn this setting off.

Roll paper

When you turn on this mode, the printer recognizes that single sheets are not loaded in the printer, so it does not try to eject the paper and advance it forward to the next page when you press the **LF/FF** button.

Changing default settings

Follow the steps on the next page to enter the default-setting mode and change the printer's default settings.

Note:
❑ *To print the language selection and default-setting mode instructions, you need five sheets of A4 or letter size single-sheet paper, or five pages of continuous paper that is at least 279 mm long and 210 mm wide. See Chapter 2 for instructions on loading continuous paper, or Chapter 3 for instructions on loading single sheets.*

❑ *If you use single sheets, you need to load a new sheet of paper each time the printer ejects a printed sheet.*

1. Make sure paper is loaded and the printer is turned off.

> **Caution:**
> *Whenever you turn off the printer, wait at least five seconds before turning it back on; otherwise you may damage the printer.*

2. While holding down the **Font** button, turn on the printer. The printer enters the default-setting mode and prints the language selection instructions.

3. Press the **Font** button until the Font lights indicate the language you want, as described in the language selection instructions.

4. Press the **Tear Off/Bin** button to print the default-setting mode instructions (four pages) in the language you selected.

   The printed instructions list the default settings you can change, describe how to change them, and show you how the control panel lights help you make settings. Follow these instructions to change the default settings using the buttons on the printer's control panel.

   Note:
   The arrows on the instruction sheets indicate the printer's current settings.

5. When you finish making settings, turn off the printer and exit the default-setting mode. Any settings you have made remain in effect until you change them again.

   Note:
   You may exit the default-setting mode by turning off the printer when the printer is not printing.

Chapter 6

Using EPSON Status Monitor 3

6

About the EPSON Status Monitor 3 Utility

The EPSON Status Monitor 3 utility comes with your printer but is available only when using Windows 95, 98, or NT 4.0. It allows you to monitor your printer's status, alerts you when printer errors occur, and provides troubleshooting instructions when needed.

The EPSON Status Monitor 3 is available only when:

❏ The printer is connected directly to the host computer via the parallel port [LPT1].

❏ Your system is configured to support bidirectional communication.

You can install the EPSON Status Monitor 3 utility when you install the printer driver.

Before using the Status Monitor, be sure to read the README file in the Disk 1 folder on the driver disk. This file contains the latest information on the Status Monitor.

Note:
If you install the driver by using Add Printer in the Printers folder, or by using the "Point and Print" method, Status Monitor 3 may not function properly. If you want to use Status Monitor 3, reinstall the driver as described in Chapter 1.

Accessing EPSON Status Monitor 3

There are two ways to access EPSON Status Monitor 3:

❏ Double-click the printer-shaped shortcut icon on the taskbar at the bottom of your computer screen. To add a shortcut icon to the taskbar, see "Utility menu."

❏ Open the printer software window, click the Utility tab, then click EPSON Status Monitor 3.

Printer Status window

To get more detailed information on printer status, you can access Status Monitor 3 from the printer software window. Click the **Utility** tab, then click **EPSON Status Monitor 3**.

If you access the Printer Status window as described above, the following window appears.
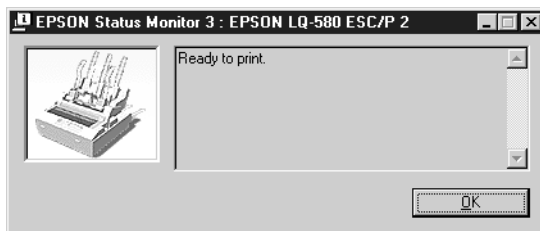
You can view the following information in the Printer Status window.

❏ Current Status

Provides you with detailed printer status information, a graphic display, and status messages.

Chapter 7

Troubleshooting

7

Using the Error Indicators

You can identify many common printer problems using the lights on the control panel. If your printer stops working and one or more control panel lights are on or flashing or the printer beeps, use the following table to diagnose and fix the problem. If you can't fix your printer problem using this table, go to the next section.

State of panel lights	Beep pattern	Problem
		Solution
☐ Pause	–	**The printer is paused.**
		Press the Pause button to resume printing.
	• • • • •	**Paper from another paper source is currently in the paper path.**
		Move the paper release lever back to the appropriate position and press the Load/Eject button to feed the paper out of the paper path. Then set the lever to the position you want to use. Press the Pause button to turn off the Pause light, if necessary.
☐ Paper Out ☐ Pause	• • •	**No paper is loaded in the selected paper source.**
		Load paper in the printer. Then press the Pause button to turn off the Pause light, if necessary.
	• • •	**The paper is not loaded correctly.**
		Remove your paper and reload it. See Chapter 2 (continuous paper) or Chapter 3 (single sheets) for instructions on loading paper. Then press the Pause button to turn off the Pause light, if necessary.
	• • •	**Paper is jammed in the printer.**
		Clear the paper jam as described "Clearing Paper Jams" on page 7-16.

State of panel lights	Beep pattern	Problem
		Solution
⁰ Paper Out □ Pause	• • •	**Continuous paper is not fed to the standby position.**
		Tear off the printed document at the perforation; then press the Load/Eject button. The printer feeds the paper to the standby position. Press the Pause button to turn off the Pause light.
	• • •	**A single sheet of paper is not fully ejected.**
		Press the Load/Eject button to eject the sheet. Then press the Pause button to turn off the Pause light, if necessary.
	• • •	**Paper is jammed in the printer.**
		Clear the paper jam as described on "Clearing Paper Jams" on page 7-16.
⁰ Pause	–	**The print head is overheated.**
		Wait a few minutes; the printer resumes printing automatically once the print head cools.
⁰ Paper Out ⁰ Pause ⁰ ⁰ Tear Off/Bin ⁰ ⁰ ⁰ Font		**An unknown printer error has occurred.**
		Turn off the printer and leave it off for several minutes; then turn on the printer again. If the error recurs, contact your dealer.

□ = on, ⁰ = flashing
• • •   = short series of beeps (three beeps)
• • • • •= long series of beeps (five beeps)

Note:
The printer beeps once if you press a control panel button when the corresponding function is not available.

Problems and Solutions

Most printer problems are easy to solve. Use the information in this section to find the source of and solution to any printer problems that occur.

Determine the type of problem that occurred, and see the appropriate page below:

You can also use the self test feature to determine whether the printer or the computer is causing the problem. See "Printing a Self Test" on page 7-18 for instructions on printing a self test.

To pinpoint communication problems, experienced users may want to use the printer's hex dump mode, described on "Printing a Hex Dump" on page 7-20.

To clear a paper jam, see "Clearing Paper Jams" on page 7-16.

Power supply problems

The control panel lights come on briefly, but then go off and stay off.

Cause	What to do
The printer's voltage rating does not match the voltage of your electrical outlet.	Check the printer and the outlet voltage ratings. If the voltages do not match, unplug the printer immediately and contact your dealer.

⚠ *Warning:*
Do not reconnect the power cord to an electrical outlet that has the wrong voltage for your printer.

The printer does not work and the control panel lights are off even though you turned on the printer.

Cause	What to do
The power cord is not properly plugged into the electrical outlet or your printer.	Turn off the printer, and make sure the power cord is firmly plugged into the electrical outlet and the printer, if necessary. Then turn on the printer.
The electrical outlet does not work.	Use a different outlet.

7

Single-sheet paper loading or feeding problems

The printer does not load single-sheet paper or does not feed it properly.	
Cause	**What to do**
The paper release lever is set to a tractor position.	Set the paper release lever to the single-sheet position. For more information on setting the paper release lever, see Chapter 2.
Continuous paper is in the paper path.	Set the paper release lever to the appropriate tractor position and press the **Load/Eject** button to feed the continuous paper to the standby position. Then set the paper release lever to the single-sheet position. (See "Switching to printing on single sheets" on page 2-29 for more information.)
The paper on the paper guide is positioned too far to the right for the printer to detect that it is there.	Move the paper a little to the left.
Single-sheet paper is not loaded properly.	See Chapter 3 for instructions on loading single-sheet paper.
The paper thickness lever is not set correctly.	Set the paper thickness lever to match the thickness of your paper. See "Setting the Paper Release Lever" on page 2-2.
Your paper is creased, old, too thin, or too thick.	See the paper specifications in Appendix C and use new, clean sheets of paper.

The printer does not fully eject a single sheet.

Cause	What to do
Your paper is too long.	Press the **Load/Eject** button to eject the sheet. Make sure the page length of your paper is within the range specified for single-sheet paper in Appendix C. Also check and adjust the paper size setting in your application or printer driver.

The optional cut-sheet feeder does not feed your single-sheet paper properly.

Cause	What to do
The cut-sheet feeder is not installed properly.	Reinstall it as described in "Installing an optional cut-sheet feeder" on page A-6.
Too many sheets are loaded in the cut-sheet feeder.	Load no more than 150 single sheets in the high-capacity cut-sheet feeder. See "Switching between continuous paper and single-sheet paper in the cut-sheet feeder" on page A-18 for more information.
The edge guides of the cut-sheet feeder are not positioned correctly.	Align the left edge guide with the arrow mark, then move the right edge guide to match your paper's width.
There is only one sheet left in the bin.	Load more paper in the cut-sheet feeder.

7

Continuous paper loading or feeding problems

The printer does not load continuous paper or does not feed it properly.	
Cause	**What to do**
The paper release lever is not set correctly.	Set the paper release lever to the tractor position for the paper source you want to use. For more information on setting the paper release lever, see Chapter 2.
Single-sheet paper is in the paper path.	Set the paper release lever to the single-sheet position and press the **Load/Eject** button to eject the sheet. Then set the paper release lever back to the appropriate tractor position. (See "Switching to printing on continuous paper" on page 2-30 for more information.
Continuous paper is not loaded properly.	See Chapter 2 for instructions on loading continuous paper on the tractor you want to use.
The paper thickness lever is not set correctly.	Set the paper thickness lever to match the thickness of your paper. See "Setting the Paper Thickness Lever" on page 2-4.

The printer does not feed continuous paper to the standby position.	
Cause	**What to do**
You did not tear off the printed pages before pressing the **Load/Eject** button.	Tear off the printed pages at the perforation. Then press the **Load/Eject** button to feed the paper backward to the standby position.

Wrong top-of-form position

Printing starts too high or low on the page.	
Cause	What to do
The paper size setting in your application software or printer driver does not match the size of the paper you are using.	Check the paper size setting in your application or printer driver.
The printer's page length settings for the tractor do not match the size of the continuous paper you are using.	Check the page length settings for the tractor using the printer's default-setting mode or the EPSON Remote! utility. See "About Your Printer's Default Settings" on page 5-4 or "Using the EPSON Remote! Utility" on page 4-32.
The top margin or top-of-form position setting is incorrect.	Check the margin or top-of-form position setting in your application software. See the printable area specifications in Appendix C.
	Adjust the top-of-form position in micro adjust mode. Be aware, however, that settings made in Windows applications override settings made in micro adjust mode. See "Adjusting the Top-of-Form Position" on page 2-31.
The printer you want to use is not selected in your software.	Choose the correct printer from the Windows desktop or in your application before printing.
You moved the paper using the knob while the printer was on.	Adjust the top-of-form position using the micro adjust feature. See "Adjusting the Top-of-Form Position" on page 2-31.

c *Caution:*
   Never use the knob to adjust the top-of-form position; this may damage the printer or cause it to lose the top-of-form position.

Wrong tear-off position

The printer prints on (or too far away from) the perforation of your continuous paper.	
Cause	**What to do**
The tear-off position setting is incorrect.	Adjust the tear-off position using the micro adjust feature. See "Adjusting the tear-off position" on page 2-35.
You moved the paper using the knob while the printer was on.	Adjust the tear-off position using the micro adjust feature. See "Adjusting the tear-off position" on page 2-35.

🔲 *Caution:*
Never use the knob to adjust the tear-off position; this may damage the printer or cause it to lose the tear-off position.

The printer you want to use is not selected in your software.	Choose the correct printer from the Windows desktop or in your application before printing.
The paper size setting in your application or printer driver does not match the size of the paper you are using.	Check the paper size setting in your application or printer driver.
The printer's page length settings for the tractor do not match the size of the continuous paper you are using.	Check the page length settings for the tractor using the printer's default-setting mode or the EPSON Remote! utility. See "About Your Printer's Default Settings" on page 5-4 or "Using the EPSON Remote! Utility" on page 4-32.

Printing or printout quality problems

The printer does not print when the computer sends data.	
Cause	**What to do**
The printer is paused.	Press the **Pause** button.
The interface cable is not plugged in securely.	Check that both ends of the cable between the printer and the computer are plugged in securely. If the cable is connected correctly, run a self test as described later in this chapter.
Your interface cable does not meet the printer and/or computer specifications.	Use an interface cable that meets the requirements of both the printer and computer. See "Optional interface cards" on page A-3 and your computer's documentation.
Your software is not properly set up for your printer.	Select your printer from the Windows desktop or in your application. If necessary, install or reinstall the printer driver software as described in Chapter 1.

7

The printer makes noise, but nothing prints or printing stops abruptly	
Cause	**What to do**
The paper thickness lever is set incorrectly.	Set the paper thickness lever to match the thickness of your paper. See "Setting the Paper Thickness Lever" on page 2-4.
The ribbon has too much slack, the ribbon has come loose, or the ribbon cartridge is not installed properly.	Remove any slack in the ribbon by turning the ribbon-tightening knob, or reinstall the ribbon cartridge as described in Chapter 1.

The printout is faint.

Cause	What to do
The paper thickness lever is set incorrectly for your paper.	Move the paper thickness lever to a lower setting.
The ribbon is worn out.	Replace the ribbon cartridge as described in Chapter 1.

The printout has gaps.

Cause	What to do
The paper thickness lever is not set correctly.	Set the paper thickness lever to match the thickness of your paper. See page 2-5 for continuous paper, or page 3-3 for single sheets.

Part of the printout is missing, or dots are missing in random positions.

Cause	What to do
The ribbon has too much slack, the ribbon has come loose, or the ribbon cartridge is not installed properly.	Remove any slack in the ribbon by turning the ribbon-tightening knob, or reinstall the ribbon cartridge as described in Chapter 1.
The ribbon is worn out.	Replace the ribbon cartridge as described in Chapter 1.

Lines of dots are missing in the printout.

Cause	What to do
The print head is damaged.	Stop printing and contact your dealer to have the print head replaced.

c *Caution:*
Never replace the print head yourself; you may damage the printer. Other parts of the printer must also be checked when the print head is replaced.

All the text is printed on the same line.

Cause	What to do
No line feed command is sent at the end of each line of text.	Turn on the auto line feed setting using the printer's default-setting mode or the EPSON Remote! utility so that the printer automatically adds a line feed code to each carriage return. See "About Your Printer's Default Settings" on page 5-4 or "Using the EPSON Remote! Utility" on page 4-32.

The printout has extra blank lines between lines of text.

Cause	What to do
Two line feed commands are being sent at the end of each line of text.	Turn off the auto line feed setting using the printer's default-setting mode or the EPSON Remote! utility. See "About Your Printer's Default Settings" on page 5-4 or "Using the EPSON Remote! Utility" on page 4-32.
The line space setting in your application software is incorrect.	Adjust the line space setting in your application software.

7

The skip over perforation setting is on.	Turn off the skip over perforation setting in the default-setting mode or the EPSON Remote! utility. See "About Your Printer's Default Settings" on page 5-4 or "Using the EPSON Remote! Utility" on page 4-32.

The printer prints strange symbols, incorrect fonts, or other inappropriate characters.

Cause	What to do
Your printer and computer are not communicating correctly.	Make sure that you are using the correct interface cable and that the communications protocol is correct. See "Optional interface cards" on page A-3 and your computer documentation. If you installed an optional serial interface card, also see "Installing an Interface Card" on page A-30.
The wrong character table is selected in your software.	Select the correct character table using your software, the default-setting mode, or the EPSON Remote! utility. The character table setting in your software overrides settings made in the default-setting mode or the EPSON Remote! utility.
The printer you want to use is not selected in your software.	Choose the correct printer from the Windows desktop or in your application before printing.
Your application software is not configured correctly for your printer.	Make sure that your application software is set up correctly for your printer. See your application documentation. If necessary, install or reinstall the printer driver software as described in Chapter 1.

| Software settings override settings you make using the default-setting mode, EPSON Remote!, or the control panel buttons. | Use your application software to select the font. |

Vertical printed lines are not aligned.	
Cause	**What to do**
Bidirectional printing, which is the printer's standard printing mode, is out of alignment.	Use the printer's bidirectional adjustment mode to correct this problem. See "Aligning Vertical Lines in Your Printout," later in this chapter.

7

Clearing Paper Jams

To clear a paper jam, follow these steps:

1. Turn off the printer.

2. If a single sheet of paper is stuck on the paper guide, gently remove it.

3. Remove the printer cover. If continuous paper from the rear slot is loaded in the printer, remove the paper guide.

4. If continuous paper is jammed in the printer, tear off the supply at the perforation nearest the paper entry slot.

5. Turn the knob on the left side of the printer away from you to eject the paper in the printer. Remove any remaining pieces of paper.

   Caution:
   Use the knob on the left side of the printer to clear paper jams only when the printer is off. Otherwise, you may damage the printer or lose the top-of-form or tear-off position.

6. Replace the paper guide if necessary, and replace the printer cover. Then close the paper guide cover.

7. Turn on the printer. Make sure the **Paper Out** and **Pause** lights are off.

Aligning Vertical Lines in Your Printout

If you notice that the vertical lines in your printout are not properly aligned, you can use the printer's bidirectional adjustment mode to correct this problem.

Note:
❏ *To complete the steps below, you need four sheets of A4 or letter size single-sheet paper or four pages of continuous paper that are at least 279 mm long and 241 mm wide. See Chapter 2 for instructions on loading continuous paper, or Chapter 3 for instructions on loading single sheets.*

❏ *If you use single sheets, you need to load a new sheet of paper each time the printer ejects a printed sheet onto the paper guide.*

Follow these steps to perform the bidirectional adjustment:

1. Make sure paper is loaded and the printer is turned off.

    Caution:
    Whenever you turn off the printer, wait at least five seconds before turning it back on; otherwise you may damage the printer.

2. While holding down the **Pause** button, turn on the printer. The printer enters the bidirectional adjustment mode and then prints instructions and the first set of alignment patterns.

3. As described in the instructions, compare the alignment patterns and select the pattern with the best alignment.

4. Follow the instructions to print the remaining sets of alignment patterns and select the pattern with the best alignment in each set.

5. After you select the best pattern in the final set of alignment patterns, turn off the printer and exit the bidirectional adjustment mode. Your selections are saved automatically.

Printing a Self Test

Running the printer's self test helps you determine whether the printer or the computer is causing the problem:

❏ If the self test results are satisfactory, the printer is working properly and the problem probably results from your printer driver settings, application settings, computer, or interface cable. (Be sure to use a shielded interface cable.)

❏ If the self test does not print properly, there is a problem with the printer. See "Problems and Solutions" for possible causes and solutions to the problem.

You can print a self test using either single sheets or continuous paper. See Chapter 2 for instructions on loading continuous paper, or Chapter 3 for instructions on loading single sheets.

Note:
Use continuous paper that is at least 241 mm wide or A4 or letter size single-sheet paper.

To perform a self test, follow these steps:

1. Make sure paper is loaded and the printer is turned off.

   Caution:
   Whenever you turn off the printer, wait at least five seconds before turning it back on; otherwise you may damage the printer.

2. To run the test using the Draft font, hold down the **LF/FF** button while you turn on the printer. To run the test using the printer's letter-quality fonts, hold down the **Load/Eject** button while you turn on the printer. Either self test can help you determine the source of your printing problem; however, the draft test prints faster than the near-letter-quality test.

After a few seconds, the printer loads the paper automatically and begins printing a self test. A series of characters is printed.

Note:
*To temporarily stop the self test, press the **Pause** button. To resume the test, press the **Pause** button again.*

3. To end the self test, press the **Pause** button to stop printing and the **Load/Eject** button to eject the printed page. Then turn off the printer.

7

Printing a Hex Dump

If you are an experienced user or a programmer, you can print a hexadecimal dump to isolate communication problems between the printer and your software program. In hex dump mode, the printer prints all data received from the computer as hexadecimal values.

You can print a hex dump using either single sheets or continuous paper. See Chapter 2 for instructions on loading continuous paper, or Chapter 3 for instructions on loading single sheets.

Note:
Use continuous paper that is at least 241 mm wide or A4 or letter size single-sheet paper.

To print a hex dump, follow the steps below.

1. Make sure paper is loaded and the printer is turned off.

    Caution:
    Whenever you turn off the printer, wait at least five seconds before turning it back on; otherwise you may damage the printer.

2. To enter hex dump mode, hold down both the **LF/FF** and **Load/Eject** buttons while you turn on the printer.

3. Open a software program and send a print job to the printer. Your printer prints all the codes it receives in hexadecimal format.

```
Hex Dump

1B 40 0D 1B 74 01 1B 36 1B 52 00 1B 50 1B 28 55    .@..t..6.R..P.(U
01 00 0A 1B 28 43 02 00 78 0F 1B 28 63 04 00 3C    ....(C..x..(c..<
00 3C 0F 1B 19 30 0D 1B 4A 18 1B 24 AA 05 1B 2A    .<...0..J..$¬..*
27 24 00 00 00 08 00 00 08 00 00 08 00 00 08 00    '$..............
00 08 00 00 08 00 00 08 00 00 08 00 00 08 00 00    ................
08 00 00 08 00 00 08 00 00 08 00 00 08 00 00 08    ................
00 00 08 00 00 08 00 00 08 00 00 08 00 00 08 00    ................
00 08 00 00 08 00 00 08 00 00 08 00 00 08 00 00    ................
08 00 00 08 00 00 08 00 00 08 00 00 08 00 00 08    ................
00 00 08 00 00 08 00 00 08 00 00 08 00 00 08 0D    ................
1B 4A 78 1B 24 0A 01 1B 2A 27 EC 03 00 00 38 00    .Jx.$...*'∞...8.
10 44 00 10 82 00 21 02 00 21 02 00 21 02 00 21    .D..é.!..!..!..!
02 00 21 02 00 21 04 00 21 04 00 11 08 00 0F FE    ..!..!..!......■
```

If characters are printable, they appear in the right column as ASCII characters. Nonprintable codes, such as control codes, are represented by dots. By comparing the characters printed in the right column with the printout of the hexadecimal codes, you can check the codes the printer is receiving.

4. To turn off hex dump mode, press the **Pause** button to stop printing and the **Load/Eject** button to eject the printed page(s). Then turn off the printer.

7

Appendix A

Enhancing Your Printer With Options

A

Options

The following table shows the paper handling options and interface cards available for your printer. To purchase options, contact your dealer or customer support as described in Appendix D.

Paper handling options

High-capacity cut-sheet feeder (C806382)
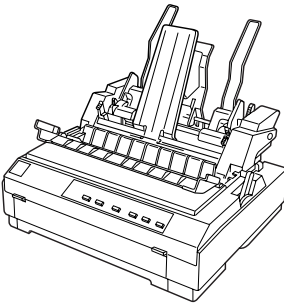
Feeds up to 150 sheets of paper or 25 plain bond envelopes into the printer without reloading. See "Switching between continuous paper and single-sheet paper in the cut-sheet feeder" on page A-18 for instructions.

If you also install the single-bin cut-sheet feeder, you can use both feeders as a double-bin cut-sheet feeder.

Single-bin cut-sheet feeder (C806372)
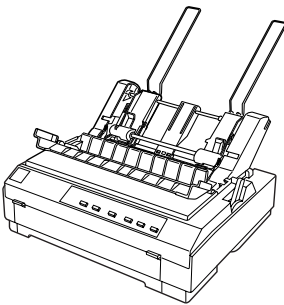
You can load up to 50 sheets of ordinary single-sheet paper in the single-bin cut-sheet feeder. You can also connect it to the high-capacity cut-sheet feeder to create a double-bin. See "Switching between continuous paper and single-sheet paper in the cut-sheet feeder" on page A-18 for instructions.

Additional tractor unit (C800202)
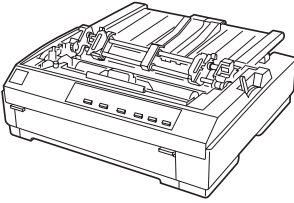
This option is available because using two tractors in combination improves continuous paper handling and reduces the chances of paper jams. This printing method is especially useful for printing on continuous multipart forms. For instructions on using this option, see "Using the Tractor in the Pull Position" on page 2-14.

Roll paper holder (#8310)
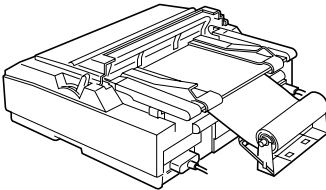
Allows you to use your printer with 8.5-inch roll paper like that used with telex machines. See "Using the Roll Paper Holder" on page A-20 for instructions.

Front sheet guide (C814232)
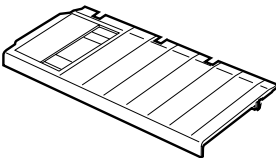
The front sheet guide allows you to load single sheets from the front paper slot. (This option may not be available in some countries.)

A

Optional interface cards

You can install an optional interface card to supplement your printer's built-in parallel interface and provide added network compatibility. The EPSON interface cards in the table below are compatible with your printer. (Not all the interfaces in the table are available worldwide.)

See "Installing an Interface Card" on page A-30 for instructions.

Model number	Card type
C823061	Serial interface card
C823081	32KB serial interface card
000748P-D	LocalTalk interface card
C823132	32KB IEEE-488 interface card
C823142	Coax interface card
C823152	Twinax interface card
C823453	IEEE-1284 (Type B bidirectional) parallel interface card
C823623	Ethernet interface card 10Base2/ 10BaseT
C823633	Ethernet interface card 100BaseTx/ 10BaseT
MSEDG0774	Token Ring interface card

When you use Ethernet interface card 100BaseTx/10BaseT C823633 or Token Ring interface card MSEDG077, you need to attach the optional interface adapter (C825251) to the interface card.

> **Caution:**
> *If you install the C823061 optional serial interface card, be sure to set the transfer speed to one of the following:*
>
> *300, 600, 1200, 2400, 4800, 9600, 19200 bps*

If you are unsure whether you need an optional interface or would like to know more about interfaces, contact your dealer.

Using the Optional Cut-Sheet Feeders

Two types of optional cut-sheet feeders are available for use with your printer: the single-bin cut-sheet feeder (C806372) and the high-capacity cut-sheet feeder (C806382). You can use either one of these separately, or you can use both feeders together as a double-bin cut-sheet feeder to automatically load two different types of paper.

The single-bin cut-sheet feeder holds up to 50 single sheets. The high-capacity cut-sheet feeder holds up to 150 single sheets or up to 25 envelopes.

> **Caution:**
> *Do not load multipart forms, carbon paper, or labels in the cut-sheet feeder.*

To install the single-bin, high-capacity, or double-bin cut-sheet feeder, see the next section. However, before installing the double-bin cut-sheet feeder, you must assemble it as described a "Assembling the double-bin cut-sheet feeder" on page A-16. To load paper in a bin, see "Loading paper in the single-bin cut-sheet feeder" on page A-8, or "Loading paper in the high-capacity cut-sheet feeder" on page A-12.

Note:
You cannot install and use the optional cut-sheet feeders when the tractor unit is installed in the pull position. To remove the tractor from the pull position, see "Removing the pull tractor" on page 2-24.

Installing an optional cut-sheet feeder

You install the single-bin, high-capacity, and double-bin cut-sheet feeders in the same way. Follow the steps in this section.

Note:
Before you install the double-bin cut-sheet feeder, you need to assemble it as described on "Assembling the double-bin cut-sheet feeder" on page A-16.

1. Make sure the printer is turned off. Then remove the paper guide by moving it to the upright position and pulling it straight up. Lift the printer cover by its back edge and then pull it straight up and off the printer.
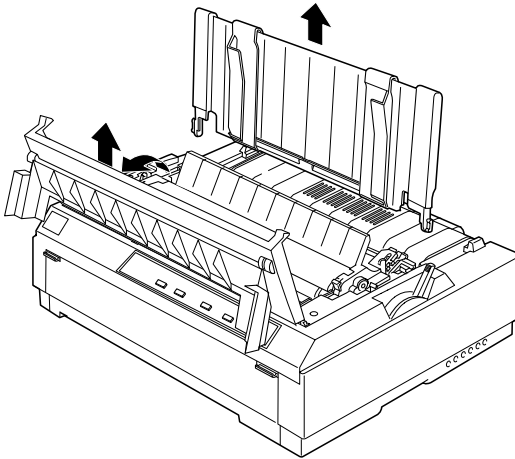
2. Holding the cut-sheet feeder in both hands, press down on the latch levers and fit the notches over the printer's mounting posts, as shown below. Release the latch levers to lock the feeder in place.

single-bin cut-sheet feeder
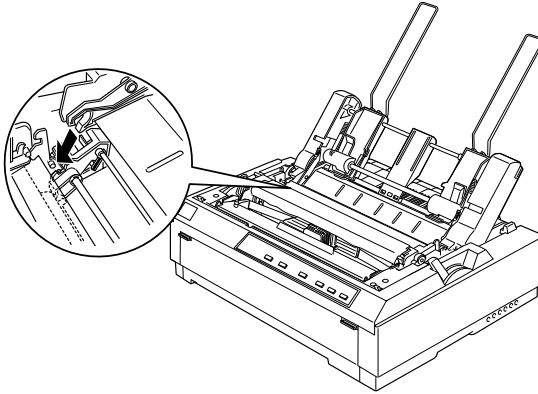
high-capacity cut-sheet feeder / double-bin cut-sheet feeder
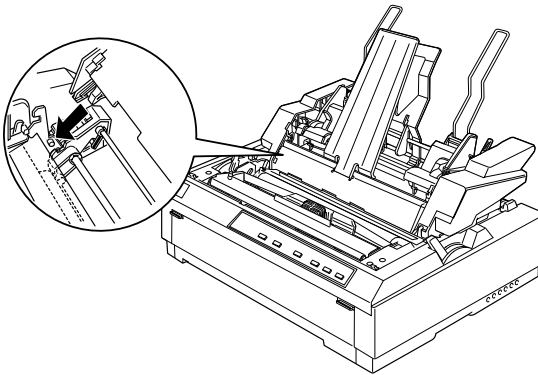
Note:
To use both cut-sheet feeders together as a double-bin cut-sheet feeder, you need to install the single-bin cut-sheet feeder behind the high-capacity cut-sheet feeder. For installation details see "Assembling the double-bin cut-sheet feeder" on page A-16.

3. To replace the printer cover, first insert the front tabs into the slots on the printer, then lower the cover into place.

If you installed the double-bin cut-sheet feeder, you need to select your paper path (bin 1 or bin 2). See "Selecting your paper path (bin 1 or bin 2)" on page A-17.

You are now ready to load paper with your single-bin, high-capacity, or double-bin cut-sheet feeder.

Loading paper in the single-bin cut-sheet feeder

The single-bin cut-sheet feeder holds up to 50 sheets of paper. When the single-bin cut-sheet feeder is installed, you can still use the paper guide to load single sheets and envelopes one at a time.

> **Caution:**
> *Do not load multipart forms, carbon paper, envelopes, or labels in the single-bin cut-sheet feeder.*

1. Make sure the paper guide is removed, and set the paper thickness lever to the single-sheet position. Also make sure the paper thickness lever (located under the printer cover) is set to the proper position for your paper's thickness.
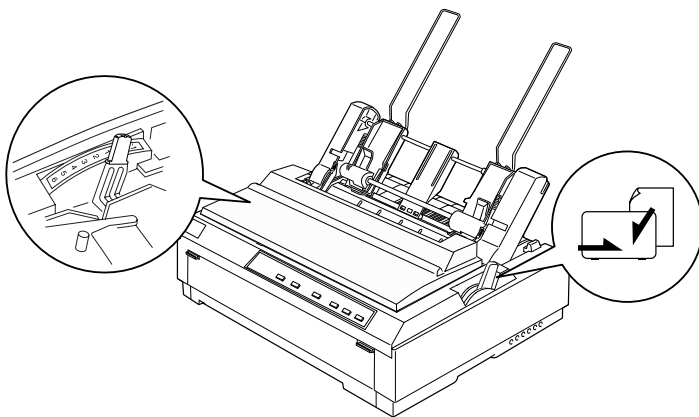
2. Slide the left paper guide of the cut-sheet feeder so it is aligned with the triangle mark. Next, slide the right paper guide to roughly match the width of your paper. Slide the paper support midway between the paper guides.

paper guides of the cut-sheet feeder

paper support

3. Pull both paper set levers forward until the paper guides retract and lock open to allow paper loading.

A
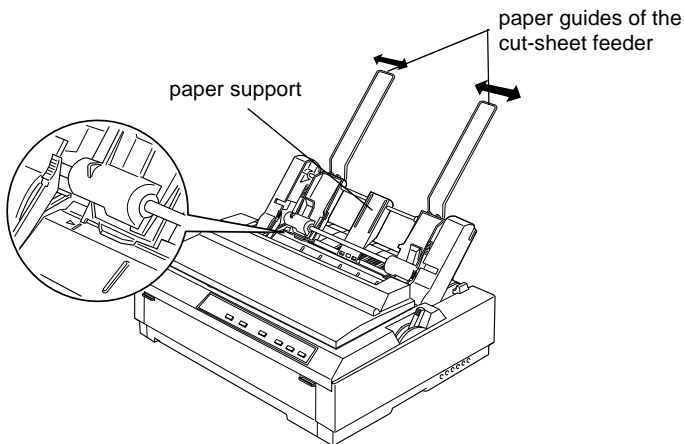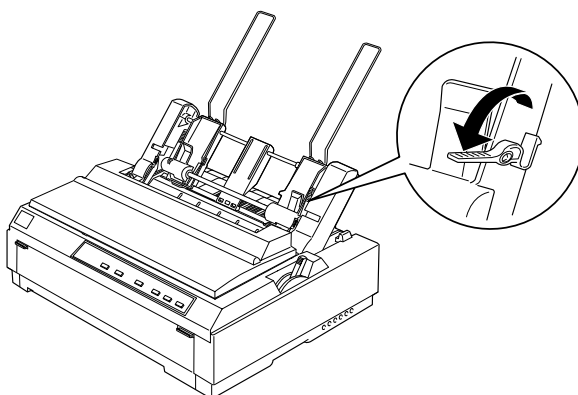
4. Open the paper guide cover.

5. Take a stack of paper (up to 50 sheets) and fan it. Next, tap the side and bottom edges of the paper on a flat surface to even up the stack.

6. Insert the paper stack printable side down along the left paper guide.
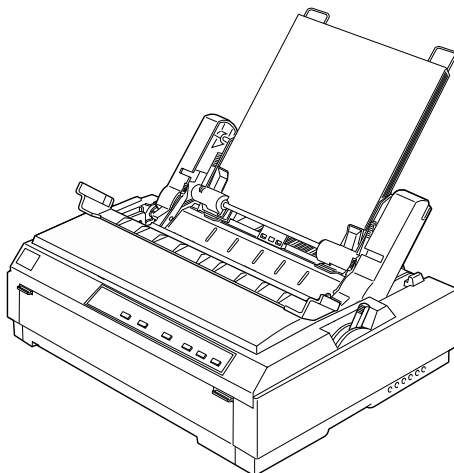
7. Adjust the right paper guide so that it matches your paper's width. Make sure the position of the guide allows the paper to move up and down freely.

8. Push back the paper set levers to clamp the paper against the guide rollers.

9. Attach the stacker-support wires to the paper guide as shown below, if necessary.
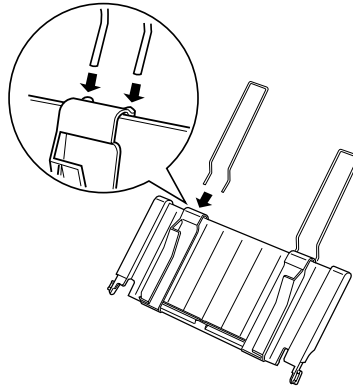
10. Install the paper guide with the attached stacker-support by fitting the notches on the paper guide straight down over the mounting posts on the printer. Slide the edge guides to the middle of your paper.
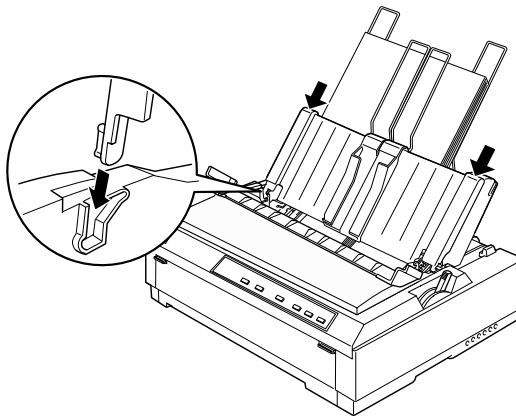
The cut-sheet feeder automatically loads paper when the printer receives data.

If the first line on your page appears too high or low, you can fix this by adjusting the top-of-form position using the micro adjust feature. See "Adjusting the Top-of-Form Position" on page 2-31.

Loading paper in the high-capacity cut-sheet feeder

The high-capacity cut-sheet feeder holds up to 150 sheets of paper or up to 25 envelopes.

> ⚠ **Caution:**
> *Do not load multipart forms, carbon paper, or labels in the high-capacity cut-sheet feeder.*

1. Set the paper release lever to the single-sheet position. Also make sure the paper thickness lever (located under the printer cover) is set to the proper position for your paper's thickness.
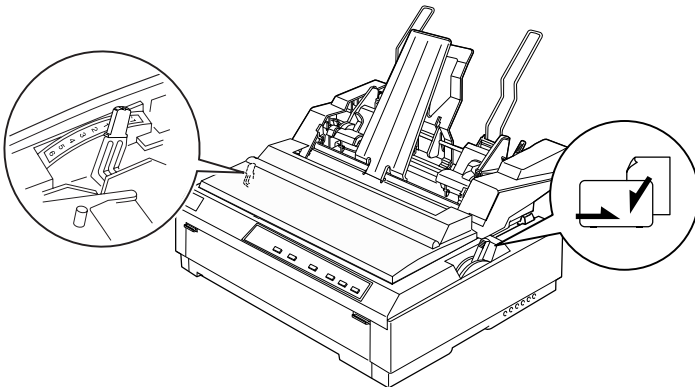
2. Pull the lock levers on the edge guides forward to release them.
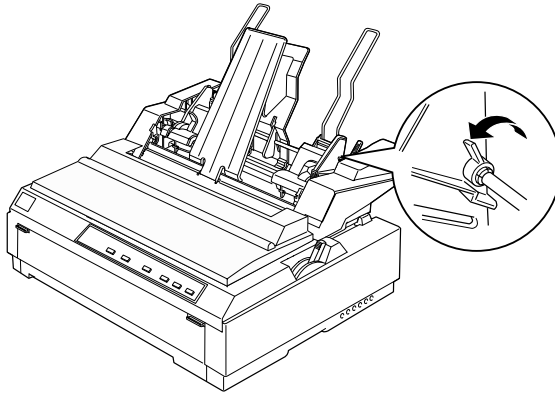
3. Slide the left paper guide until it is aligned with the triangle mark; then lock it in place by pushing back its lock lever. Next, slide the right paper guide to roughly match the width of your paper. Slide the paper support to midway between the paper guides.
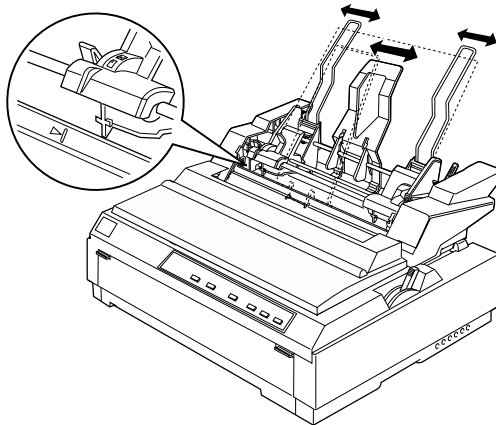
A

4. Pull both paper set levers forward until the paper guides retract and lock open to allow paper loading.
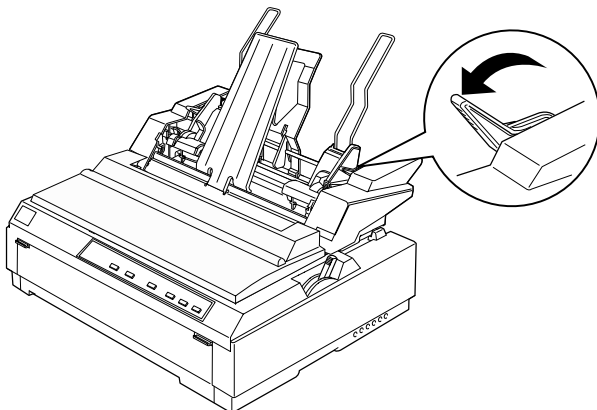
5. Open the paper guide cover.

6. Take a stack of paper (up to 150 sheets) and fan it. Next, tap the side and bottom edges of the paper on a flat surface to even up the stack.

7. Insert the paper stack, printable side down, along the left paper guide.
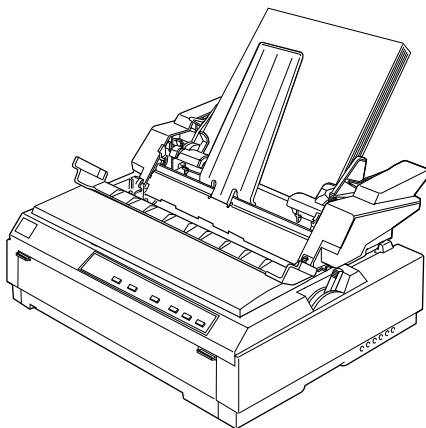
8. Adjust the right paper guide so that it matches your paper's width and lock it in place. Make sure the position of the guide allows the paper to move up and down freely.

   If you are loading envelopes, push back the envelope levers as shown below.
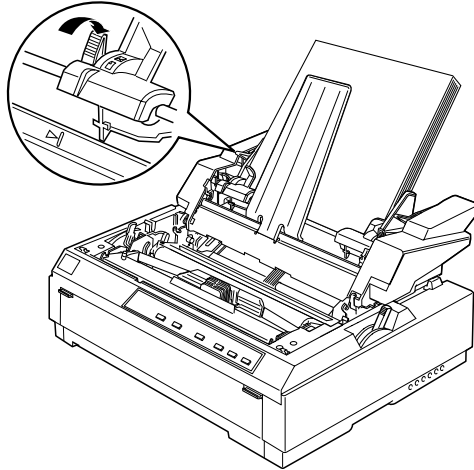
9. Push back the paper set levers to clamp the paper or envelopes against the guide rollers.

The cut-sheet feeder automatically loads paper when the printer receives data.

If the first line on your page appears too high or low, you can fix this by adjusting the top-of-form position using the micro adjust feature. See "Adjusting the Top-of-Form Position" on page 2-31.

Assembling the double-bin cut-sheet feeder

Using the double-bin cut-sheet feeder allows you to load two different types of paper automatically. Before you install the double-bin cut-sheet feeder, you need to connect the single-bin cut-sheet feeder (C806372) to the high-capacity cut-sheet feeder (C806382).

1. Remove the gear cover from the back of the high-capacity cut-sheet feeder by pressing down the tab and pulling the cover backward. Store it in a safe place.
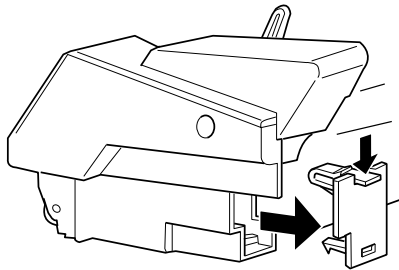
2. Hold the single-bin cut-sheet feeder in both hands. Fit the notches in the single-bin cut-sheet feeder over the mounting posts on the back of the high-capacity cut-sheet feeder.
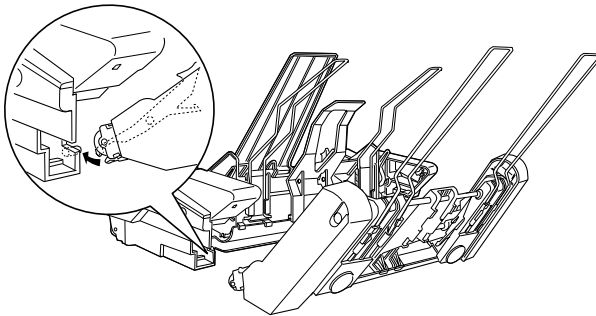
3. Lock the two cut-sheet feeders together by pushing firmly on the tab locks.
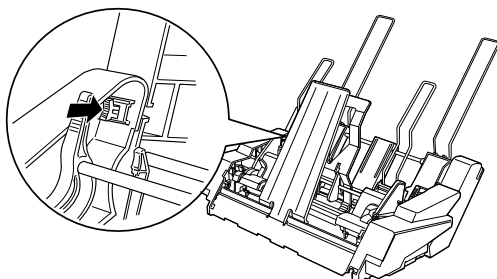
To install the double-bin cut-sheet feeder on your printer, see "Installing an optional cut-sheet feeder" on page A-6.

Selecting your paper path (bin 1 or bin 2)

When the double-bin cut-sheet feeder is installed, the high-capacity cut-sheet feeder becomes bin 1 and the single-bin cut-sheet feeder becomes bin 2 for paper path selection purposes.

bin 2: single-bin cut-sheet feeder
bin 1: high-capacity cut-sheet feeder
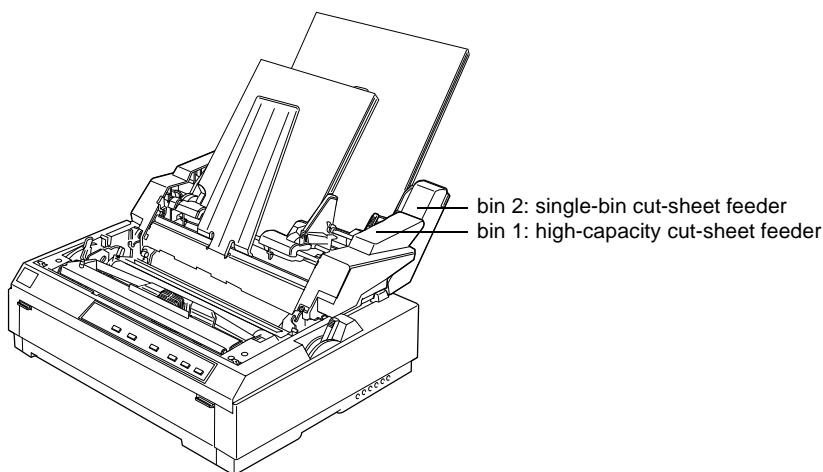
A

It is best to select the paper path in your application program because software settings usually override the printer's control panel settings. However, if you cannot select the paper path in your application, select a path by pressing the Tear off / Bin button until the light indicates the bin you want as shown below.

■ ❑ : bin 1 (high-capacity cut-sheet feeder) is selected.
❑ ■ : bin 2 (single-bin cut-sheet feeder) is selected.

■ ■ ■ Font	■ Condensed	■ ■ Tear Off/Bin	LF/FF	Load/Eject	■ Paper Out
■ ■ ❑ Draft		❑ ■ Tear Off			
❑ ■ ■ Roman		■ ❑ Bin 1			■ Pause
■ ■ ❑ Sans Serif		❑ ■ Bin 2			
❑ ■ ■ Courier		❑ ❑ Card			
❑ ■ ❑ Prestige					
❑ ❑ ■ Script					
❑ ❑ ❑ Others	Reset		↓ Micro Adjust ↑		↤ 3sec
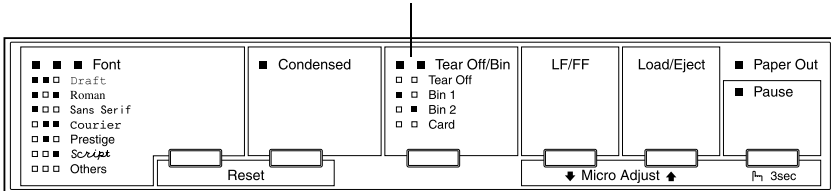
The cut-sheet feeder you selected automatically loads paper when the printer receives data.

Switching between continuous paper and single-sheet paper in the cut-sheet feeder

You can easily switch between continuous paper on a push tractor and single-sheet paper in the cut-sheet feeder without removing the continuous paper.

Switching to continuous paper

1. If any sheets are in the paper path, press the **Load/Eject** button to eject them.

2. Move the printer's paper release lever to the push tractor position. Also set the paper thickness lever to the proper position for your paper.

Switching to single-sheet paper in the cut-sheet feeder

1. If any continuous paper remains in the printer, press the **Tear Off/Bin** button to advance the paper to the tear-off position. Then tear off the printed pages.

> **Caution:**
> *Tear off any printed documents before pressing the* **Load/Eject** *button in the next step. Reverse feeding several pages at a time may cause a paper jam.*

2. Press the **Load/Eject** button. The printer feeds the paper backward to the standby position. The paper is still attached to the push tractor but is no longer in the paper path.

3. Move the printer's paper release lever to the single-sheet position. Also set the paper thickness lever to the proper position for the thickness of your single-sheet paper.

4. If you are using the double-bin cut-sheet feeder, select the bin you want to use as described on "Selecting your paper path (bin 1 or bin 2)" on page A-17.

A

Using the Roll Paper Holder

The optional roll paper holder (#8310) allows you to use 8.5-inch roll paper like that used with telex machines. This provides an inexpensive alternative to using continuous paper for applications that require variable paper lengths. Before you install and use the roll paper holder, you need to assemble it.

Assembling the roll paper holder

To assemble the roll paper holder, follow the steps below.

1. Fit the arc bearings into the stand as shown.
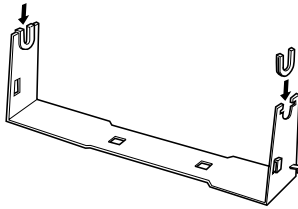
2. Make sure you orient the stand and base plate as shown below. Then place the base plate on the stand and fasten the two together with the plastic spacing clips.
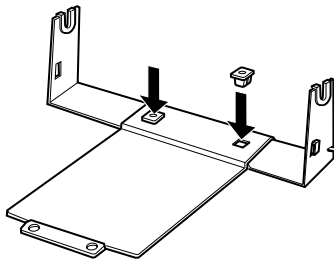
3. Hook the tension lever onto both ends of the stand as shown below. While pulling up the tension lever, fit the wire ends of the tension lever into the holes in the stand. The roll paper holder is assembled.

tension lever
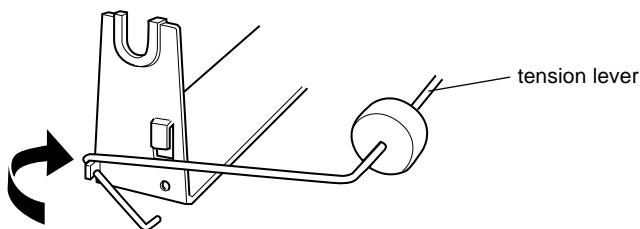
Installing the roll paper holder

To install the roll paper holder, follow the steps below.

1. Make sure the printer is turned off.

2. Position the roll paper holder underneath the printer as shown below. Fit the two positioning pegs on the bottom of the printer into the two holes in the base plate.
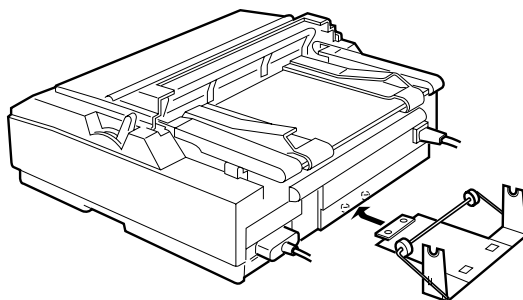
c *Caution:*
The roll paper holder is not fastened to the printer; only the printer's weight and the two positioning pegs hold it in place. If you pick up the printer, be careful not to drop the roll paper holder.

To remove the roll paper holder, carefully lift up the printer and pull out the roll paper holder from beneath the printer.

Loading roll paper

After you install the roll paper holder, follow the steps below to load a roll of paper,

1.   Make sure the printer is turned off. Open the paper guide cover and remove the paper guide.

2.   Make sure the paper tension unit is installed.

3.   Set the paper thickness lever (located under the printer cover) to the proper position for the thickness of your roll paper.

4.   Set the paper release lever to the single-sheet position.

5.   Cut the leading edge of the roll paper straight across.
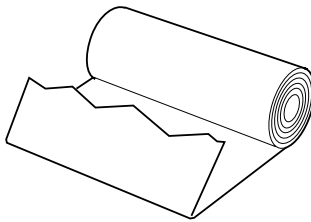
6.   Insert the roll paper holder shaft into the center of the paper roll as shown.
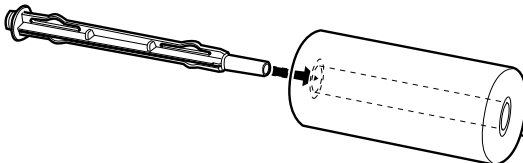
7. Place the shaft and paper roll on the roll paper holder so the paper feeds from the bottom of the roll.
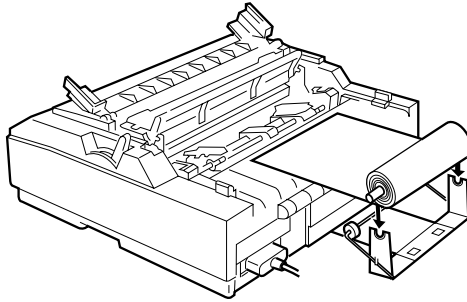
8. Turn on the printer. Bring the leading edge of the paper up over the push tractor and insert it until it meets resistance. The printer loads the roll paper automatically.

9. Replace the paper guide and close the paper guide cover. You are now ready to print. The printed roll paper is fed over the paper guide to the back of the printer, as shown below.
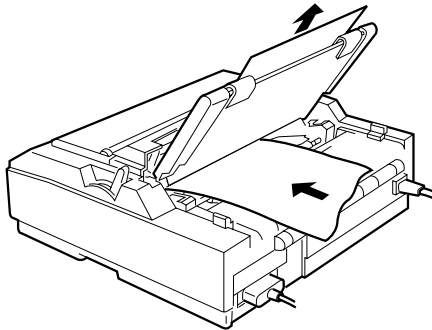
When you finish printing, open the paper guide cover and press the **LF/FF** button to advance the paper. Tear off the paper using the tear-off edge of the printer.
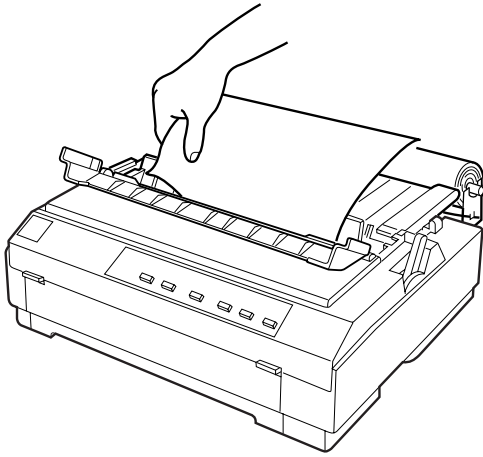
Removing roll paper

Roll paper cannot be fed backward. To remove roll paper, open the paper guide cover and remove the paper guide, then cut the paper behind where it feeds into the printer. Press the **Load/Eject** button to eject the remaining paper.
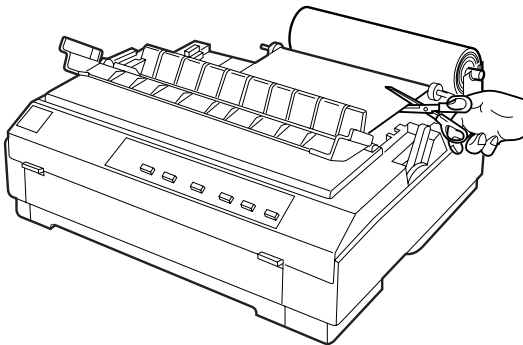
Using an Optional Front Sheet Guide

The optional front sheet guide (C814232) fits inside the front of the printer. This option allows you to load single sheets and carbonless single-sheet multipart forms of up to 5 parts (one original and four copies). Paper used with front sheet guide must be 148 to 257 mm wide and can only be loaded one sheet at a time.

The optional front sheet guide (C814232) provides you with the best paper jam prevention, but you cannot load continuos paper in the front when it is installed.

Note:
This option is not available in some countries.

Installing the front sheet guide

1. Open the front cover.
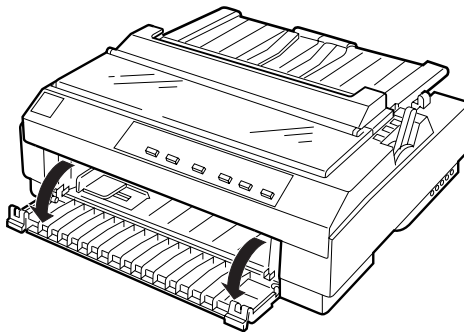
A

2. Remove the edge guide from the bottom of the printer by pushing in the pegs.
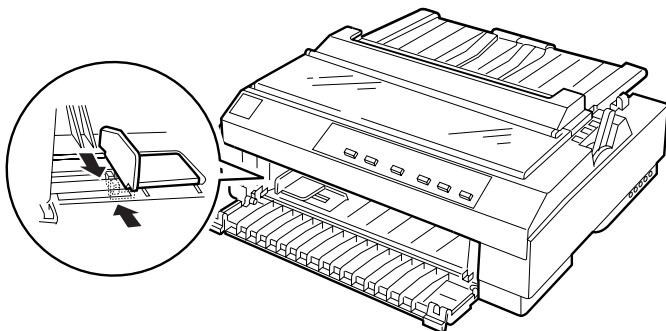
3. Insert the front of the front paper guide into the holder on both sides of the printer's interior. Insert the pegs on the back of the front paper guide into the holes on the inside-bottom of the printer.
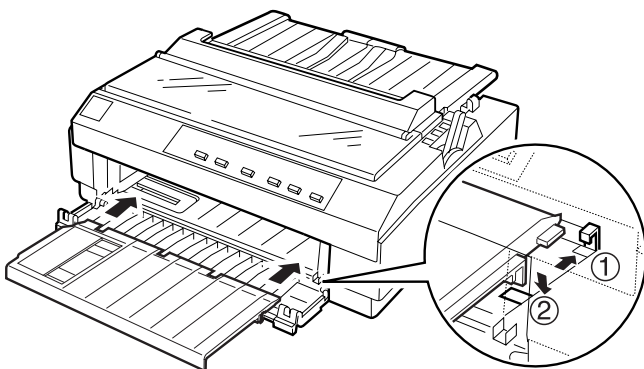
4. Open the edge guides on the paper guide all the way to the left and right, then place the paper guide in the upright position.
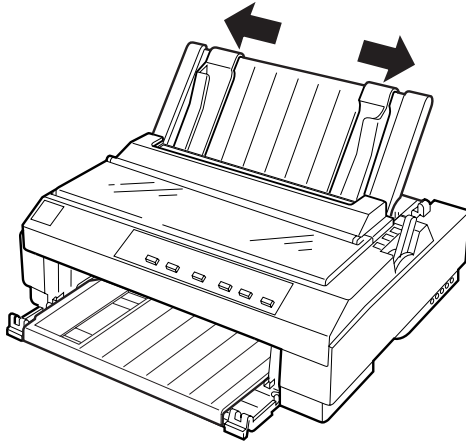
Loading paper in the front sheet guide

You can load single sheets or multipart forms one at a time in the front sheet guide.

> **Caution:**
> *Do not load envelopes in the front sheet guide.*

1. Make sure that the paper guide is in the upright position and the edge guides are open all the way to the left and right. Set the paper release lever to the single-sheet position.

2. If you are using ordinary single-sheet paper, set the paper thickness lever (located under the printer cover) to 0 as shown below. If you are loading a single-sheet multipart form, set the paper thickness lever to the proper position.
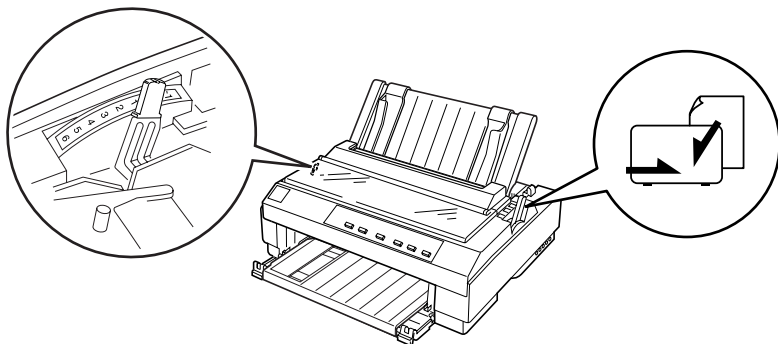
3. Slide the edge guide to the triangle mark on the front sheet guide.

Note:
You can slide the edge guide to the left in 1/10-inch increments to increase the left margin on your printout.
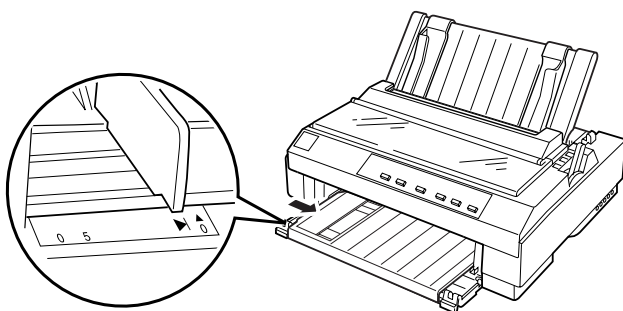
4. Making sure it is aligned with the edge guide, load the paper printable side up until it meets resistance. The printer loads the paper automatically.
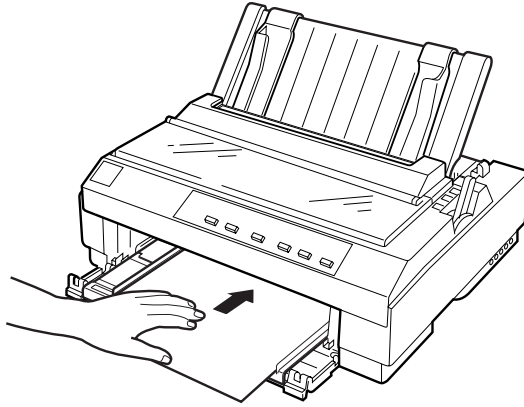
A

Installing an Interface Card

Follow the steps below to install an optional interface card.

1. Make sure the printer is turned off. Unplug the printer's power cord and disconnect the interface cable.

2. Remove the screws from the shield plate on the back of the printer and remove the plate.
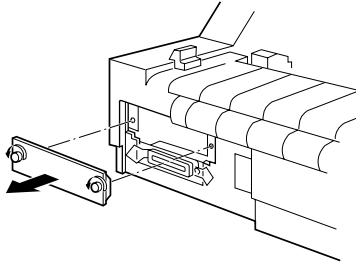
3. Slide the interface card along the slots on both sides of the interface compartment. Firmly push in the card to make sure the connector at the back of the interface card is fully inserted into the printer's internal socket. Then replace the screws and tighten them.
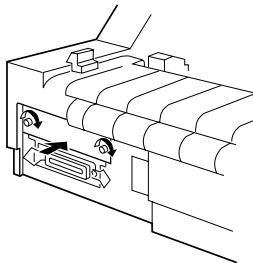
Note:
Store the shield plate in a safe place; you will need to reattach it if you remove the interface card later.

To remove the interface card, perform the procedure above in reverse order.

A

Appendix B

Cleaning and Transporting the Printer

B

Cleaning the Printer

To keep your printer operating at its best, you should clean it thoroughly several times a year. To clean your printer, follow these steps:

1. Remove any paper loaded in the printer. Make sure the printer is turned off.

2. Remove the paper guide. If a pull tractor or an optional cut-sheet feeder is installed, remove it.

3. Use a soft brush to carefully brush away all dust and dirt from the outer case and paper guide.

4. If the outer case or paper guide is still dirty or dusty, clean them with a soft, clean cloth dampened with mild detergent dissolved in water. Keep the printer cover in place and lower it until it lies flat on the top of the printer to prevent water from getting inside the printer.

> *Caution:*
> ❏ *Never use alcohols or thinners to clean the printer; these chemicals can damage the printer components as well as the case.*
>
> ❏ *Be careful not to get water on the printer mechanism or electronic components.*
>
> ❏ *Do not use a hard or abrasive brush.*
>
> ❏ *Do not spray the inside of the printer with lubricants; unsuitable lubricants can damage the printer mechanism. Contact an EPSON dealer if you think lubrication is needed.*

Transporting the Printer

If you need to transport your printer some distance, carefully repack it using the original box and packing materials, as described below.

> ⚡ **Warning:**
> *You need to move the print head by hand to remove the ribbon cartridge. If you have just used the printer, the print head may be hot; let it cool for a few minutes before touching it.*

1. Remove any paper loaded in the printer. Make sure the printer is turned off.

2. Unplug the power cord from the electrical outlet; then disconnect the interface cable from the printer.

3. Remove the paper guide.

4. If a pull tractor is installed, remove it as described in "Removing the pull tractor" on page 2-24. If any options are installed, remove them and pack them in their original boxes.

5. Make sure that the print head is not hot. Then remove the ribbon cartridge as described in Chapter 1.

6. Remove the paper tension unit as described on "Installing the tractor in the pull position" on page 2-14. Attach the protective locking clips on both sides of the printer roller. Then install the paper tension unit as described on "Removing the pull tractor" on page 2-24.

7. Make sure the tractor that comes with your printer is installed in the push position. See "Loading paper onto the push tractor" on page 2-6 for instructions.

8. Repack the printer, ribbon cartridge, paper guide, and power cord in the original packing materials and place them in the printer's original box.

B

Appendix C

Specifications

C

Printer Specifications

Mechanical

Printing method:	24-pin impact dot matrix	
Printing speed:	High-speed draft	400 cps at 10 cpi
	Draft	300 cps at 10 cpi
		360 cps at 12 cpi
		450 cps at 15 cpi
	Draft condensed	257 cps at 17 cpi
		300 cps at 20 cpi
	LQ	100 cps at 10 cpi
		120 cps at 12 cpi
		150 cps at 15 cpi
	LQ condensed	171 cps at 17 cpi
		200 cps at 20 cpi

Printing direction: Bidirectional logic seeking for text and graphics printing. Unidirectional text or graphics printing can be selected using software commands.

Line spacing: 1/6-inch or programmable in 1/360-inch increments

Printable columns: 80 columns (at 10 cpi)

Resolution: 360×180 dpi maximum (letter quality)
360×360 dpi maximum (raster graphics)

Interfaces: One standard bidirectional, 8-bit, parallel interface with IEEE 1284 nibble mode support and one optional interface slot

Paper feed methods:	Friction (front or top paper entry) Push tractor (rear paper entry) Pull tractor (front, bottom, or rear paper entry) Push and pull tractor (optional) Cut-sheet feeder (optional) Roll paper holder (optional)	
Paper feed speed:	Continuous	5 inches/second
	Intermittent	45 ms/line at 1/6-inch line spacing

Paper capacity: High-capacity cut-sheet feeder
    up to 150 sheets of 82 g/m² paper
    up to 25 plain or bond envelopes
    up to 30 airmail envelopes
    up to 30 postcards

Note:
The total thickness of the paper stack can be up to 15 mm.

Single-bin cut-sheet feeder
    up to 50 sheets of 82 g/m² paper

Note:
The total thickness of the paper stack can be up to 5 mm.

Buffer: 64KB

C

Built-in fonts:	*Bitmap fonts*	
	EPSON Draft	10, 12, 15 cpi
	EPSON Roman	10, 12, 15 cpi, proportional
	EPSON Sans Serif	10, 12, 15 cpi, proportional
	EPSON Courier	10, 12, 15 cpi
	EPSON Prestige	10, 12 cpi
	EPSON Script	10 cpi
	EPSON OCR-B	10 cpi
	EPSON Orator	10 cpi
	EPSON Orator-S	10 cpi
	EPSON Script C	proportional
	Scalable fonts	
	EPSON Roman	10.5, 8-32 pt (every 2 pt)
	EPSON Sans Serif	10.5, 8-32 pt (every 2 pt)
	EPSON Roman T	10.5, 8-32 pt (every 2 pt)
	EPSON Sans Serif H	10.5, 8-32 pt (every 2 pt)
	Barcode fonts	
	EAN-13, EAN-8, Interleaved 2 of 5, UPC-A, UPC-E, Code 39, Code 128, POSTNET	
Character tables:	One Italic and 12 graphical character tables. (35 graphical character tables are available in some countries.) See "Character Tables" on page C-20 for more information.	
Character sets:	14 international character sets and one legal character set	

Reliability:	Total print volume	19 million lines (except print head) MTBF 10,000 POH (25% duty)
	Print head life	approx. 200 million strokes per wire
Dimensions and weight:	Height	160 mm
	Width	415 mm
	Depth	368 mm
	Weight	approx. 7.5 kg
Ribbon:	Black ribbon cartridge (#7753) Film ribbon cartridge (#7768)	
	Black ribbon life	2 million characters (LQ, 10 cpi, 48 dots/ character)
	Film ribbon life	0.2 million characters (LQ, 10 cpi, 48 dots/ character)

Note:
EPSON recommends the use of original EPSON ribbon cartridges only. Other products not manufactured by EPSON may cause damage to your printer not covered by EPSON's warranties.

C

Electrical

Input voltage range	198 to 264 V
Rated frequency range	50 to 60 Hz
Input frequency range	49.5 to 60.5 Hz
Rated current	0.5 A (maximum 1.4 A depending on the character type)
Power consumption	Approx. 36 W (ISO/ IEC 10561 letter pattern)

Note:
Check the label on the back of the printer for the voltage of your printer.

Environmental

	Temperature	Humidity (without condensation)
Operation	5 to 35 °C	10 to 80% RH
Storage	−30 to 60 °C	0 to 85% RH

Paper

Note:

❏ *Use recycled paper and envelopes only under normal temperature and humidity conditions, as follows:*

> *Temperature   15 to 25 °C*
>
> *Humidity   30 to 60% RH*

❏ *Do not load paper that has been folded or is damaged, wrinkled, or curled.*

Ordinary single sheets:	**front, top, and cut-sheet feeder entry**

Width	Front and top:
	     257 to 356 mm
	 High-capacity cut-sheet feeder:
	     100 to 364 mm
	 Second-bin cut-sheet feeder:
	     182 to 216 mm

Length	Front and top:
	     100 to 364 mm
	 High-capacity cut-sheet feeder:
	     257 to 356 mm
	 Second-bin cut-sheet feeder:
	     257 to 356 mm

Thickness	0.065 to 0.14 mm Cut sheet feeder: 0.07 to 0.14 mm
Weight	52 to 90 g/m² Cut sheet feeder: 64 to 90 g/m²

Single-sheet multipart forms:	**front entry only**
Width	100 to 257 mm
Length	100 to 364 mm
Copies	1 original + up to 4 copies
Thickness	0.12 to 0.39 mm
Weight	40 to 58 g/m²
Binding	Line glue at the top of form

C

Envelopes:	**top entry only**
Size	No. 6: 165×92 mm No. 10: 241×105 mm
Thickness	0.16 to 0.52 mm
Weight	45 to 90 g/m^2

Postcards:	**front and top entry**

Width	Front and top:
	    100 to 200 mm
	Cut sheet feeder:
	    100 to 148 mm

Length	Front:148 to 200 mm Top: 100 to 200 mm Cut sheet feeder: 100 to 148 mm
Thickness	0.22 mm
Weight	192 g/m^2

Continuous paper (standard and multipart):	**front, rear, and bottom entry**
Width	101.6 to 254 mm
Length (one page)	101.6 to 558.8 mm
Copies	1 original + up to 4 copies
Thickness	Printable area 0.065 to 0.39 mm Perforated edges up to 0.9 mm
Weight (not multipart)	52 to 82 g/m^2
Weight (one sheet of multipart)	40 to 58 g/m^2

| Binding | Point glue or paper staples on both sides (front, bottom, or rear entry) |

❏ The continuous multipart forms should be securely joined together along the left and right edges by crimping. Crimping should be pressed in from the original sheet side and go completely through all copy sheets.

❏ The ratio of the cut/uncut length at the perforation should be between 3:1 and 5:1.

❏ The perforation between pages should not extend all the way to the edges of the paper.

❏ At the perforation between pages, the horizontal and vertical perforation cuts should not cross.

❏ The thickness of the perforation part when extended should be 1 mm or less.

Continuous paper with labels: **front and bottom entry**

Label size	23.8×63.5 mm minimum 2.5 mm corner radius, minimum
Backing sheet width	101.6 to 254 mm
Backing sheet length (one page)	101.6 to 558.8 mm
Backing sheet thickness	0.07 to 0.09 mm
Total thickness	0.16 to 0.19 mm
Label weight	64 g/m²

Roll paper: **rear entry with optional roll paper holder only**

Width	216 ± 3 mm
Thickness	0.07 to 0.09 mm
Weight	52 to 82 g/m²

C

Paper alignment

Front entry

Printing starts at "0" on the scale. The unprintable area is to the left of the "0."
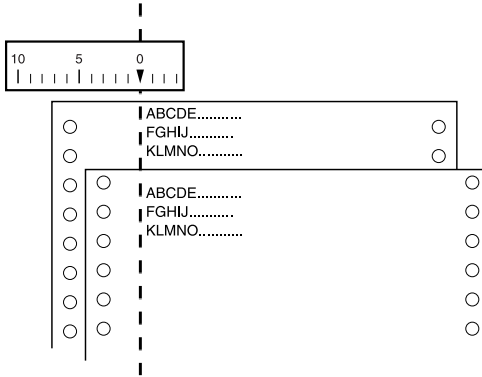
Rear entry

Printing starts at "0" on the scale. The unprintable area is to the left of the "0."
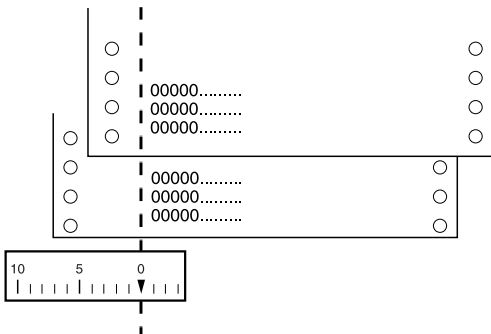
Printable area

Single sheets, envelopes, and postcards:
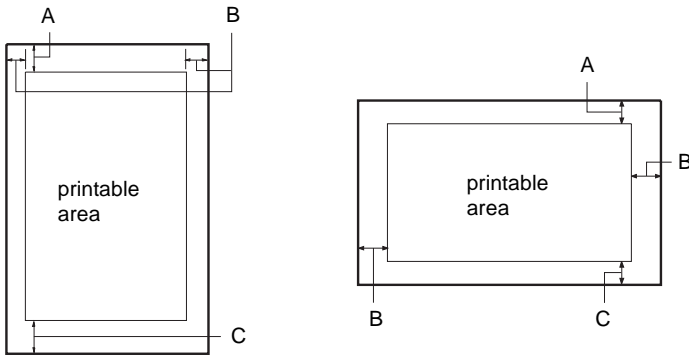
A   The minimum top margin is 4.2 mm.

B   The minimum left margin is 3.0 mm.
     The minimum right margin is 3.0 mm.
     The maximum paper width is 257 mm and the maximum
     printable width is 203.2 mm.
     For single sheets wider than 209.2 mm, the side margins
     increase proportionally to match the width of the paper.

C   The minimum bottom margin is 4.2 mm.

C

Continuous paper:
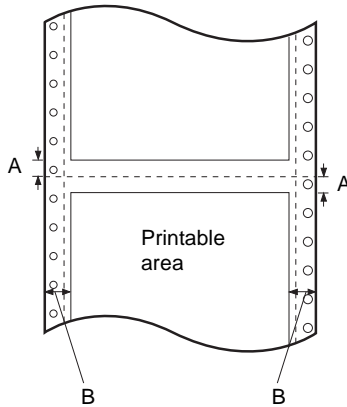
A   The minimum top and bottom margins above and below the
     perforation are 4.2 mm each.

B   The minimum left and right margins are 13 mm each.
     The maximum paper width is 254 mm and the maximum
     printable width is 203.2 mm.
     For continuous paper wider than 229.2 mm, the side margins
     increase proportionally to match the width of the paper.

Roll paper:
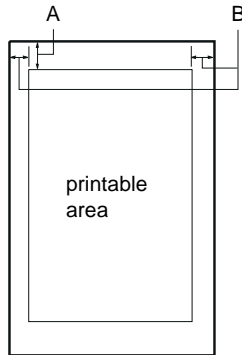
A   The minimum top margin is 4.2 mm.

B   The minimum left margin is 3.0 mm.
     The minimum right margin is 3.0 mm.
     The maximum printable width is 203.2 mm.

Safety approvals

Safety standards	EN 60950
EMI	EN 55022 (CISPR pub. 22) class B
	AS/NZS 3548 class B
Acoustic noise:	Approx. 49 dB (A) (ISO 7779 pattern)

C

CE marking

Low Voltage Directive 73/23/EEC   EN 60950
EMC Directive 89/336/EEC   EN 55022 Class B
EN 61000-3-2
EN 61000-3-3
EN 50082-1
   IEC 60801-2
   IEC 60801-3
   IEC 60801-4

Command Lists

Your printer supports the following EPSON ESC/P2 control codes and IBM 2390 Plus emulation control codes:

EPSON ESC/P2 control codes

Selecting an EPSON ESC/P2 printer in your software allows you to use advanced fonts and graphics.

General operation:
    ESC @, ESC U, ESC EM

Paper feeding:
    FF, LF, ESC 0, ESC 2, ESC 3, ESC +, CR

Page format:
    ESC (C, ESC C, ESC C 0, ESC Q, ESC l, ESC (c, ESC N, ESC O

Print position motion:
    ESC $, ESC \, ESC (V, ESC (v, ESC D, HT, ESC B, VT, ESC J

Font selection:
    ESC k, ESC x, ESC y, ESC X, ESC P, ESC M, ESC g, ESC p,
    ESC 4, ESC 5, ESC E, ESC F, ESC !

Font enhancement:
    ESC W, DC4, SO, DC2, SI, ESC w, ESC G, ESC H, ESC T,
    ESC S, ESC -, ESC (-, ESC q

Spacing:
    ESC Space, ESC c, ESC (U

Character handling:
    ESC t, ESC (t, ESC R, ESC %, ESC &, ESC :, ESC 6, ESC 7, ESC (^

Bit image:
    ESC *

Bar code:
    ESC (B

C

Barcode commands

Your printer has powerful barcode printing capabilities and includes the following resident barcode fonts: EAN-13, EAN-8, Interleaved 2 of 5, UPC-A, UPC-E, Code 39, Code 128, and POSTNET. See the barcode commands below:

ESC (B   Select Barcode Printing

Format:

ASCII code:	ESC	(	B	m	n
Decimal:	27	40	66	m	n
Hexadecimal:	1B	28	42	m	n

Function:

ESC (B $n1$ $n2$ k m s $v1$ $v2$ c data
$n = (n1 + (256 \times n2))$

k: Select barcode
k = 0: EAN-13, 1: EAN-8, 2: Interleaved 2 of 5, 3: UPC-A, 4: UPC-E, 5: Code 39, 6: Code 128, 7: POSTNET

m: Module width (180 dpi)
m = 2: 2 dots, 3: 3 dots, 4: 4 dots, 5: 5 dots

s: Space adjustment value
$-3 \le s \le 3$ (1/360-inch units)

v1, *v2*: Bar length
$v1 + v2 \times 256$ (1/180-inch units)

Note:
❏ *The v1 and v2 values are ignored when POSTNET is selected.*

❏ *The long bar length of POSTNET is always 0.125 inch; the short bar length is always 0.050 inch.*

c: Control flag

Bit 0 = Check digit

    0: The printer does not add a check digit.
    1: The printer adds a check digit.

Bit 1 = Human readable character (HRC)

    0: The printer adds the HRC.
    1: The printer does not add the HRC.

Bit 2 = Position of flag character (for EAN-13 and UPC-A only)

    0: Center
    1: Under

Bits 3–7 = Not used

Barcode data

Barcode data corresponds to the barcode symbology. The data number of each barcode type is constant. The barcode is printed only if the following valid characters are set:

Barcode type	Number of valid characters 1 (HEX)	Number of valid characters 2 (HEX)
EAN-13	0D	0C
EAN-8	8	7
Interleaved 2 of 5	2 to FF	2 to FF
UPC-A	0C	0B
UPC-E	0C or 8	0B or 7
Code 39	1 to FF	1 to FF
Code 128	2 to FF	2 to FF
POSTNET	6 or 0A or 0C	5 or 9 or 0B

Number of valid characters 1: Control flag c b0=0

Number of valid characters 2: Control flag c b0=1

C

The valid data for each barcode type is described below. If invalid data is included in the barcode data string, the barcode is not printed.

Barcode type	Barcode data
EAN-13	0-9 (Hex 30-39)
EAN-8	0-9 (Hex 30-39)
UPC-A	0-9 (Hex 30-39)
UPC-E	0-9 (Hex 30-39)
Interleaved 2 of 5	0-9 (Hex 30-39)
POSTNET	0-9 (Hex 30-39)
Code 39	0-9 (Hex 30-39), (Hex 41-5A), (Hex 20, 24, 25, 2B, 2D, 2E, 2F)
Code 128	Set A, Set B, Set C

The following conditions are required for barcode printing:

❏ Barcode printing is always performed unidirectionally. However, when it is mixed with raster bit image data, neither barcode nor raster bit image data is printed.

❏ A barcode is not printed when part of the barcode extends beyond the right margin.

❏ When barcode data and text data are mixed in a data sequence, barcodes and text are printed in the same place.

❏ The start and stop (*) characters of Code 39 are added to human readable characters.

❏ The initial data of Code 128 (Set A, B, or C) is identified as the first data of Code 128, and must be hexadecimal (41, 42, and 43, respectively).

❏ When Code 128 Set C and Interleaved 2 of 5 are selected, barcode data requires an even number data string. However, if an odd number string is sent, a 0 is automatically added, making it an even number data string.

❏ The barcode print start position (except for POSTNET) is always 40/360 inch above the baseline.

IBM 2390 Plus emulation control codes

This printer emulates the IBM Proprinter using the commands below. For detailed information, see the IBM 2390 Plus reference manual.

General operation:
   NUL, DC3, ESC j, BEL, CAN, DC1, ESC Q, ESC [K, ESC U, ESC [F

Paper feeding:
   FF, LF, ESC 5, ESC A, ESC A (AGM*), ESC 0, ESC 1, ESC 2, ESC 3, ESC 3 (AGM*), CR, ESC]

Page format:
   ESC C, ESC C0, ESC X, ESC N, ESC O, ESC 4

Print position motion:
   ESC d, ESC R, ESC D, HT, ESC B, VT, ESC J, ESC J (AGM*)

Font selection:
   DC2, ESC P, ESC :, ESC E, ESC F, ESC I, ESC [d, ESC [I

Font enhancement:
   DC4, SO, ESC SO, ESC W, ESC [@, SI, ESC SI, ESC G, ESC H, ESC T, ESC S, ESC -, ESC _, ESC [-

Spacing:
   BS, SP, ESC [¥

Character handling:
   ESC 6, ESC 7, ESC [T, ESC ^, ESC ¥

Bit image:
   ESC K, ESC L, ESC Y, ESC Z, ESC [g, ESC * (AGM*)

* Alternate Graphic Mode

Barcode:
   ESC [f, ESC [p

Download:
   Download command is not provided.

C

Character Tables

You can select the character tables shown in this section using the printer's default-setting mode or with software commands.

Note:
❏ *Most of the character tables are the same as the PC 437 table for hex codes 00 through 7F; only the characters for hex codes 80 through FF are shown for these tables.*

❏ *The character tables with an asterisk (*) after the table name are available only in some countries.*

PC 437 (US Standard Europe)

CODE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL			0	@	P	`	p	Ç	É	á	▓	└	╨	α	≡
1			!	1	A	Q	a	q	ü	æ	í	▓	┴	╤	β	±
2		DC2	"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3			#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4		DC4	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5		§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7			'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8			(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9	HT	EM	)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	θ	·
A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
C	FF		,	<	L	\	l	¦	î	£	¼	╝	╠	█	∞	ⁿ
D	CR		─	=	M	]	m	}	ì	¥	¡	╜	=	█	ø	²
E	SO		.	>	N	^	n	~	Ä	₧	«	╛	╬	█	∈	■
F	SI		/	?	O	_	o		Å	ƒ	»	┐	╧	█	∩	

PC 850 (Multilingual)

CODE	8	9	A	B	C	D	E	F
0	Ç	É	á	░	└	ð	Ó	─
1	ü	æ	í	▒	┴	Ð	ß	±
2	é	Æ	ó	▓	┬	Ê	Ô	_
3	â	ô	ú	│	├	Ë	Ò	¾
4	ä	ö	ñ	┤	─	È	õ	¶
5	à	ò	Ñ	Á	┼	ı	Õ	§
6	å	û	ª	Â	ã	Í	µ	÷
7	ç	ù	º	À	Ã	Î	þ	¸
8	ê	ÿ	¿	©	╚	Ï	Þ	°
9	ë	Ö	®	╣	╔	┘	Ú	¨
A	è	Ü	¬	║	╩	┌	Û	·
B	ï	ø	½	╗	╦	█	Ù	¹
C	î	£	¼	╝	╠	▄	ý	³
D	ì	Ø	¡	¢	═	¦	Ý	²
E	Ä	×	«	¥	╬	Ì	¯	■
F	Å	ƒ	»	┐	¤	▀	´	

PC 860 (Portuguese)

CODE	8	9	A	B	C	D	E	F
0	Ç	É	á	░	└	╨	α	≡
1	ü	À	í	▒	┴	╤	ß	±
2	é	È	ó	▓	┬	╥	Γ	≥
3	â	ô	ú	│	├	╙	π	≤
4	ã	õ	ñ	┤	─	╘	Σ	⌠
5	à	ò	Ñ	╡	┼	╒	σ	⌡
6	Á	Ú	ª	╢	╞	╓	µ	÷
7	ç	ù	º	╖	╟	╫	τ	≈
8	ê	Ì	¿	╕	╚	╪	Φ	°
9	Ê	Õ	Ò	╣	╔	┘	Θ	·
A	è	Ü	¬	║	╩	┌	Ω	·
B	Í	¢	½	╗	╦	█	δ	√
C	Ô	£	¼	╝	╠	▄	∞	ⁿ
D	ì	Ù	¡	╜	═	▌	ø	²
E	Ã	₧	«	╛	╬	▐	∈	■
F	Â	Ó	»	┐	╧	▀	∩	

PC 863 (French-Canadian)

CODE	8	9	A	B	C	D	E	F
0	Ç	É	¦	░	└	╨	α	≡
1	ü	È	´	▒	┴	╤	ß	±
2	é	Ê	ó	▓	┬	╥	Γ	≥
3	â	ô	ú	│	├	╙	π	≤
4	Â	Ë	¨	┤	─	╘	Σ	⌠
5	à	Ï	¸	╡	┼	╒	σ	⌡
6	¶	û	³	╢	╞	╓	µ	÷
7	ç	ù	¯	╖	╟	╫	τ	≈
8	ê	¤	Î	╕	╚	╪	Φ	°
9	ë	Ô	⌐	╣	╔	┘	Θ	·
A	è	Ü	¬	║	╩	┌	Ω	·
B	ï	¢	½	╗	╦	█	δ	√
C	î	£	¼	╝	╠	▄	∞	ⁿ
D	‗	Ù	¾	╜	═	▌	φ	²
E	À	Û	«	╛	╬	▐	∈	■
F	§	ƒ	»	┐	╧	▀	∩	

PC 865 (Nordic)

CODE	8	9	A	B	C	D	E	F
0	Ç	É	á	░	└	╨	α	≡
1	ü	æ	í	▒	┴	╤	ß	±
2	é	Æ	ó	▓	┬	╥	Γ	≥
3	â	ô	ú	│	├	╙	π	≤
4	ä	ö	ñ	┤	─	╘	Σ	⌠
5	à	ò	Ñ	╡	┼	╒	σ	⌡
6	å	û	ª	╢	╞	╓	µ	÷
7	ç	ù	º	╖	╟	╫	τ	≈
8	ê	ÿ	¿	╕	╚	╪	Φ	°
9	ë	Ö	⌐	╣	╔	┘	Θ	·
A	è	Ü	¬	║	╩	┌	Ω	·
B	ï	ø	½	╗	╦	█	δ	√
C	î	£	¼	╝	╠	▄	∞	ⁿ
D	ì	Ø	¡	╜	═	▌	φ	²
E	Ä	₧	«	╛	╬	▐	∈	■
F	Å	ƒ	¤	┐	╧	▀	∩	

C

PC 861 (Icelandic)

CODE	8	9	A	B	C	D	E	F
0	Ç	É	á	░	└	╨	α	≡
1	ü	æ	í	▒	┴	╤	β	±
2	é	Æ	ó	▓	┬	╥	Γ	≥
3	â	ô	ú	│	├	╙	π	≤
4	ä	ö	Á	┤	─	╘	Σ	∫
5	à	þ	Í	╡	┼	╒	σ	÷
6	å	û	Ó	╢	╞	╓	μ	≈
7	ç	Ý	Ú	╖	╟	╫	τ	°
8	ê	ý	¿	╕	╚	╪	Φ	·
9	ë	Ö	⌐	╣	╔	┘	Θ	·
A	è	Ü	¬	║	╩	┌	Ω	·
B	Ð	ø	½	╗	╦	█	δ	√
C	ð	£	¼	╝	╠	▄	∞	ⁿ
D	Þ	Ø	¡	╜	═	▌	φ	²
E	Ä	₧	«	╛	╬	▐	∈	■
F	Å	ƒ	»	┐	╧	▀	∩	

BRASCII

CODE	8	9	A	B	C	D	E	F
0	NUL			°	À	Ð	à	ð
1			¡	±	Á	Ñ	á	ñ
2		DC2	¢	²	Â	Ò	â	ò
3			£	³	Ã	Ó	ã	ó
4		DC4	¤	´	Ä	Ô	ä	ô
5			¥	μ	Å	Õ	å	õ
6			¦	¶	Æ	Ö	æ	ö
7			§	·	Ç	Œ	ç	œ
8			¨	¸	È	Ø	è	ø
9	HT	EM	©	¹	É	Ù	é	ù
A	LF		ª	º	Ê	Ú	ê	ú
B	VT	ESC	«	»	Ë	Û	ë	û
C	FF		¬	¼	Ì	Ü	ì	ü
D	CR		—	½	Í	Ý	í	ý
E	SO		®	¾	Î	Þ	î	þ
F	SI		¯	¿	Ï	ß	ï	ÿ

Abicomp

CODE	8	9	A	B	C	D	E	F
0	NUL			Ò	¡	ò		
1			À	Ó	à	ó		
2		DC2	Á	Ô	á	ô		
3			Â	Õ	â	õ		
4		DC4	Ã	Ö	ã	ö		
5			Ä	Œ	ä	œ		
6			Ç	Ù	ç	ù		
7			È	Ú	è	ú		
8			É	Û	é	û		
9	HT	EM	Ê	Ü	ê	ü		
A	LF		Ë	Ÿ	ë	ÿ		
B	VT	ESC	Ì	¨	ì	β		
C	FF		Í	£	í	ª		
D	CR		Î	·	î	º		
E	SO		Ï	§	ï	¿		
F	SI		Ñ	°	ñ	±		DEL

ISO Latin 1

CODE	8	9	A	B	C	D	E	F
0				°	À	Ð	à	ð
1			¡	±	Á	Ñ	á	ñ
2			¢	²	Â	Ò	â	ò
3			£	³	Ã	Ó	ã	ó
4			¤	´	Ä	Ô	ä	ô
5			¥	μ	Å	Õ	å	õ
6			¦	¶	Æ	Ö	æ	ö
7			§	·	Ç	×	ç	÷
8			¨	¸	È	Ø	è	ø
9			©	¹	É	Ù	é	ù
A			ª	º	Ê	Ú	ê	ú
B			«	»	Ë	Û	ë	û
C			¬	¼	Ì	Ü	ì	ü
D			—	½	Í	Ý	í	ý
E			®	¾	Î	Þ	î	þ
F			¯	¿	Ï	ß	ï	ÿ

Roman 8

HexCode	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p				‾	â	Å	Á	Þ
1			!	1	A	Q	a	q			À	Ý	ê	î	Ã	þ
2			"	2	B	R	b	r			Â	ý	ô	Ø	ã	·
3			#	3	C	S	c	s			È	°	û	Æ	Ð	µ
4			$	4	D	T	d	t			Ê	Ç	á	å	ð	¶
5			%	5	E	U	e	u			Ë	ç	é	í	Í	¾
6			&	6	F	V	f	v			Î	Ñ	ó	ø	Ì	—
7			'	7	G	W	g	w			Ï	ñ	ú	æ	Ó	¼
8			(	8	H	X	h	x			´	¡	à	Ä	Ò	½
9			)	9	I	Y	i	y			`	¿	è	ì	Õ	ª
A			*	:	J	Z	j	z			^	¤	ò	Ö	õ	º
B			+	;	K	[	k	{			¨	£	ù	Ü	Š	«
C			,	<	L	\	l	|			~	¥	ä	É	š	■
D			-	=	M	]	m	}			Ù	§	ë	ï	Ú	»
E			.	>	N	^	n	~			Û	ƒ	ö	ß	Ÿ	±
F			/	?	O	_	o	▨			£	¢	ü	Ô	ÿ	

PC 858

CODE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		►		0	@	P	`	p	Ç	É	á	░	└	ð	Ó	─
1	☺	◄	!	1	A	Q	a	q	ü	æ	í	▒	┴	Ð	ß	±
2	☻	↕	"	2	B	R	b	r	é	Æ	ó	▓	┬	Ê	Ô	═
3	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	Ë	Ò	¾
4	♦	¶	$	4	D	T	d	t	ä	ö	ñ	┤	─	È	õ	¶
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	Á	┼	€	Õ	§
6	♠	▬	&	6	F	V	f	v	å	û	ª	Â	ã	í	µ	÷
7	•	↨	'	7	G	W	g	w	ç	ù	º	À	Ã	Î	þ	¸
8	■	↑	(	8	H	X	h	x	ê	ÿ	¿	©	╚	Ï	Þ	°
9	○	↓	)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘	Ú	¨
A	◙	→	*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Û	·
B	♂	←	+	;	K	[	k	{	ï	ø	½	╗	╦	█	Ù	¹
C	♀	∟	,	<	L	\	l	|	î	£	¼	╝	╠	█	ý	³
D	♪	↔	-	=	M	]	m	}	ì	Ø	¡	¢	╬	█	Ý	²
E	♫	▲	.	>	N	^	n	~	Ä	×	«	¥	╧	Ì	¯	■
F	☼	▼	/	?	O	_	o	⌂	Å	ƒ	»	┐	¤	█	´	

C

ISO 8859-15

CODE	8	9	A	B	C	D	E	F
0				°	À	Ð	à	ð
1			¡	±	Á	Ñ	á	ñ
2			¢	²	Â	Ò	â	ò
3			£	³	Ã	Ó	ã	ó
4			€	Ž	Ä	Ô	ä	ô
5			¥	µ	Å	Õ	å	õ
6			Š	¶	Æ	Ö	æ	ö
7			§	·	Ç	×	ç	÷
8			š	ž	È	Ø	è	ø
9			©	¹	É	Ù	é	ù
A			ª	º	Ê	Ú	ê	ú
B			«	»	Ë	Û	ë	û
C			¬	Œ	Ì	Ü	ì	ü
D				œ	Í	Ý	í	ý
E			®	Ÿ	Î	Þ	î	þ
F			¯	¿	Ï	ß	ï	ÿ

PC 437 Greek*

CODE	8	9	A	B	C	D	E	F
0	Α	Ρ	ι	░	└	╨	ω	Ω
1	Β	Σ	κ	▒	┴	╤	ά	±
2	Γ	Τ	λ	▓	┬	╥	έ	≥
3	Δ	Υ	μ	│	├	╙	ή	≤
4	Ε	Φ	ν	┤	─	╘	ϊ	⌠
5	Ζ	Χ	ξ	╡	┼	╒	ί	⌡
6	Η	Ψ	ο	╢	╞	╓	ό	÷
7	Θ	Ω	π	╖	╟	╫	ύ	≈
8	Ι	α	ρ	╕	╚	╪	ϋ	°
9	Κ	β	σ	╣	╔	┘	ώ	£
A	Λ	γ	ς	║	╩	┌	Ά	¥
B	Μ	δ	τ	╗	╦	█	Έ	√
C	Ν	ε	υ	╝	╠	▄	Ή	ⁿ
D	Ξ	ζ	φ	╜	═	▌	Ί	²
E	Ο	η	χ	╛	╬	▐	Ό	■
F	Π	θ	ψ	┐	╧	▀	Υ	

PC 853 (Turkish)*

CODE	8	9	A	B	C	D	E	F
0	Ç	É	á	░	└		Ó	─
1	ü	ċ	í	▒	┴		ß	
2	é	Ċ	ó	▓	┬	Ê	Ô	ℓ
3	â	ô	ú	│	├	Ë	Ò	ħ
4	ä	ö	ñ	┤	─	È	Ġ	˘
5	à	ò	Ñ	Á	┼	ı	ġ	§
6	ĉ	û	Ğ	Â	Ŝ	Î	µ	÷
7	ç	ù	ğ	À	ŝ	Ï	Ħ	¸
8	ê	İ	Ĥ	Ş	└	ı	ħ	°
9	ë	Ö	ĥ	╣	╔	┘	Ú	¨
A	è	Ü	½	║	╩	┌	Û	·
B	ï	ĝ	½	╗	╦	█	Ù	
C	î	£	Ĵ	╝	╠	▄	Ü	³
D	ì	Ĝ	ş	ż	═		ŭ	²
E	Ä	×	«	ż	╬	İ		■
F	Ĉ	ĵ	»	┐	¤	■	´	

PC 855 (Cyrillic)*

CODE	8	9	A	B	C	D	E	F
0	ђ	љ	а	░	└	л	Я	
1	Ђ	Љ	А	▒	┴	Л	р	ы
2	ѓ	њ	б	▓	┬	м	Р	Ы
3	Ѓ	Њ	Б	│	├	М	с	з
4	ё	ћ	ц	┤	─	н	С	З
5	Ё	Ћ	Ц	х	┼	Н	т	ш
6	є	ќ	д	Х	к	о	Т	Ш
7	Є	Ќ	Д	и	К	О	э	э
8	ѕ	ў	е	И	└	п	У	щ
9	Ѕ	Ў	Е	╣	╔	┘	у	щ
A	і	џ	ф	║	╩	┌	Ж	Щ
B	І	Џ	Ф	╗	╦	█	в	ч
C	ї	ю	г	╝	╠	▄	В	Ч
D	Ї	Ю	Г	й	═	П	ь	
E	ј	ъ	«	Й	╬	я	Ь	■
F	Ј	Ъ	»	┐	¤	■	№	

PC 852 (Eastern Europe)*

CODE	8	9	A	B	C	D	E	F
0	Ç	É	á	░	└	đ	Ó	-
1	ü	Ĺ	í	▒	┴	Đ	ß	˝
2	é	ĺ	ó	▓	┬	Ď	Ô	ˇ
3	â	ô	ú	│	├	Ë	Ń	˘
4	ä	ö	Ą	┤	─	ď	ń	´
5	ů	Ľ	ą	Á	┼	Ň	ň	§
6	ć	ľ	Ž	Â	Ă	Í	Š	÷
7	ç	Ś	ž	Ě	ă	Î	š	¸
8	ł	ś	Ę	Ş	└	ě	Ŕ	°
9	ë	Ö	ę	╣	┌	┘	Ú	¨
A	Ő	Ü	ź	║	┴	┌	ŕ	·
B	ő	Ť	Ź	╗	╦	█	Ű	ű
C	î	ť	Č	╝	╠	▄	ý	Ř
D	Ź	Ł	ş	ż	═	Ţ	Ý	ř
E	Ä	×	«	ż	╬	Ů	ţ	■
F	Ć	č	»	┐	¤	▀	´	

PC 857 (Turkish)*

CODE	8	9	A	B	C	D	E	F
0	Ç	É	á	░	└	º	Ó	-
1	ü	æ	í	▒	┴	ª	ß	±
2	é	Æ	ó	▓	┬	Ê	Ô	
3	â	ô	ú	│	├	Ë	Ò	¾
4	ä	ö	ñ	┤	─	È	õ	¶
5	à	ò	Ñ	Á	┼		Õ	§
6	å	û	Ğ	Â	ã	Í	µ	÷
7	ç	ù	ğ	À	Ã	Î		¸
8	ê	İ	¿	©	└	Ï	×	°
9	ë	Ö	®	╣	┌	┘	Ú	¨
A	è	Ü	¬	║	┴	┌	Û	·
B	ï	ø	½	╗	╦	█	Ù	¹
C	î	£	¼	╝	╠	▄	ì	³
D	ı	Ø	¡	¢			ÿ	²
E	Ä	Ş	«	¥	╬	Ì	¯	■
F	Å	ş	»	┐	¤		´	

PC 866 (Russian)*

CODE	8	9	A	B	C	D	E	F
0	А	Р	а	░	└	╨	р	Ё
1	Б	С	б	▒	┴	╤	с	ё
2	В	Т	в	▓	┬	╥	т	Є
3	Г	У	г	│	├	╙	у	є
4	Д	Ф	д	┤	─	└	ф	Ї
5	Е	Х	е	╡	┼	┌	х	ї
6	Ж	Ц	ж	╢	╞	╟	ц	Ў
7	З	Ч	з	╖	╟	╫	ч	ў
8	И	Ш	и	╕	╚	╪	ш	°
9	Й	Щ	й	╣	╔	┘	щ	·
A	К	Ъ	к	║	╩	┌	ъ	√
B	Л	Ы	л	╗	╦	█	ы	№
C	М	Ь	м	╝	╠	▄	ь	¤
D	Н	Э	н	╜	═	▌	э	■
E	О	Ю	о	╛	╬	▐	ю	
F	П	Я	п	┐	╧	▀	я	

PC864 (Arabic)

CODE	8	9	A	B	C	D	E	F

PC 869 (Greek)*

CODE	8	9	A	B	C	D	E	F
0		Ἰ	ï	░	└	Τ	ζ	-
1		Ἴ	ϊ	▒	┴	Υ	η	±
2		Ὀ	ό	▓	┬	Φ	ϑ	υ
3			ύ	│	├	Χ	ι	φ
4			Α	┤	─	Ψ	κ	χ
5		Ύ	Β	Κ	┼	Ω	λ	§
6	Ά	Ϋ	Γ	Λ	Π	α	μ	Ψ
7		©	Δ	Μ	Ρ	β	ν	¨
8	·	Ώ	Ε	Ν	└	γ	ξ	°
9	¬	²	Ζ	╣	┌	δ	ο	··
A	¦	³	Η	║	┴		π	ω
B	½	ά	½	╗	┬	┌	ρ	ϋ
C	¬	£	Θ	╝	├	■	σ	ΰ
D	Ϊ	έ	Ι	Ξ	═	δ	ς	ώ
E	─	ή	«	Ο	┼	ε	τ	■
F	Ἡ	ί	»		Σ		´	

MAZOWIA (Poland)*

CODE	8	9	A	B	C	D	E	F
0	Ç	Ę	Ź	░	└	╨	α	≡
1	ü	ę	Ż	▒	┴	╤	β	±
2	é	ł	ó	▓	┬	╥	Γ	υ
3	â	ô	Ó	│	├	╙	π	≤
4	ä	ö	ń	┤	─	╘	Σ	∫
5	à	Ć	Ń	╡	┼	╒	σ	∫
6	ą	û	ź	╢	╞	╓	μ	÷
7	ç	ù	ż	╖	╟	╫	τ	≈
8	ê	Ś	§	╕	╚	╪	Φ	°
9	ë	Ö	┐	╣	╔	┘	θ	·
A	è	Ü	¬	║	╩	┌	Ω	·
B	ï	zł	½	╗	╦	■	δ	√
C	î	Ł	¼	╝	╠	■	∞	ⁿ
D	ć	¥	¡	╜	═	■	ø	²
E	Ä	Ś	«	╛	╬	■	∈	■
F	Ą	ƒ	»	┐	╧	■	∩	

Code MJK (CSFR)*

CODE	8	9	A	B	C	D	E	F
0	Č	É	á	░	└	╨	α	≡
1	ü	ž	í	▒	┴	╤	β	±
2	é	ž	ó	▓	┬	╥	Γ	≥
3	ď	ô	ú	│	├	╙	π	≤
4	ä	ö	ň	┤	─	╘	Σ	∫
5	Ď	ů	Ň	╡	┼	╒	σ	∫
6	Ť	ů	Ů	╢	╞	╓	μ	÷
7	č	Ú	Ô	╖	╟	╫	τ	≈
8	ě	ý	š	╕	╚	╪	Φ	°
9	Ě	Ö	ř	╣	╔	┘	θ	·
A	Ł	Ü	ŕ	║	╩	┌	Ω	·
B	í	Š	Ŕ	╗	╦	■	δ	√
C	ľ	Ľ	¼	╝	╠	■	∞	ⁿ
D	ĺ	Ý	§	╜	═	■	ø	²
E	Ä	Ř	«	╛	╬	■	∈	■
F	Á	ť	»	┐	╧	■	∩	

ISO 8859-7*

CODE	8	9	A	B	C	D	E	F
0				°	Ϊ	Π	ΰ	π
1			'	±	Α	Ρ	α	ρ
2			'	²	Β		β	ς
3			£	³	Γ	Σ	γ	σ
4				´	Δ	Τ	δ	τ
5				˜	Ε	Υ	ε	υ
6			¦	Ά	Ζ	Φ	ζ	φ
7			§	·	Η	Χ	η	χ
8				Έ	Θ	Ψ	ϑ	ψ
9			©	Ή	Ι	Ω	ι	ω
A				Ί	Κ	Ϊ	κ	ϊ
B			«	»	Λ	Ϋ	λ	ϋ
C			¬	Ό	Μ	ά	μ	ό
D				½	Ν	έ	ν	ύ
E				Ύ	Ξ	ή	ξ	ώ
F			―	Ώ	Ο	ί	ο	

ISO Latin 1T (Turkish)*

CODE	8	9	A	B	C	D	E	F
0				°	À	Ð	à	ð
1			¡	±	Á	Ñ	á	ñ
2			¢	²	Â	Ò	â	ò
3			£	³	Ã	Ó	ã	ó
4			¤	´	Ä	Ô	ä	ô
5			¥	µ	Å	Õ	å	õ
6			¦	¶	Æ	Ö	æ	ö
7			§	·	Ç	×	ç	÷
8			¨	¸	È	Ø	è	ø
9			©	¹	É	Ù	é	ù
A			ª	º	Ê	Ú	ê	ú
B			«	»	Ë	Û	ë	û
C			¬	¼	Ì	Ü	ì	ü
D				½	Í	Ý	í	ý
E			®	¾	Î	Þ	î	þ
F			¯	¿	Ï	ß	ï	ÿ

Bulgaria (Bulgarian)*

CODE	8	9	A	B	C	D	E	F
0	А	Р	а	р	└	▓	α	≡
1	Б	С	б	с	┴	▓	β	±
2	В	Т	в	т	┬	▓	Γ	≥
3	Г	У	г	у	├	▓	π	≤
4	Д	Ф	д	ф	─	┤	Σ	∫
5	Е	Х	е	х	┼	№	σ	∫
6	Ж	Ц	ж	ц	╢	§	µ	÷
7	З	Ч	з	ч	╖	╗	τ	≈
8	И	Ш	и	ш	╜	╝	Φ	°
9	Й	Щ	й	щ	╙	╜	θ	·
A	К	Ъ	к	ъ	╟	┘	Ω	·
B	Л	Ы	л	ы	╤	┐	δ	√
C	М	Ь	м	ь	╥	█	∞	ⁿ
D	Н	Э	н	э	=	█	ø	²
E	О	Ю	о	ю	╪	█	∈	■
F	П	Я	п	я	┐	█	∩	

PC 774 (LST 1283: 1993)*

CODE	8	9	A	B	C	D	E	F
0	Ç	É	á	▓	└	ą	α	≡
1	ü	æ	í	▓	┴	č	β	±
2	é	Æ	ó	▓	┬	ę	Γ	≥
3	â	ô	ú	│	├	ė	π	≤
4	ä	ö	ñ	┤	─	į	Σ	„
5	à	ò	Ñ	Ą	┼	š	σ	"
6	å	û	ª	Č	Ų	ų	µ	÷
7	ç	ù	º	Ę	Ū	ž	τ	≈
8	ê	ÿ	¿	Ė	╚	ž	Φ	°
9	ë	Ö	⌐	╣	╔	┘	θ	·
A	è	Ü	¬	║	╩	┌	Ω	·
B	ï	¢	½	╗	╦	█	δ	√
C	î	£	¼	╝	╠	█	∞	ⁿ
D	ì	¥	¡	╜	=	█	ø	²
E	Ä	₧	«	š	╬	█	∈	■
F	Å	ƒ	»	Ž	┘	█	∩	

Estonia (Estonian)*

CODE	8	9	A	B	C	D	E	F
0	Ç	É	á	▓	└	š	Ó	-
1	ü	æ	í	▓	┴	š	ß	±
2	é	Æ	ó	▓	┬	Ê	Ô	=
3	â	ô	ú	│	├	Ë	Ò	¾
4	ä	ö	ñ	┤	─	È	õ	¶
5	à	ò	Ñ	Á	┼	ı	Õ	§
6	å	û	ª	Â	ã	í	µ	÷
7	ç	ù	º	À	©	î	ž	°
8	ê	ÿ	¿	Ä	╚	ï	ž	··
9	ë	Ö	®	╣	╔	┘	Ú	··
A	è	Ü	¬	║	╩	┌	Û	·
B	ï	ø	½	╗	╦	█	Ù	¹
C	î	£	¼	╝	╠	█	ý	³
D	ì	Ø	¡	¢	=	█	Ý	²
E	Ä	×	«	¥	╬	█	ì	■
F	Å	ƒ	»	¤	┘	█	´	

C

PC 771 (Lithuanian)

CODE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		▶		0	@	P	`	p	А	Р	а	░	└	╨	р	Ę
1	☺	◀	!	1	A	Q	a	q	Б	С	б	▒	┴	╤	с	ę
2	☻	↕	"	2	B	R	b	r	В	Т	в	▓	┬	╥	т	Ė
3	♥	‼	#	3	C	S	c	s	Г	У	г	│	├	╙	у	ė
4	♦	¶	$	4	D	T	d	t	Д	Ф	д	┤	─	╘	ф	Į
5	♣	§	%	5	E	U	e	u	Е	Х	е	╡	┼	╒	х	į
6	♠	▬	&	6	F	V	f	v	Ж	Ц	ж	╢	╞	╓	ц	Š
7	•	↨	'	7	G	W	g	w	З	Ч	з	╖	╟	╫	ч	š
8	◘	↑	(	8	H	X	h	x	И	Ш	и	╕	╚	╪	ш	Ų
9	○	↓	)	9	I	Y	i	y	Й	Щ	й	╣	╔	┘	щ	ų
A	◙	→	*	:	J	Z	j	z	К	Ъ	к	║	╩	┌	ъ	Ū
B	♂	←	+	;	K	[	k	{	Л	Ы	л	╗	╦	█	ы	ū
C	♀	∟	,	<	L	\	l	¦	М	Ь	м	╝	╠	Ą	ь	ž
D	♪	↔	-	=	M	]	m	}	Н	Э	н	╜	═	ą	э	Ž
E	♫	▲	.	>	N	^	n	~	О	Ю	о	╛	╬	Č	ю	■
F	☼	▼	/	?	O	_	o	△	П	Я	п	┐	┴	č	я	

ISO 8859-2*

HexCode	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p				°	Ŕ	Đ	ŕ	đ
1			!	1	A	Q	a	q			Ą	ą	Á	Ń	á	ń
2			"	2	B	R	b	r			˘	˛	Â	Ň	â	ň
3			#	3	C	S	c	s			Ł	ł	Ă	Ó	ă	ó
4			$	4	D	T	d	t			¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u			Ľ	ľ	Ĺ	Ő	Í	ő
6			&	6	F	V	f	v			Ś	ś	Ć	Ö	ć	ö
7			'	7	G	W	g	w			§	ˇ	Ç	×	ç	÷
8			(	8	H	X	h	x			¨	ˏ	Č	Ř	č	ř
9			)	9	I	Y	i	y			Š	š	É	Ů	é	ů
A			*	:	J	Z	j	z			Ş	ş	Ę	Ú	ę	ú
B			+	;	K	[	k	{			Ť	ť	Ë	Ű	ë	ű
C			,	<	L	\	l	|			Ź	ź	Ě	Ü	ě	ü
D			-	=	M	]	m	}				˝	Í	Ý	í	ý
E			.	>	N	^	n	~			Ž	ž	Î	Ţ	î	ţ
F			/	?	O	_	o	▓			Ż	ż	Ď	ß	ď	˙

PC 866 LAT. (Latvian)*

CODE	8	9	A	B	C	D	E	F
0	А	Р	а	░	└	Š	р	Ē
1	Б	С	б	░	┴	Ţ	с	ē
2	В	Т	в	▒	┬	č	т	Ģ
3	Г	У	г	▓	├	Č	у	ķ
4	Д	Ф	д	┤	─	Ļ	ф	Ķ
5	Е	Х	е	Á	┼	ŗ	х	ļ
6	Ж	Ц	ж	ā	ǵ	ц	Ļ
7	З	Ч	з	ņ	ī	ч	ž
8	И	Ш	и	ī	щ	Ž
9	Й	Щ	й	щ	ō
A	К	Ъ	к	ъ	·
B	Л	Ы	л	┬	�	ы	√
C	М	Ь	м	ь	Ņ
D	Н	Э	н	Ō	─	ũ	э	š
E	О	Ю	о	┘	Ũ	ю	■
F	П	Я	п	▄	Я

PC 866 UKR (Ukranian)*

CODE	8	9	A	B	C	D	E	F
0	А	Р	а	░	└	╨	р	Ё
1	Б	С	б	░	┴	╤	с	ё
2	В	Т	в	▒	┬	╥	т	Ґ
3	Г	У	г	▓	├	╙	у	ґ
4	Д	Ф	д	┤	─	╘	ф	Є
5	Е	Х	е	┼	╒	х	є
6	Ж	Ц	ж	║	╟	╓	ц	І
7	З	Ч	з	┐	╫	╨	ч	і
8	И	Ш	и	╝	╚	щ	Ї
9	Й	Щ	й	╔	щ	ї
A	К	Ъ	к	╩	ъ	·
B	Л	Ы	л	╦	▌	ы	√
C	М	Ь	м	╠	▌	ь	№
D	Н	Э	н	╜	=	▌	э	¤
E	О	Ю	о	┘	╪	ю	■
F	П	Я	п	┐	Я

PC APTEC (Arabic)*

PC 708 (Arabic)*

PC 720 (Arabic)*　　　　PC AR 864 (Arabic)*

Italic table

CODE	8	9	A	B	C	D	E	F
0	NUL			*0*	*@*	*P*	*`*	*p*
1			*!*	*1*	*A*	*Q*	*a*	*q*
2		DC2	*"*	*2*	*B*	*R*	*b*	*r*
3			*#*	*3*	*C*	*S*	*c*	*s*
4		DC4	*$*	*4*	*D*	*T*	*d*	*t*
5			*%*	*5*	*E*	*U*	*e*	*u*
6			*&*	*6*	*F*	*V*	*f*	*v*
7			*'*	*7*	*G*	*W*	*g*	*w*
8			*(*	*8*	*H*	*X*	*h*	*x*
9	HT	EM	*)*	*9*	*I*	*Y*	*i*	*y*
A	LF		***	*:*	*J*	*Z*	*j*	*z*
B	VT	ESC	*+*	*;*	*K*	*[*	*k*	*{*
C	FF		*,*	*<*	*L*	**	*l*	*|*
D	CR		*−*	*=*	*M*	*]*	*m*	*}*
E	SO		*.*	*>*	*N*	*^*	*n*	*~*
F	SI		*/*	*?*	*O*	*_*	*o*	

No character is
available for hex code 15 in
the Italic table

C

International character sets for the Italic table

You can select one of the following eight international character sets for the Italic character table shown below using the default-setting mode or the ESC R command. For example, when you select "Italic France," the characters in the "France" row are used in the Italic character table.

Country	ASCII code hex											
	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
US	#	$	@	[	\	]	^	'	{	|	}	~
France	#	$	à	°	ç	§	^	`	é	ù	è	"
Germany	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
UK	£	$	@	[	\	]	^	`	{	|	}	~
Denmark	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~
Sweden	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
Italy	#	$	@	°	\	é	^	ù	à	ò	è	ì
Spain	Pt	$	@	¡	Ñ	¿	^	`	"	ñ	}	~

You can select one of the following seven additional sets only with the ESC R command.

Japan	#	$	@	[	¥	]	^	`	{	|	}	~
Norway	#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	à	ü
DenmarkII	#	$	É	Æ	Ø	Å	Ü	é	æ	ø	à	ü
Spain II	#	$	á	¡	Ñ	¿	é	`	í	ñ	ó	ú
Latin America	#	$	á	¡	Ñ	¿	é	ü	í	ñ	ó	ú
Korea*	#	$	@	[	₩	]	^	`	{	|	}	~
Legal*	#	$	§	°	´	"	¶	'	©	®	†	™

C

Appendix D

Customer Support Information

Contacting Customer Support

If your printer is not operating properly and you cannot solve the problem using the troubleshooting information in Chapter 7, contact customer support services for assistance. You will find the telephone number and further important information for your country in the Service and Support brochure provided with your printer.

We will be able to help you much more quickly if you give us the following information:

❏ Printer model

❏ Serial number of your printer
(The serial number label is on the back of the printer.)

❏ Brand and model of your computer

❏ Printer software version
(Click the **About** button in your printer driver.)

❏ Windows version (for example, 95, 98, NT 4.0, or 3.1)

❏ Software application(s) you normally use with the printer and their version number(s)

D

Glossary

ASCII
American Standard Code for Information Interchange. A standardized coding system for assigning numeral codes to letters and symbols.

auto line feed
When this option is turned on in the default-setting mode or the EPSON Remote! utility, each carriage return (CR) code is automatically followed by a line feed (LF) code.

bidirectional printing
Printing in which the print head prints in both directions (bidirectionally), from left to right and then right to left. This increases the print speed but may reduce precise vertical alignment. Bidirectional printing is the printer's standard printing mode. See also *unidirectional printing*.

buffer
The portion of the printer's memory used to store data before it is printed.

character table
A collection of letters, numbers, and symbols that provides you with the set of characters used in a particular language.

characters per inch (cpi)
The number of characters that can fit in one inch of a text line, determined by the size of the characters. See also *pitch*.

continuous paper
Paper that has sprocket-feed holes on both long edges, is perforated between pages, and is supplied in a folded stack. Also called fanfold paper.

control codes
Special codes used to control printer functions, such as a carriage return or line feed, instead of printing characters.

cpi
See *characters per inch*.

cut-sheet feeder
An optional, detachable device that automatically feeds single sheets of paper into the printer.

data dump
See *hex dump*.

default
Value settings or settings that take effect when a device (such as a printer) is turned on, reset, or initialized. See also *factory settings*.

dithering
A halftoning method in which dots are printed in a predetermined pattern to simulate a shade or tone. Dithering works best for images with solid colors, such as charts and graphs. See also *halftoning*.

dot matrix
A method of printing in which each letter or symbol is formed by a pattern (matrix) of individual dots.

draft
The print mode used by your printer when you select Draft as the font. The Draft font uses fewer dots per character for faster printing. See also *letter quality*.

driver
See *printer driver*.

ESC/P
Abbreviation for EPSON Standard Code for Printers, the system of commands your computer uses to control your printer. It is standard for all EPSON printers and supported by most application software for personal computers.

ESC/P2
The enhanced version of the ESC/P printer command language.

factory settings
The configuration settings for a computer or printer that are set at the factory. If the device reverts to these settings when initialized, they are called default settings, see also *default*.

fanfold paper
See *continuous paper*.

font
A style of type designated by a name such as Roman or Sans Serif.

form feed (FF)
A control panel button and control code that advances the paper to the next top-of-form position.

halftoning
A method of using dot patterns to represent an image. Halftoning makes it possible to produce varying shades of gray using only black dots, or a nearly infinite array of colors using only a few colors of dots. See also *dithering*.

hex dump
A troubleshooting feature that helps identify the cause of communication problems between the printer and the computer. When the printer is in hex dump mode, it prints each code that it receives in hexadecimal notation as well as in ASCII codes that stand for characters. Also called *data dump*.

interface

The connection (via a cable) between the computer and the printer through which print data is transmitted to the printer.

initialization

Returns the printer to its default settings (a fixed set of conditions).

landscape

Printing that is oriented sideways on the page. This orientation gives you a page that is wider than it is high and is useful for printing spreadsheets. See also *portrait*.

letter quality (LQ)

The print mode used by your printer, printing with **letter**-**quality** fonts provides better readability and appearance at a reduced print speed. See also *draft*.

line feed (LF)

A control panel button and control code that advances the paper one line space.

micro adjust

A printer feature that allows you to precisely adjust the tear-off and top-of-form positions.

paper positions

There are three paper positions for continuous paper printing: standby, tear-off, and top-of-form. For single-sheet printing, there is only the top-of-form position. See also *standby position, tear-off position*, and *top-of-form position*. For detailed information on these positions, see "Paper positions" on page 5 of the Glossary.

pitch

The size of the font, which is measured in the number of character per inch (cpi). The standard is 10 cpi. See also *character per inch.*

platen

The black roller that provides a backing for the paper during printing.

portrait

Printing that is oriented upright on the page (as opposed to landscape, in which printing is sideways on the page). This is the standard orientation for printing letters or documents. See also *landscape.*

printable area

The area of a page on which the printer can print. It is smaller than the physical size of the page because of margins.

printer driver

A software program that sends commands for using the functions of a particular printer.

reset

To return a printer to its default settings.

resolution

A measure of the amount of detail that can be represented. Resolution of printed images is measured by using the number of dots per inch (dpi).

self test

A method for checking the operation of the printer. When you run the self test, an internally stored self-pattern is printed.

standby position

The position of your continuous paper when it is attached to the tractor but not loaded in the printer. See also page 5 of the Glossary.

Tear Off/Bin button

A control panel button that feeds the perforation of continuous paper to the tear-off position. When pressed again, the paper feeds back to the top-of-form position. Selects the bin when the double-bin cut-sheet feeder is installed.

tear-off position

The position of your continuous paper when you finish printing if the auto tear-off mode is on or if you press the Tear Off/Bin button. Using the micro adjust feature, you can adjust the tear-off position so that the paper's perforation is aligned with the printer's tear-off edge. See also page 5 of the Glossary for paper positions.

top-of-form position

The position on the paper that the printer recognizes as the first printable line. This is the default top margin position. Using the micro adjust feature, you can adjust the top-of-form position. See also page 6 of the Glossary for top-of-form positions.

unidirectional printing

Printing in which the print head prints in one direction only. Unidirectional printing is useful for printing graphics because it provides precise vertical alignment. You can select unidirectional printing using the printer's default-setting mode or the EPSON Remote! utility. See also *bidirectional printing*.

Paper positions

Standby position
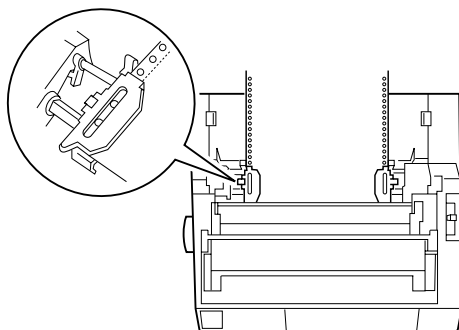
In the standby position, your paper is attached to the printer but is not inside the printer.

Tear-off position
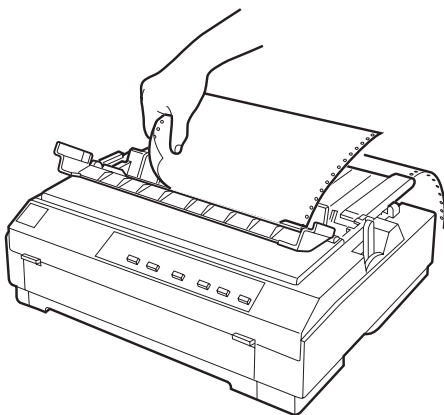
Tear off your printed document at the printer's tear-off edge.

Top-of-form position
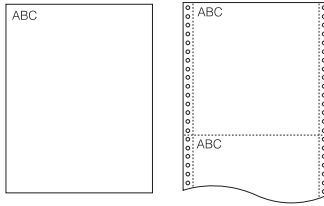
The letters ABC above are printed at the top-of-form position.

Index

Paper paths *8*

A

Adjusting
    tear-off position *2-35–2-36*
    top-of-form
              position *2-31–2-33*
Advanced document properties
4-31
Advanced menu *4-21*
Advancing to the
    tear-off edge *2-34–2-36*
Aligning vertical lines *7-17*
Attaching
    paper guide *1-11–1-12*
    printer cover *1-10*

B

Built-in font *5-2*

C

Character Tables *C-20–C-33*
Choosing a place for
    the printer *1-3–1-4*
Cleaning the printer *B-2*
Clearing
    paper jams *7-16*
    printer *B-2*
Connecting the printer *1-14–1-15*
Continuous paper
    printing *4–6*
    problems *7-8*
Control panel *5-2–5-11*
Cut-sheet feeder
    switching between

continuous paper
and single-sheet
paper *A-18*

D

Default setting *5-4–5-11*
Document properties *4-30*

E

Edge guide *2-19*
ENERGY STAR compliance *12*
EPSON Remote! *1-16*
EPSON Remote! Utility *4-32*
EPSON Status Monitor 3 *1-16*
Error indicator *7-2–7-3*

F

Front
    paper guide *2-19*
    slot *8*, *3-2*, *3-11–3-13*

G

Graphics menu *4-8*

H

Hex dump *7-20–7-21*
High-capacity cut-sheet
    feeder *A-2*

I

Installing
    interface card *A-30*
    paper tension unit *1-10*, *2-25*
    ribbon cartridge *1-5–1-10*