EPSON®

9-Pin Dot Matrix Printer

FX-880/FX-1180

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Printed on Recycled Paper.

User's Guide

FCC Compliance Statement
For United States Users

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

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

WARNING

The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification of this device and may cause interference levels which exceed the limits established by the FCC for this equipment. It is the responsibility of the user to obtain and use a shielded equipment interface cable with this device. If this equipment has more than one interface connector, do not leave cables connected to unused interfaces.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

For Canadian Users

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Declaration of Conformity

According to ISO/IEC Guide 22 and EN 45014

Manufacturer:	SEIKO EPSON CORPORATION
Address:	3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392 Japan
Representative:	EPSON EUROPE B.V.
Address:	Prof. J. H. Bavincklaan 5 1183 AT Amstelveen The Netherlands

Declares that the Product:

Product Name:	Dot Matrix Printer
Type Name:	FX-880/1180
Model:	P980A/P981A

Conforms to the following Directive(s) and Norm(s):

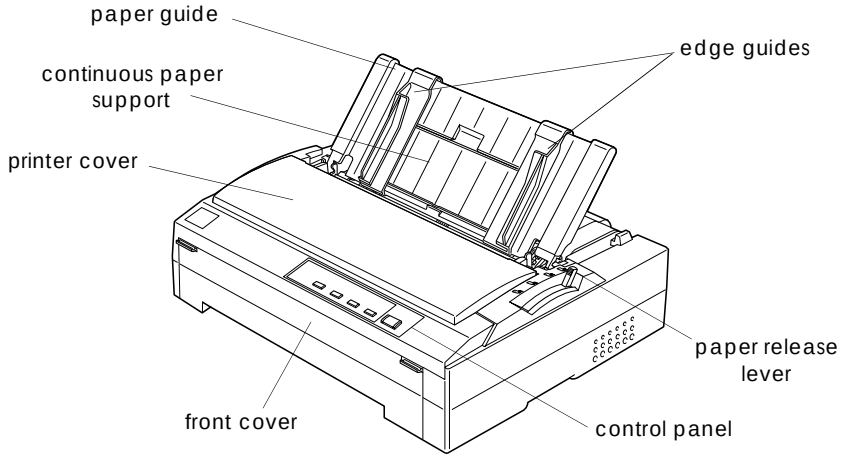
Directive 73/23/EEC:
EN 60950

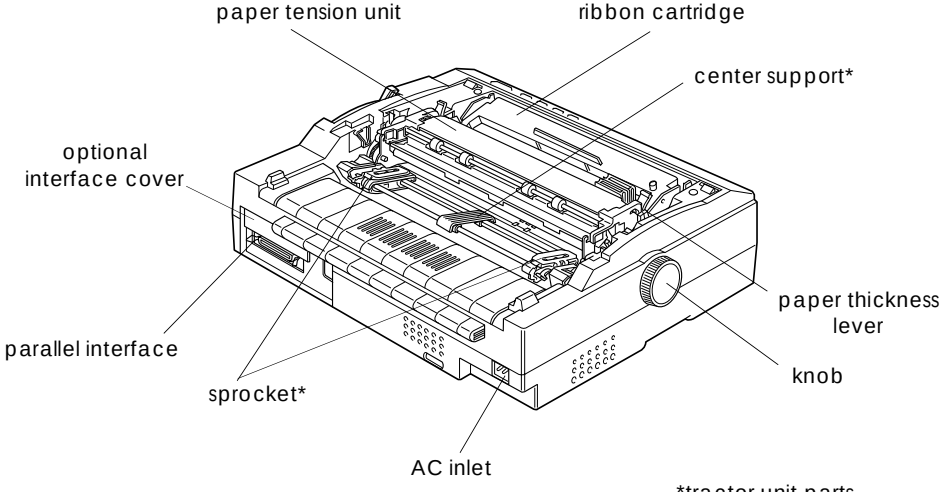
Directive 89/336/EEC:
EN 55022 Class B
EN 61000-3-2
EN 61000-3-3
EN 50082-1
IEC 801-2
IEC 801-3
IEC 801-4

January, 1998

Y. Ishii
President of EPSON EUROPE B.V.

Printer Parts





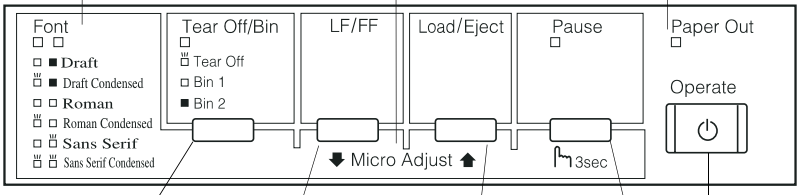
*tractor unit parts

Control Panel Buttons and Lights

Font lights
Indicate which font is selected. To select a font, see Chapter 5.

Micro Adjust
Using the micro adjust feature, you can press the D and U buttons to adjust the top-of-form or tear-off position. See Chapter 3.

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.



Operate button
Turns the printer on and off. The printer is off when the top of this button is even with the button protectors.

Tear Off/Bin button
- Feeds continuous paper forward 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.

Tear Off/Bin light
- Flashes when continuous paper is in the tear-off position.
- On when bin 1 of the optional cut-sheet feeder is selected.
- Off when bin 2 of the optional cut-sheet feeder is selected.

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

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 held down for three seconds, enters the micro adjust mode. When pressed again, exits the micro adjust mode.

Pause light
- On when the printer is paused.
- Flashes when the printer is in the micro adjust mode.

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Getting to Know Your Printer

Your new EPSON® 9-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, multi-part forms with one original plus up to five copies, labels, single sheets, and envelopes).

High-speed draft mode printing of up to 455 characters per second at 12 characters per inch.

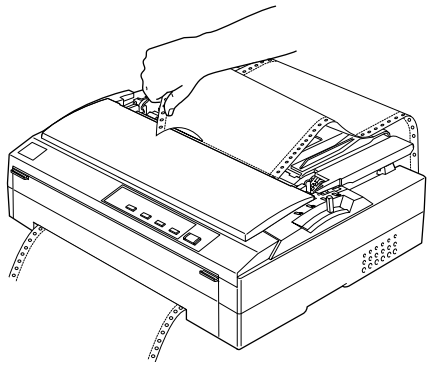
Your printer also comes with printer driver software, the EPSON Status Monitor 2 utility for Microsoft® Windows® 95 that lets you check the status of your printer quickly and easily, and other software. In addition, several options are available to help suit your individual needs.

Features

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

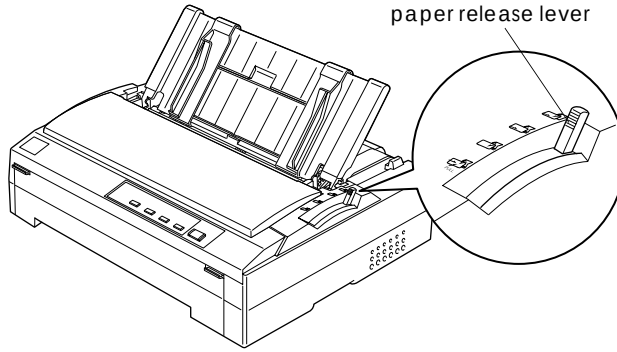
Use the **tear-off feature** to save paper.

If you are using the tractor in the front or rear push position, 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 the printed sheets and save the paper normally lost between documents. For more information, see Chapter 3.



Use the **paper release lever** to change the paper path without removing continuous paper from the tractors.

Using the paper release lever, you can easily switch to printing on single sheets without removing the continuous paper loaded in the printer. You can switch to single-sheet printing this way whenever the tractor is installed in the front or the rear push position and your continuous paper is in the standby position. For more information, see Chapter 3.



Use the **micro adjust feature** to adjust the top-of-form and tear-off positions.

The micro adjust feature allows you to move the paper forward or backward in 1/216-inch increments so that you can make precise adjustments to the top-of-form and tear-off positions. For more information, see Chapter 3.

Available Paper Paths

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

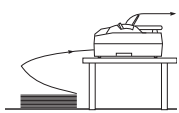
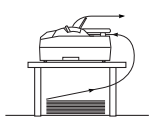
Printing on continuous paper

You can choose from three tractor positions (front push, rear 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 Chapter 3 for tractor installation and paper loading instructions.

Using the push tractor positions

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 tractor in the front or rear push position. This allows you to use the printer's tear-off edge to easily tear off sheets of continuous paper at the perforation. Also, when continuous paper is loaded on a push tractor, you can print on single sheets of paper from the paper guide without removing the continuous paper from the tractor.

There are two push tractor positions: front and rear. The tractor is installed in the rear push position when the printer is shipped. See the table below for details about the push positions and the corresponding paper paths.

Tractor Position	Description
 front push	Load paper from the front slot. If you print on thick paper such as multi-part forms, use the front paper slot because this paper path is almost straight. This reduces the chances of paper jams.
 rear push	Load paper from the rear slot. ***Caution:*** *Do not load continuous paper with labels from the rear slot. Labels require a straight paper path; otherwise the labels may come off their backing sheets inside the printer and cause a paper jam.* ***Note:*** *The rear slot is also not recommended when your multi-part forms have 5 or 6 parts (1 original plus 4 or 5 copies), because the paper might jam.*

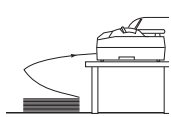
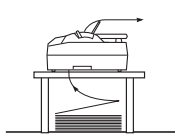
Using the pull tractor position

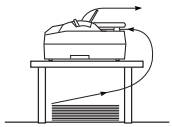
If you often print on thick or heavy continuous paper, such as multi-part forms or continuous paper with labels, use the tractor in the pull position. The pull tractor provides you with the best paper jam prevention, and allows you to load continuous paper from the front, rear, or bottom of the printer. However, you cannot use the tear-off feature when the tractor is in the pull position.

Note:
If you plan to use the 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 the optional additional tractor unit (C80020] for FX-880, C80021] for FX-1180) and install it in the pull position.

If you use a push tractor with the optional tractor in the pull position, you can create a push / pull tractor combination. This improves the performance of continuous paper, and is recommended for printing on continuous pre-printed forms. See "Using two tractors in a push / pull combination" on page 3-30 for more information.

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 multi-part forms or continuous paper with labels, use the front paper slot because this paper path is nearly straight. This reduces the chances 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 multi-part forms or continuous paper with labels. ***Note:*** *When loading paper from the bottom slot, be sure to use a printer stand with an opening large enough for the paper to feed through it without obstruction.*



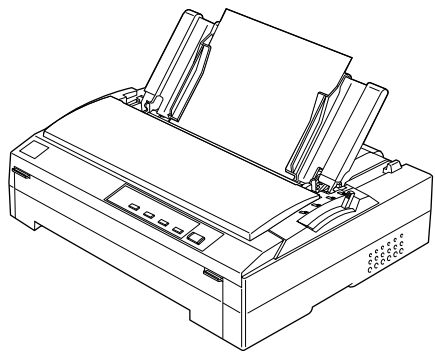
rear

If the front or bottom paper slot is unavailable, you can also load ordinary continuous paper from the rear slot. Please note that loading paper 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 the backing sheets inside the printer and cause a paper jam.

Printing on single sheets

As shown below, you can load ordinary single sheets (not single-sheet multi-part forms) and envelopes one at a time from the top of the printer, using the paper guide that comes with the printer.



You can also load single-sheet paper using an optional cut-sheet feeder, front sheet guide, or front paper guide. For information on printing on single sheets, see Chapter 4. For information on options, see Appendix A.

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, or roll paper holder, 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 Cartridges

Your printer uses the following ribbon cartridge:

EPSON black ribbon cartridge
FX-880: #8750
FX-1180: #8755

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 under "Installing or Replacing the Ribbon Cartridge" on page 1-5.

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 service 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.

Note for German-speaking users:
Bei Anschluß des Druckers an die Stromversorgung muß sichergestellt werden, daß die Gebäudeinstallation mit einem 16 A-Überstromschalter abgesichert ist.

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, and copiers in an effort to reduce air pollution caused by power generation.

For United Kingdom Users

Use of options

Epson (UK) Limited shall not be liable against any damages or problems arising from the use of any options or consumable products other than those designated as Original EPSON Products or EPSON Approved Products by Epson (UK) Limited.

Safety information

W ***Warning:*** *This appliance must be earthed. Refer to rating plate for voltage and check that the appliance voltage corresponds to the supply voltage.*

Important: *The wires in the mains lead fitted to this appliance are coloured in accordance with the following code:*

Green and yellow — Earth
Blue — Neutral
Brown — Live

If you have to fit a plug:
As the colours of the mains lead of this appliance may not match coloured markings used to identify the terminals in a plug, please proceed as follows:

The green and yellow wire must be connected to the terminal in the plug which is marked with the letter E or the Earth symbol (G).

The blue wire must be connected to the terminal in the plug marked with the letter N.

The brown wire must be connected to the terminal in the plug marked with the letter L.

If damage occurs to the plug, replace the cord set or consult a qualified electrician.

Replace fuses only with a fuse of the correct size and rating.

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.

Although this manual includes only illustrations of the FX-880 printer, you can use the instructions and illustrations in this manual for both the FX-880 and the FX-1180; the printer work the same way.

Warnings, Cautions, and Notes

This guide uses the following conventions:

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

C ***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

1

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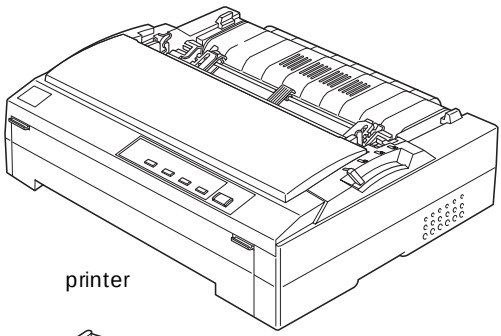
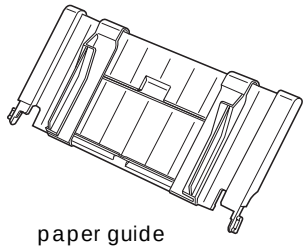
Unpacking the Printer

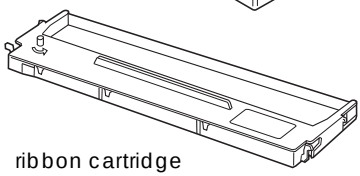
Besides this guide, your printer box should include EPSON printer software disks, a Notice Sheet, and the following items:



printer



paper guide



ribbon cartridge

power cord

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 in which you bought your printer; be sure the plug you have is the right one for your location.

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.

C ***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.

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. Also 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.

  Note for French-speaking users:
  Placez l'imprimante près d'une prise de contact où la fiche peut être débranchée facilement.

- 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:

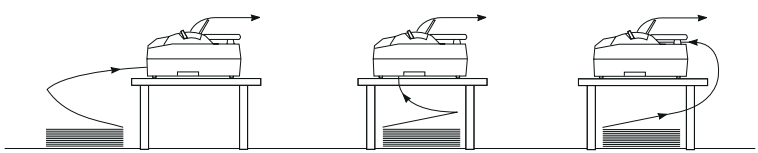
Use a stand that supports at least the following weight:
15.2 kg (33.51 lb) for FX-880
19.2 kg (42.33 lb) for FX-1180

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.



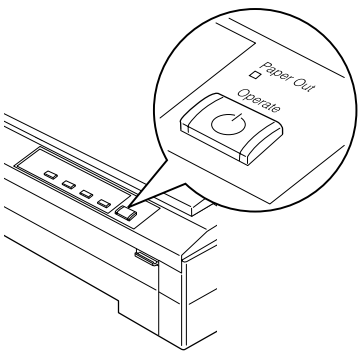
Installing or Replacing the Ribbon Cartridge

This section describes how to install or replace the ribbon cartridge. The installation and replacement procedures are the same except that you need to remove the used ribbon cartridge before replacing it with a new one.

EPSON recommends the use of genuine EPSON ribbon cartridges (#8750 for FX-880, #8755 for FX-1180). Products not manufactured by EPSON may cause damage to your printer not covered by EPSON's warranties.

W ***Warning:***
You 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 before touching it.

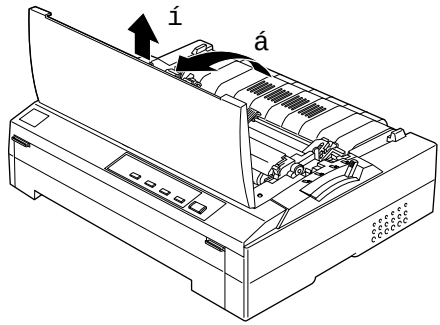
1. Make sure the printer is turned off. The printer is off when the surface of the Operate button is even with the button protectors as shown.



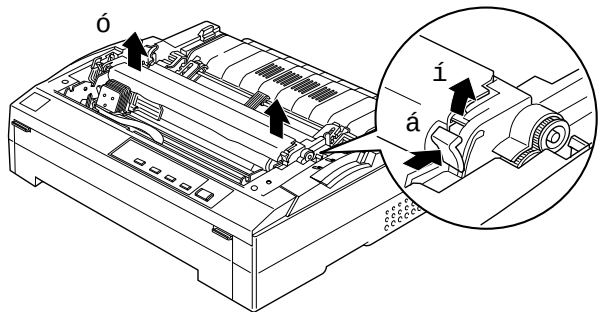
C ***Caution:***
Moving the print head while the printer is on may damage the printer.

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

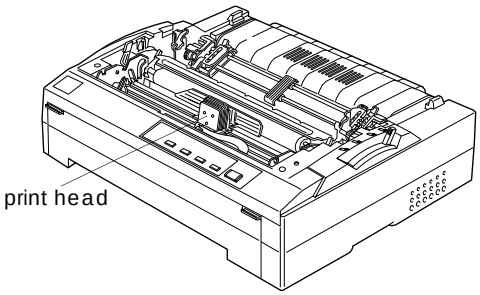
3. Lift the printer cover by its back edge and then pull it straight up and off.



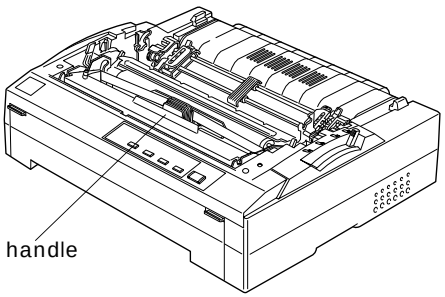
4. Press up the tabs on each side of the paper tension unit, then lift the front of the unit and pull it up and out of the printer.



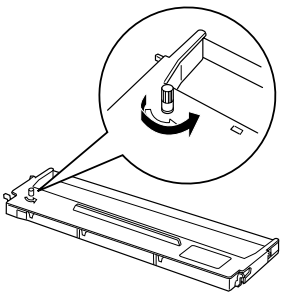
5. Make sure that the print head is not hot; if it is, let it cool for a few minutes before touching it. Then slide the print head to the middle of the printer by hand.



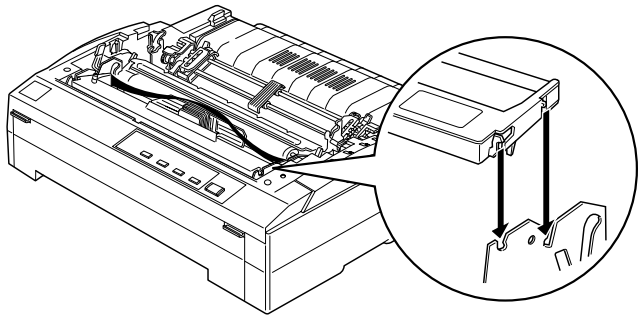
6. If a used ribbon cartridge is installed, grasp the cartridge by its handle and pull it up and out of the printer.



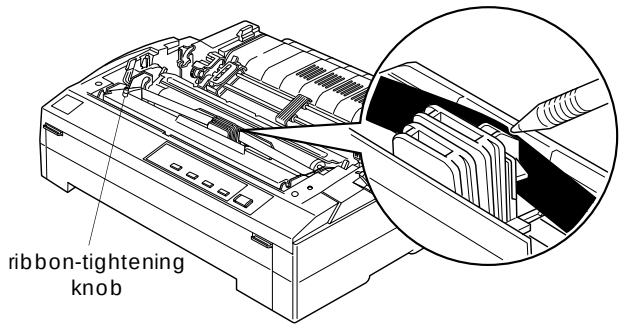
7. Remove the new ribbon cartridge from the package and turn the ribbon-tightening knob in the direction of the arrow to remove any slack in the ribbon.



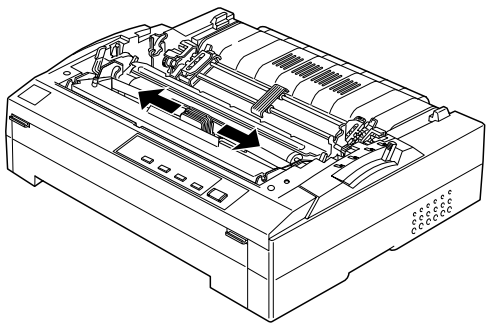
8. Hold the ribbon cartridge by its handle and push it firmly down into position; then press down on both ends of the cartridge to fit the plastic hooks into the slots.



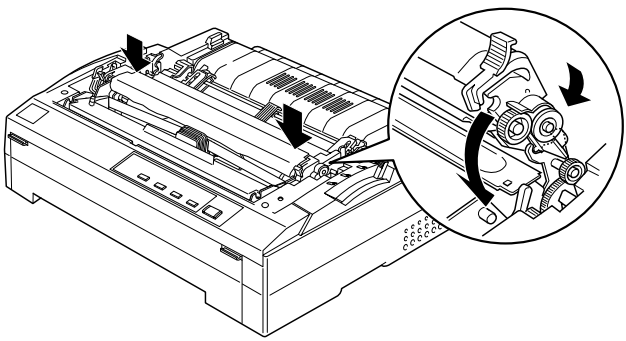
9. Use a pointed object, such as a ball point pen, to guide the ribbon between the print head and ribbon guide while you turn the ribbon-tightening knob to help feed the ribbon into place.



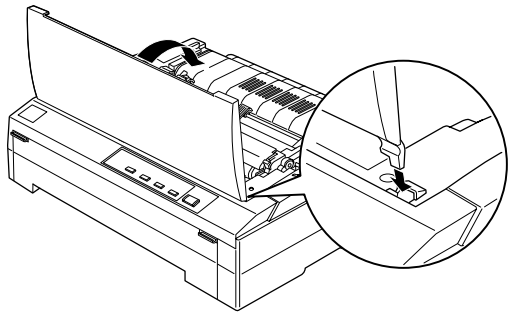
10. Slide the print head from side to side to make sure it moves smoothly. Also check that the ribbon is not twisted or creased.



11. Install the paper tension unit by placing it on the printer's mounting pegs and lowering it into place. Press down on both ends of the unit until it clicks into place.

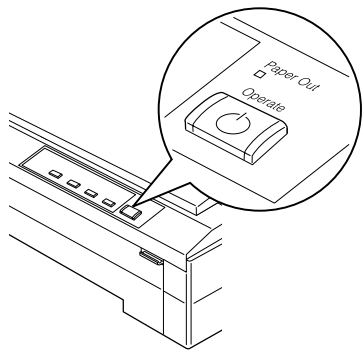


12. Replace the printer cover by inserting the front tabs into the slots on the printer and lowering the cover into place. Then push it down until it clicks.



Plugging in the Printer

1. Make sure the printer is turned off. The printer is off when the surface of the Operate button is even with the button protectors as shown below.



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.

C ***Caution:***
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

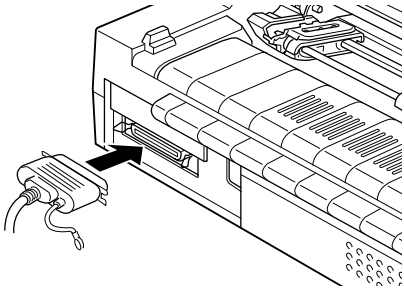
To connect your computer to your printer's built-in parallel interface, you need a shielded, twisted-pair parallel cable with a D-SUB, 25-pin, male connector for your computer and a 36-pin Centronics® compatible connector for the printer.

If your computer requires a different type of printer interface, you should be able to use one of the optional interfaces described on page A-25.

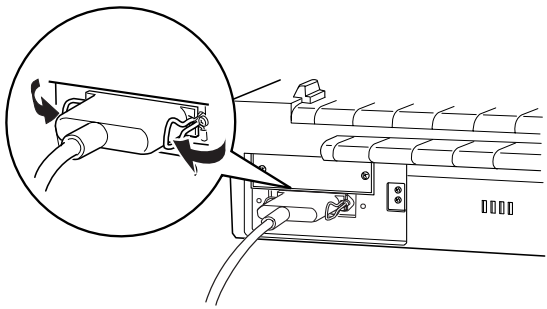
Follow the steps below to connect the printer to your computer using the built-in parallel interface.

1. Make sure both the printer and computer are turned off. The printer is off when the surface of the Operate button is even with the button protectors.

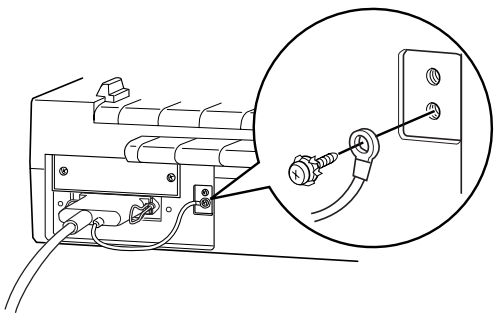
2. Plug the cable connector securely into the printer's interface connector.



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. (If the cable has a ground wire at the computer end, attach it to the ground connector at the back of the computer.)

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

Installing the Printer Driver on Your PC

After you connect the printer to your computer, install the printer driver on your computer. The 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. The printer driver is included in the EPSON printer software disks that come with your printer.

If you are using DOS, see "Optional printer driver for DOS program users" on page 1-18.

Note:
Before you install the printer software, it is best to make backup copies of the EPSON printer software disks.

For Windows 95 or NT 4.0

Follow the steps below to install the printer driver for Windows 95 or NT 4.0. If you want to use the plug-and-play feature to install the printer driver for Windows 95, see page 1-14.

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

1. Make sure Windows 95 or NT 4.0 is running and the printer is off.

2. Insert Disk 1 of your printer driver software in a disk drive. Double-click the My Computer icon, and then double-click the drive in which you inserted the disk.

3. Double-click the Setup.exe icon, then select your printer icon in the EPSON Printer Driver Setup dialog box shown below. Click OK and follow the on-screen instructions.

After you install the printer driver for Windows 95, you can install the EPSON Status Monitor 2 utility program. See Chapter 6 for information on installing and using the Status Monitor.

Using Windows 95 plug-and-play

If you are using Windows 95 and want to install the driver using plug-and-play, follow the steps below.

Note:
You can install the printer driver using plug-and-play only if your computer has an IEEE-1284 compatible, bidirectional parallel port. See your computer documentation for more information.

1. Make sure the printer is connected to your computer as described on page 1-11.

2. Turn off your printer and computer, if necessary.

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

3. First turn on your printer and then turn on the computer. Your computer starts loading Windows 95.

4. If you use a password, enter it at the prompt. The New Hardware Found screen appears and displays your printer's model name.

   Note:
   If you do not see the New Hardware Found screen, or if you run into any other problem, click Cancel *and follow the instructions under "For Windows 95 or NT 4.0" on page 1-13.*

5. Click the Driver from disk provided by hardware manufacturer radio button.

   Note:
   Windows 95 may display the New Hardware Found screen again the next time you turn on your computer. If this happens, select the Do not install a driver *radio button and then click* OK. *This screen will not appear again.*

6. Click OK. You see the Install From Disk screen.

7. Insert Disk 1 of your printer driver software in a disk drive.

8. Type A:\Win95 in the Copy manufacturer's files from box. (If you inserted the disk in a drive other than drive A, substitute the appropriate letter.) Then click OK. The Add Printer Wizard dialog box appears.

9. You can type a unique name for the printer in the Printer name box. However, we recommend that you keep the default model name as shown.

   If this is your only printer or you want to use this printer as the default printer for Windows 95 applications, select Yes. (No is the default setting.)

10. Click the Finish button. The program copies the files to your hard disk and adds an icon to the Printer's folder using the printer model name or the name you entered.

After you install the printer driver for Windows 95, you can install the EPSON Status Monitor 2 utility program. See Chapter 6 for information on installing and using the Status Monitor.

For Windows 3.1 or NT 3.5x

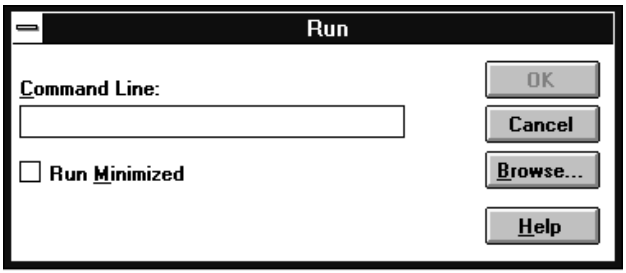
Follow the steps below to install the printer driver for Windows 3.1 or NT 3.5x.

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

1. Make sure Windows 3.1 or NT 3.5x is running and the Program Manager window is open.

2. Insert Disk 1 of your printer driver software in a disk drive.

3. Choose Run from the File menu. The following dialog box appears:



4. Type A:\SETUP. (If you inserted the disk in a drive other than drive A, substitute the appropriate letter.) Then click OK. The EPSON Printer Driver Setup dialog box appears.

5. Select your printer and click OK. Follow the instructions on the screen.

Optional printer drivers for DOS program users

To control the printer from DOS application programs, you must select the printer you are using during the application's installation or setup procedure.

Choose your EPSON printer at the appropriate step in the installation or setup procedure. If the list in your application does not include your printer, choose the first available printer from the following list:

For FX-880:	**For FX-1180:**
FX-870	FX-1170
FX-850	FX-1050
FX-800	FX-1000
FX-85	FX-105
FX-80+	FX-100+
FX-80	FX-100

If none of these printers is listed, choose the first one available from the following:

FX
LX
RX
MX
EPSON printer
Standard printer
Draft printer
ASCII printer

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

Chapter 2
Using the Printer Software

2

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About Your Printer Software

The EPSON software that comes with your printer includes the printer driver software, the EPSON Remote! utility, and the EPSON Status Monitor 2 utility for Windows 95.

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.

EPSON Remote! is a DOS-based printer setup utility that allows you to easily change the printer's default settings from the computer screen.

The EPSON Status Monitor 2 utility program is available only for Windows 95. It allows you to monitor the status of your printer, alerts you when errors occur, and provides you with troubleshooting tips. To install and use the Status Monitor, see Chapter 6, "Using EPSON Status Monitor 2."

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

To use the printer driver or EPSON Remote! utility, see the appropriate page below.

To use...	See page...
the printer driver with Windows 95	2-3
the printer driver with Windows 3.1	2-8
the printer driver with Windows NT 4.0	2-11
the printer driver with Windows NT 3.5 x	2-16
EPSON Remote! with DOS	2-21

Using the Printer Driver With Windows 95

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. To access the printer driver, see "Accessing the printer driver from Windows applications" or "Accessing the printer driver from the Start menu," below. To check and change the printer driver settings, see "Printer driver settings overview" on page 2-5.

Accessing the printer driver from Windows applications

To access the printer driver from a Windows application, follow the general steps below. How you access your printer driver may vary depending on the application you use. See your application manual for details.

Note:
When you access the printer driver from within a Windows application, any settings you make apply only to the application you are using.

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 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 printer driver settings.

Accessing the printer driver from the Start menu

To access the printer driver from the Start menu, follow the steps below.

Note:
When you access the printer driver from the Start menu, any change you make to the printer driver apply to all your applications.

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.

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 three menus: Paper, Graphics, and Device Options. To open these menus, see the sections on accessing the printer driver, above. The printer driver settings on each of these menus are described below.

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 setting.
- Intensity — Move the slider to make your printout lighter or darker.

Device Options menu

- Print Quality — Select the print quality from the Print Quality list. Higher quality means the printer produces more detailed printouts at a slower printing speed.

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 3, or with single sheets as described in Chapter 4.

Using the Printer Driver With Windows 3.1

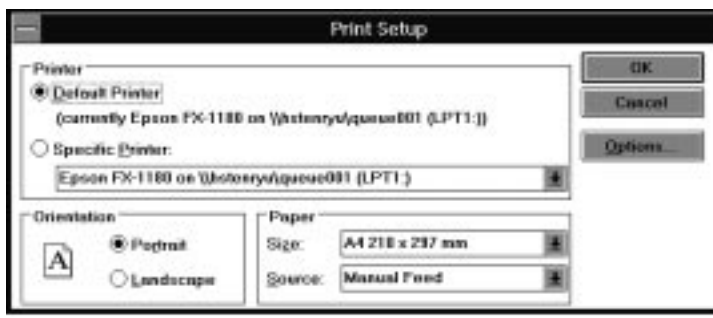
While many Windows applications override the settings made with the printer driver, some do not, so you must verify that the printer driver settings match your requirements. To access the printer driver, see "Accessing the printer driver from Windows applications" or "Accessing the printer driver from the Control Panel," below. To check and change the printer driver settings, see "Printer driver settings overview" on page 2-10.

Accessing the printer driver from Windows applications

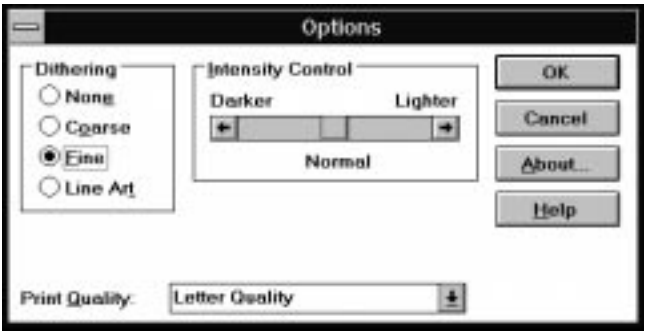
To access the printer driver from a Windows application, follow the general steps below. How you access your printer driver may vary depending on the application you use. See your application manual for details.

Note:
When you access the printer driver from within a Windows application, any settings you make apply only to the application you are using.

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, or Options. (You may need to click a combination of these buttons.) The printer driver settings window appears. See "Printer driver settings overview" on page 2-10 for detailed information about the printer driver settings.



Accessing the printer driver from the Control Panel

To access the printer driver from the Control Panel, follow the steps below.

Note:
When you access the printer driver from the Control Panel, the printer driver settings you make apply to all your applications.

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 printer driver settings window appears. To access all the settings, you may need to click Options in the printer driver settings window.

   See the next section for detailed information about the printer driver settings.

Printer driver settings overview

To access the printer driver settings window, see the sections on accessing the printer driver, above. The printer driver settings are described below.

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

q 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.
q 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.
q Paper Source	Click the paper source you want to use.
q Orientation	Select Portrait or Landscape. The diagram on the screen changes according to the orientation you select.
q 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.
q Intensity Control	Move the slider to make your printout lighter or darker.

- Print Quality — Select the print quality from the Print Quality list. Higher quality means the printer produces more detailed printouts at a slower printing speed.

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 3, or with single sheets as described in Chapter 4.

Using the Printer Driver With Windows NT 4.0

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. To access the printer driver, see "Accessing the printer driver from Windows applications" or "Accessing the printer driver from the Start menu," below. To check and change the printer driver settings, see "Printer driver settings overview" on page 2-13.

Note:
Accessing and changing printer driver settings may require network administration privileges. Ask your network administrator for more information.

Accessing the printer driver from Windows applications

To access the printer driver from a Windows application, follow the general steps below. How you access your printer driver may vary depending on the application you use. See your application manual for details.

Note:
When you access the printer driver from within a Windows application, any settings you make apply only to the application you are using.

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 the steps below.

Note:
When you access the printer driver from the Start menu, the printer driver settings you make apply to all your applications.

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.
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

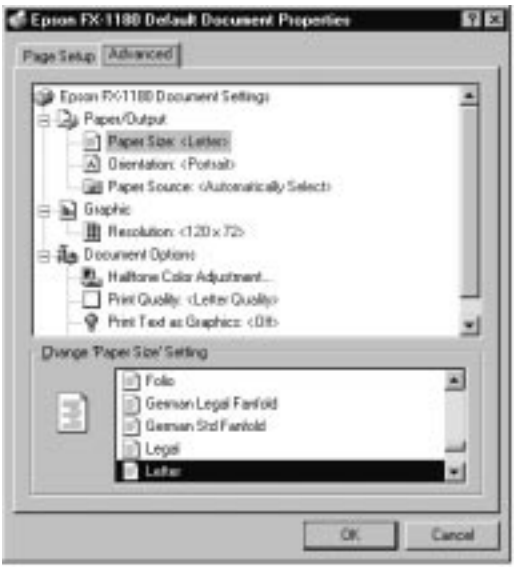
Your printer driver has two menus: Page Setup and Advanced. To open these menus, see the sections on accessing the printer driver, above. The printer driver settings on each of these menus are described below.

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** — Click the paper source you want to use from the Paper Source list.
- **Orientation** — Select Portrait or Landscape.

Advanced menu



q 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 paper source and then choose the paper size for that paper source from the Change Setting list box.

q 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.

q	Document Options	Double-click Halftone Color Adjustment to open the Halftone Color Adjustment dialog box. Click Print Text as Graphics or Metafile Spooling and select On or Off in each list box.

Once you've verified your printer driver setting and changed them if necessary, you are ready to print with continuous paper as described in Chapter 3, or with single sheets as described in Chapter 4.

Using the Printer Driver With Windows NT 3.5x

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. To access the printer driver, see "Accessing the printer driver from Windows applications" or "Accessing the printer driver from the Control Panel," below. To check and change the printer driver settings, see "Printer driver settings overview" on page 2-19.

Note:
Accessing and changing printer driver settings may require network administration privileges. Ask your network administrator for more information.

Accessing the printer driver from Windows applications

To access the printer driver from a Windows application, follow the general steps below. How you access your printer driver may vary depending on the application you use. See your application manual for details.

Note:
When you access the printer driver from within a Windows application, any settings you make apply only to the application you are using.

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.

3. Click Options (or a similar button) to view the Advanced Document Properties dialog box, which includes the Graphics Resolution, Color, and Optimizations settings. See “Printer driver settings overview” on page 2-19 for detailed information about the settings.

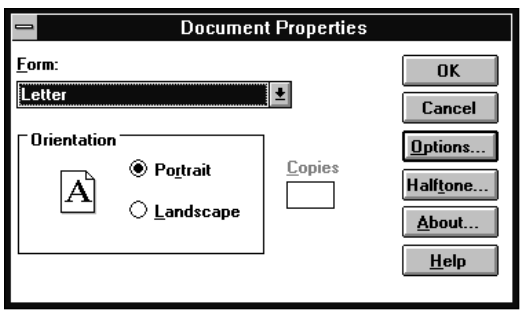
Accessing the printer driver from the Control Panel

To access the printer driver from the Control Panel, follow the steps below.

Note:
When you access the printer driver from the Control Panel, the settings you make apply to all your applications.

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.

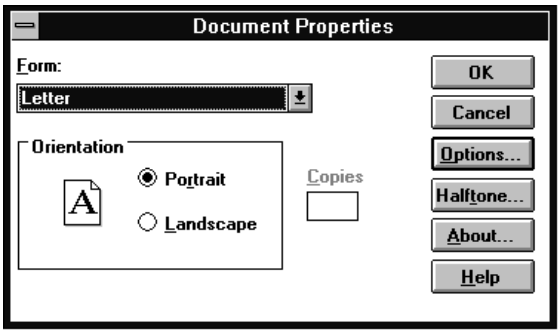
4. Click Options to open the Advanced Document Properties dialog box, which contains the Graphics Resolution, Color, and Optimization printer driver settings. See the next section for detailed information about the settings.

Printer driver settings overview

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

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 form you want to use. If you don't see your form type, select it from the Form list.
- **Orientation** — Select Portrait or Landscape. The diagram on the screen changes according to the orientation you select.

Advanced Document Properties dialog box

- **Graphics Resolution** — Click the printing resolution you want. If you don't see the resolution you want, select it 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 is available.
- **Optimization** — Turn the Print Text as Graphics setting on or off.

To set the brightness and contrast, input the RGB gamma, make other settings if necessary, and click Halftone. The Halftone Color Adjustment dialog box appears. For details, click Help in this dialog box.

Once you've verified your printer driver settings and changed them if necessary, you are ready to print with continuous paper as described in Chapter 3, or with single sheets as described in Chapter 4.

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!.

1. Insert Disk 1 of your printer driver software in a disk drive.
2. At the DOS prompt, type A:\SETUP. (If you inserted the disk in a drive other than drive A, 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 C:\EPUTIL.

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.

Chapter 3

Printing on Continuous Paper

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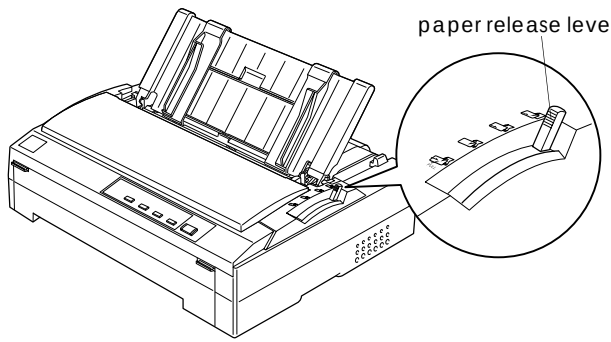
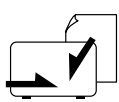
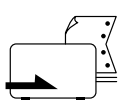
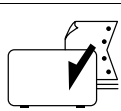
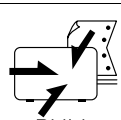
Setting the Paper Release Lever

You can load continuous paper in the printer from various paper sources, such as the front or rear push tractor. You set the paper release lever to indicate the paper source you want to use, as described in the table below. To decide which paper source and paper path best suits your printing needs, see "Available Paper Paths" on page 3.

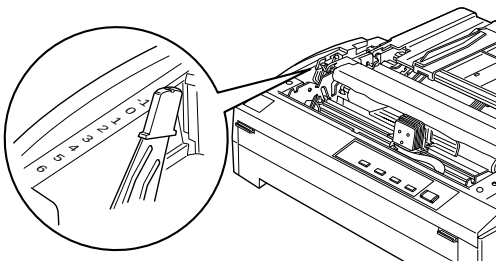


The table below describes each paper release lever position.

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 4.
	**Front push tractor position** For loading continuous paper from the tractor installed in the front push position. Also set the lever to this position when using the front push and pull tractors in combination.
	**Rear push tractor position** For loading continuous paper from the tractor installed in the rear push position. Also set the lever to this position when using the rear push and pull tractors in combination.
	**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.



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)	0
Thin paper	-1 or 0
Carbonless multi-part forms with: 2 parts (original + 1 copy) 3 parts (original + 2 copies) 4 parts (original + 3 copies) 5 parts (original + 4 copies) 6 parts (original + 5 copies)	 1 2 3 4 5
Continuous paper with labels	2
Envelopes	2 to 6

* See Appendix C for complete paper specifications.

Note:

- *When the temperature is 5°C (41°F) or less, set the paper thickness lever one position lower to improve print quality.*
- *When the temperature is 35°C (95°F) or more, set the paper thickness lever one position higher to improve print quality.*

Loading Multi-Part Forms

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

Except for setting the paper thickness lever, you load multi-part forms the same way as ordinary paper. For details, see the sections on loading continuous paper later in this chapter.

Note:

- *Be sure your multi-part forms do not exceed 0.46 mm (0.018 inch) in thickness.*
- *Do not load paper that is curled or has been folded.*
- *Thick paper, such as multi-part forms with five or six parts, requires a straight paper path to avoid paper jams. Load thick paper in the front or bottom slots.*

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. You can load labels in the front (push tractor or pull tractor) or bottom (pull tractor) paper slot; however, for best results, use the tractor in the pull position, and load paper in the front or bottom paper slot.

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 with the pull tractor" later in this chapter for more information.

C ***Caution:***

- *It is best to load continuous paper with labels on the pull tractor. Loading labels on the rear or the front push tractor is not recommended.*
- *Never feed labels backward using the* Load/Eject *or* Tear Off/Bin *button. When fed backward, labels can easily peel off the backing sheet and cause a paper jam.*
- *Because labels are sensitive to temperature and humidity, use them only under normal operating conditions, as follows:*

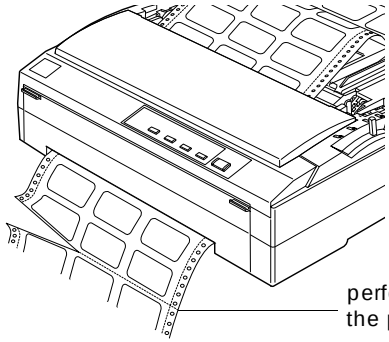
Temperature	*15 to 25°C (59 to 77°F)*
Humidity	*30 to 60% RH*

- *Do not leave labels loaded in the printer between jobs; they may curl around the platen and jam when you resume printing.*
- *Do not load continuous paper with labels from the rear paper slot. Because the paper path from the rear slot is curved, labels may come off their backing sheets inside the printer and cause a paper jam.*
- *Do not load paper that is curled or has been folded.*

Removing continuous paper with labels

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

1. Tear off the fresh 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.

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

Using the Tractor in the Front Push Position

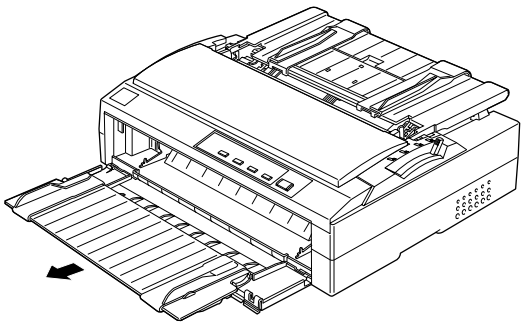
Installing the tractor in the front push position

Before installing the tractor in the front push position, remove it from its current position. If the tractor is in the rear push position, remove the paper guide and then press the tractor's lock tabs while lifting it out. If the tractor is in the pull position, remove it as described on page 3-28.

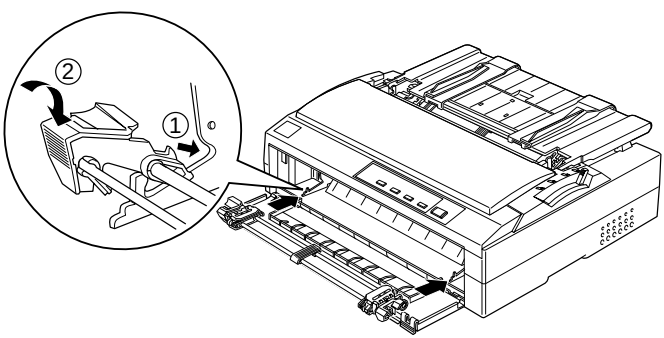
Note:
The tractor is installed in the rear push position when the printer is shipped.

1. Make sure the printer is turned off. If necessary, install the paper guide on your printer as described on page 4-3.

2. If the optional front sheet guide is installed, remove it by grasping the fins on both sides and pulling the guide slightly up and away from the printer. If the optional front paper guide is installed, open the front cover and remove it.



3. Insert the tractor into the printer's mounting slots and press down both ends of the tractor to make sure that it is firmly seated.



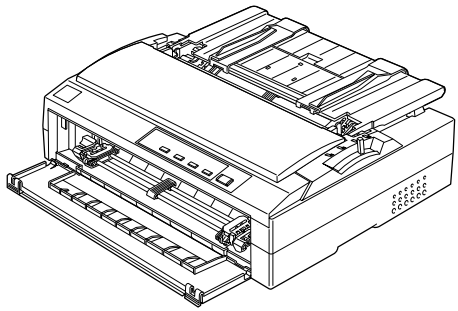
See the next section for instructions on loading continuous paper with the front push tractor.

Loading paper with the front push tractor

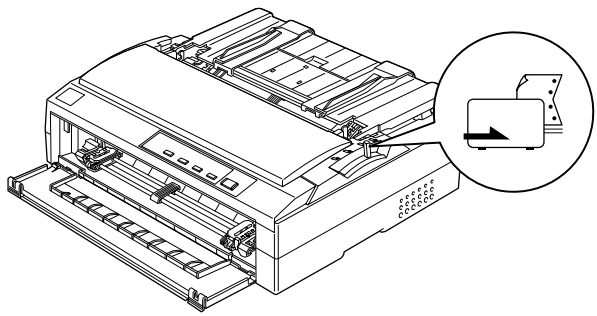
To load paper onto the front push tractor, follow the steps below.

1. Make sure the printer is turned off.

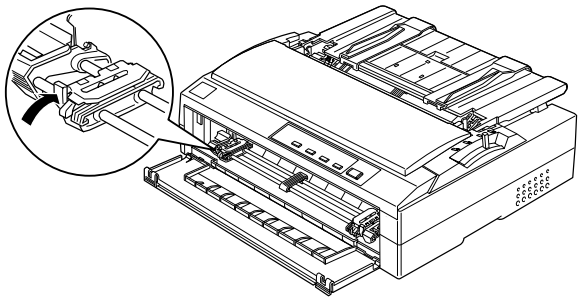
2. Open the front cover. Make sure the tractor is installed in the front push position.



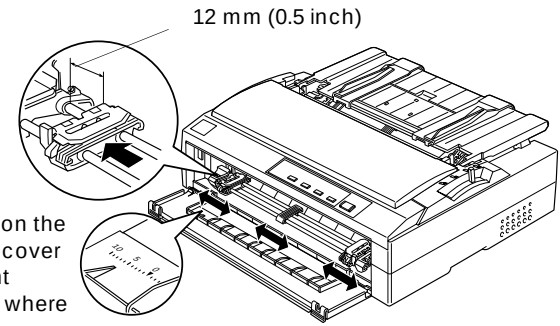
3. Set the paper release lever to the front push tractor position. Also set the paper thickness lever (located under the printer cover) to the proper position for your paper's thickness.



4. Release the left and right sprockets by pushing the blue sprocket lock levers backward.

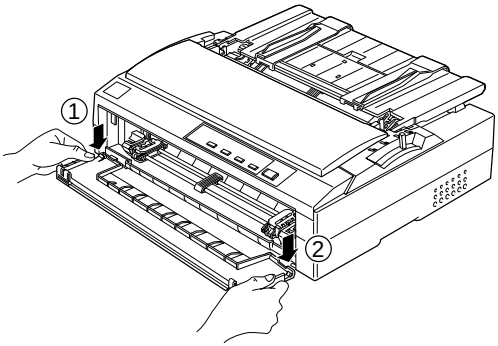


5. Slide the left sprocket approximately 12 mm (0.5 inch) from the far left position and pull the blue lever forward to lock it in place. Then slide the right sprocket to match the width of your paper, but do not lock it. Move the center support midway between the two sprocket units.

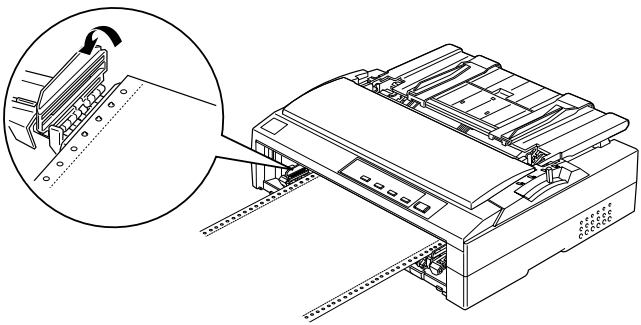


The triangle mark on the inside of the front cover indicates the point furthest to the left where printing can begin.

6. Remove the front cover by pushing it straight down, as shown below.



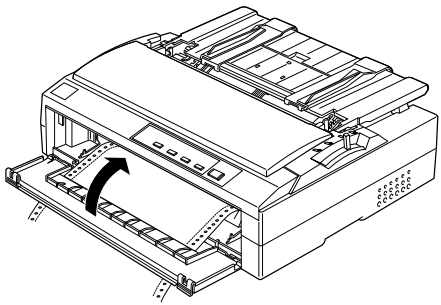
7. Make sure your paper has a clean, straight edge. Then open both sprocket covers and fit the first four holes of the paper, printable side up, over the tractor pins.



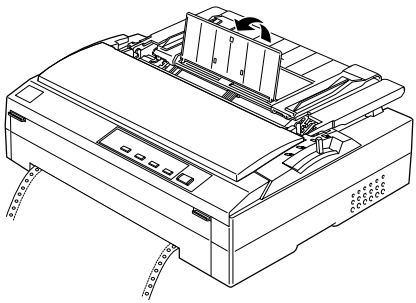
8. Close the sprocket covers.

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

10. Attach the front cover with the continuous paper positioned as shown below.



11. Make sure that the paper guide is lying flat on the printer and the edge guides are open all the way to the left and right. Then raise the continuous paper support.



12. Turn on the printer. When the printer receives data, it automatically loads the paper and starts printing.

13. After you finish printing, follow the steps in the next section to remove your printed document.

If the first line on your page appears too high or low, you can change its position by using the micro adjust feature as described in “Adjusting the Top-of-Form Position” on page 3-35.

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.

Removing the printed document from the front push tractor

To remove the printed document, follow the steps below.

1. Press the Tear Off/Bin button to feed the paper's perforation to the tear-off edge of the printer cover.

   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 as described in "Adjusting the tear-off position" on page 3-38.

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

2. Tear off the printed document using the tear-off edge of the printer cover.

3. To feed the continuous paper backward out of the printer and into the standby position, press the Load/Eject button.

To remove the remaining paper from the printer, press the Load/Eject button to feed the paper backward to the standby position. Then open the sprocket covers of the tractor and remove the paper.

C ***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.*

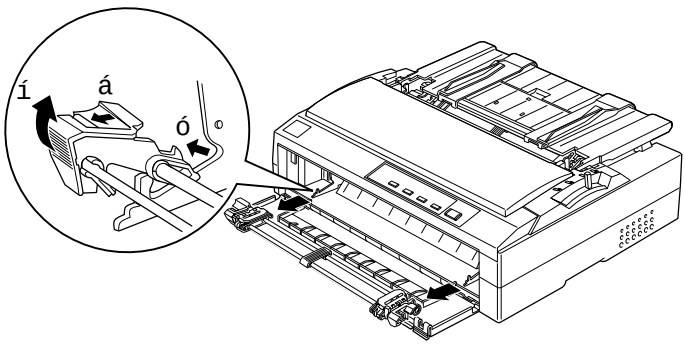
Removing the tractor from the front push position

To remove the tractor from the front push position, follow the steps below.

1. Make sure the printer is turned off.

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

3. Press the tractor's lock tabs, tilt the tractor up, and lift it out of the printer.



Using the Tractor in the Rear Push Position

The tractor is installed in the rear push position when the printer is shipped. If your tractor is in the rear push position, skip to "Loading paper with the rear push tractor" on page 3-15 for instructions on loading continuous paper.

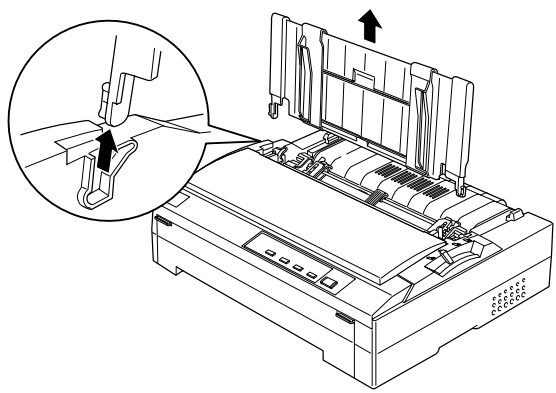
Note:
Thick paper, such as continuous paper with labels or multi-part forms with five or six parts, requires a relatively straight paper path to avoid paper jams. When printing on thick continuous paper, use the tractor in the front push position or the pull position.

Installing the tractor in the rear push position

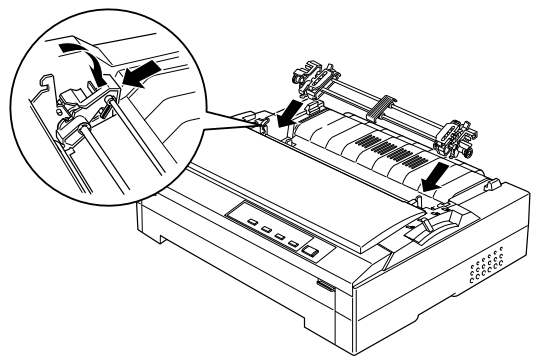
Before installing the tractor in the rear push position, remove it from its current position. If the tractor is in the front push position, remove it by pressing the tractor's lock tabs while lifting it out. If the tractor is in the pull position, remove it as described on page 3-28.

1. Make sure the printer is turned off.

2. Lift the paper guide up and off the printer.



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.

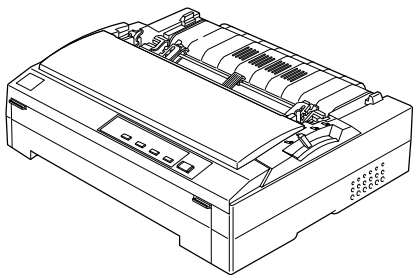


See the next section for instructions on loading continuous paper with the rear push tractor.

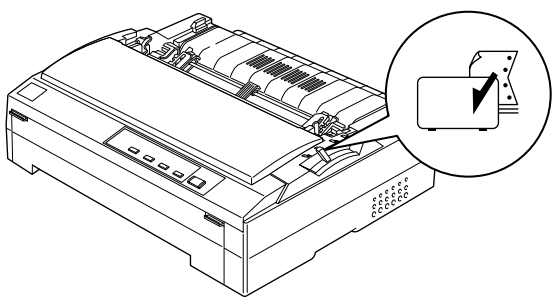
Loading paper with the rear push tractor

To load paper onto the rear push tractor, follow the steps below.

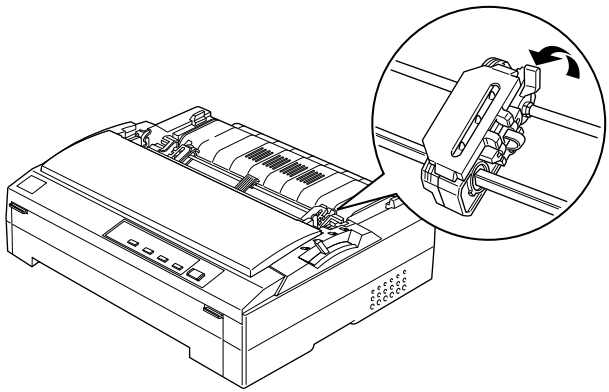
1. Make sure the printer is turned off and the tractor is installed in the rear push position. Also make sure the paper guide is removed, as shown on page 3-14.



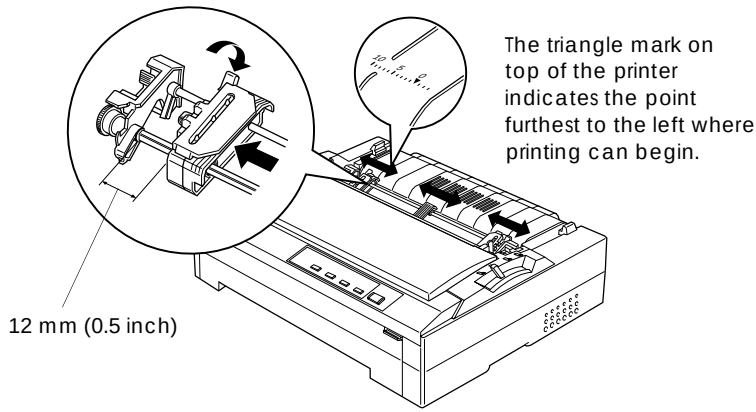
2. Set the paper release lever to the rear push tractor position.



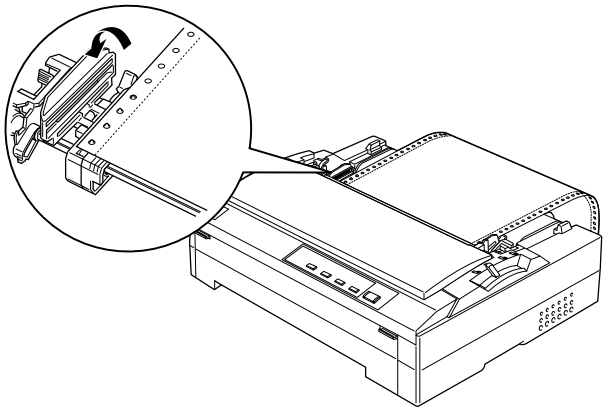
3. Release the left and right sprockets by pulling the blue sprocket lock levers forward.



4. Slide the left sprocket approximately 12 mm (0.5 inch) from the far left position and push the blue lever back to lock it in place. Then slide the right sprocket to match the width of your paper, but do not lock it. Move the center support midway between the two sprocket units.



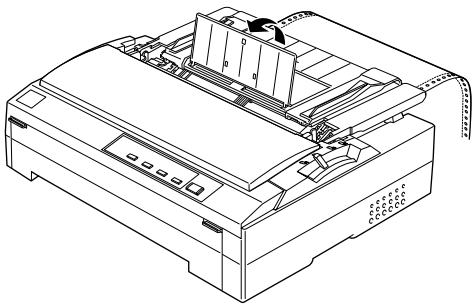
5. Make sure your paper has a clean, straight edge. Then open both sprocket covers and fit the first four holes of the paper, printable side down, over the tractor pins.



6. Close the sprocket covers.

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

8. Attach the paper guide and lay it flat on the printer. Open the edge guides all the way to the left and right, then raise the continuous paper support.



9. Turn on the printer. When the printer receives data, it automatically loads the paper and starts printing.

10. After you finish printing, follow the steps in the next section to remove your printed document.

If the first line on your page appears too high or low, you can change its position using the micro adjust feature as described in "Adjusting the Top-of-Form Position" on page 3-35.

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.

Removing the printed document from the rear push tractor

To remove the printed document, follow the steps below.

1. Press the Tear Off/Bin button to feed the paper's perforation to the tear-off edge of the printer cover.

   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 3-38.

2. Tear off the printed document using the tear-off edge of the printer cover.

3. To feed the continuous paper backward out of the printer and into the standby position, press the Load/Eject button.

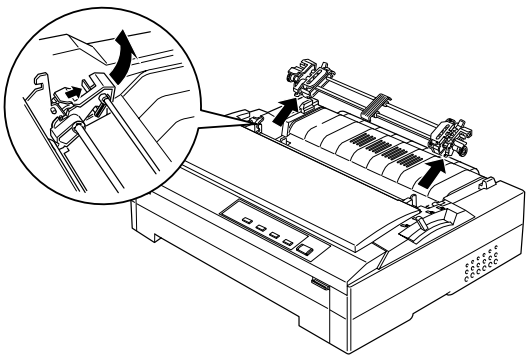
To remove the remaining paper from the printer, press the Load/Eject button to feed the paper backward to the standby position. Then open the sprocket covers of the tractor and remove the paper.

C ***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 tractor from the rear push position

To remove the tractor from the rear push position, follow the steps below.

1. Make sure the printer is turned off.
2. Remove any paper from the tractor as described in the previous section.
3. Press the tractor's lock tabs, tilt the tractor up, and lift it out of the printer.



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 multi-part forms or continuous paper with labels. However, you cannot use the tear-off feature with the pull tractor.

Because thick paper requires straight paper path to avoid paper jams, you should load paper in the front or bottom slot when using the pull tractor. To further reduce the chance of paper jams and improve the performance of continuous paper, you can use two tractors in combination. See "Using two tractor in a push / pull combination" on page 3-30 for more information.

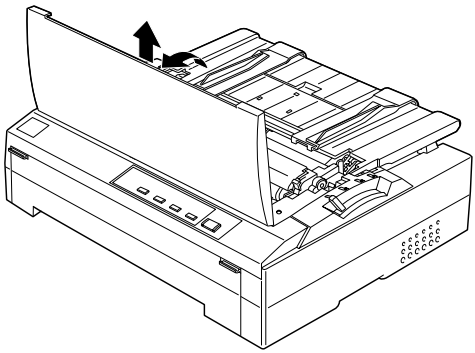
To install the tractor in the pull position, you need to remove the paper tension unit and install the tractor in its place. Follow the steps in the next section.

Installing the tractor in the pull position

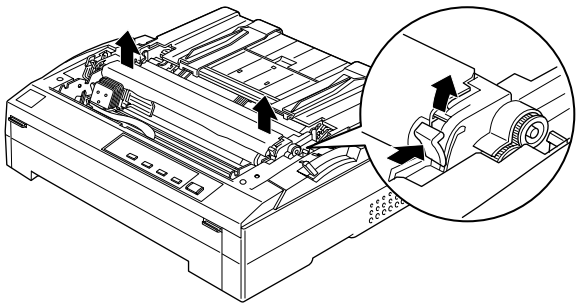
Before installing the tractor in the pull position, remove it from its current position. If the tractor is in the front push position, remove it by pressing the tractor's lock tabs while lifting it out. If the tractor is in the rear push position, remove the paper guide and then press the tractor's lock tabs while lifting it out.

Note:
The tractor is installed in the rear push position when the printer is shipped.

1. Make sure that the printer is turned off. Then lift the printer cover by its back edge and pull it straight up and off the printer.

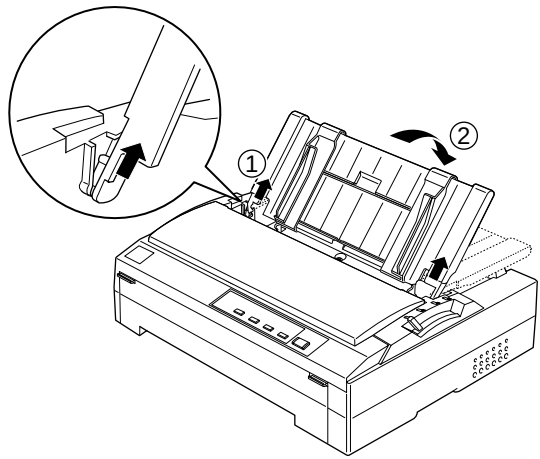


2. Press up the tabs on each side of the paper tension unit and lift the unit up and off the printer. Store the paper tension unit in a safe place.

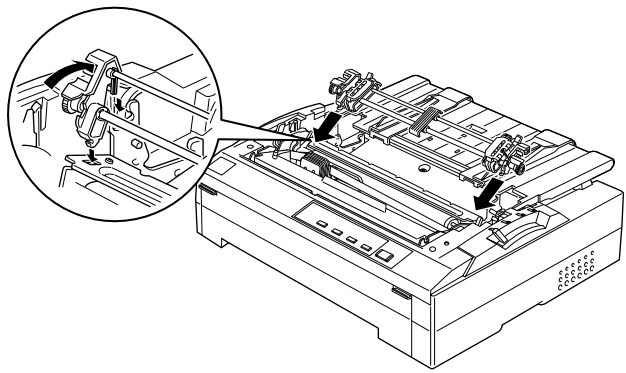


Note:
If you plan to load paper from the rear, you need to insert the paper into the paper path now, before installing the paper guide and tractor. *See page 3-23 for instructions.*

3. Attach the paper guide if necessary, and lay it flat on the printer.



4. 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.

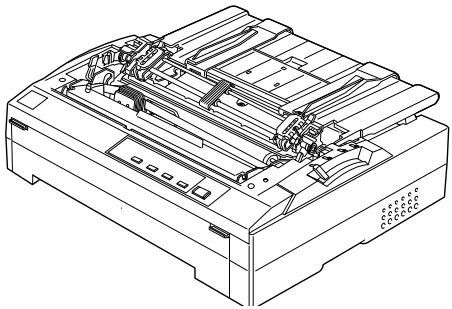


Loading paper with the pull tractor

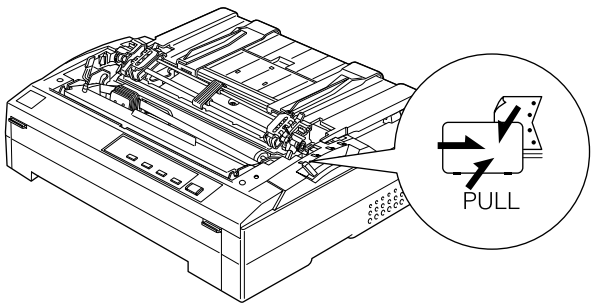
Note:
If you plan to load paper from the rear, you need to insert the paper into the paper path before installing the paper guide and tractor.

To load paper onto the pull tractor, follow the steps below.

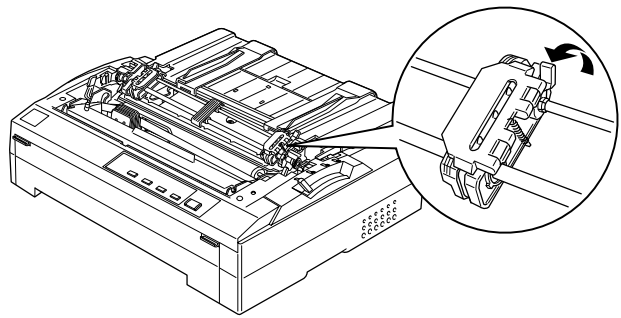
1. Make sure the printer is turned off, and the printer cover is removed. Also make sure the tractor is installed in the pull position and the paper guide is lying flat on the printer.



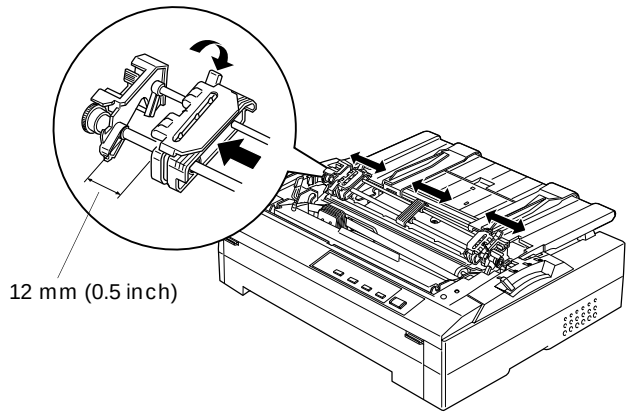
2. Set the paper release lever to the pull tractor position.



3. Release the sprockets by pulling the sprocket lock levers forward.



4. Slide the left sprocket approximately 12 mm (0.5 inch) from the far left position and push the lever back to lock it in place. Then slide the right sprocket to match the width of your paper, but do not lock it. Move the center support midway between the two sprocket units.

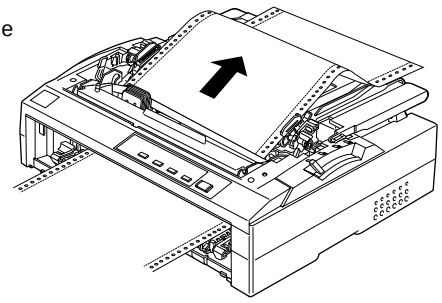


5. Make sure your paper has a clean, straight edge. Then open the sprocket covers.

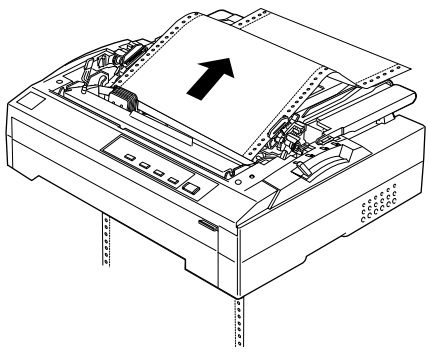
Note:
Make sure the printer is off before you insert the paper in the paper slot. If you insert the paper while it is on, a paper jam may occur.

6. Insert the paper into the front or bottom 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.

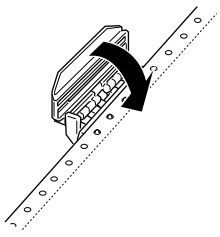
Before you load paper in the front slot, remove the front cover. Then load paper printable side up.



Load paper in the bottom slot printable side up.

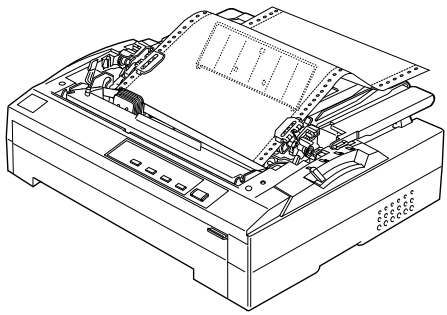


7. Fit four holes of the paper over the tractor pins on both sprockets. Then close the sprocket covers.

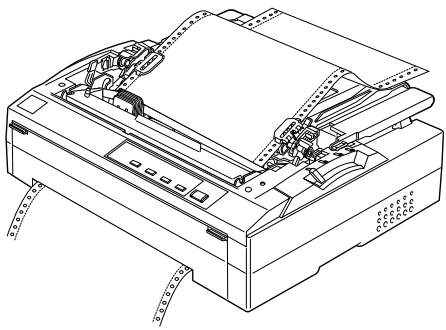


8. Slide the right sprocket to remove any slack in the paper, then lock it in place by pushing the sprocket lock back.

9. Open the edge guides on the paper guide all the way to the left and right, then raise the continuous paper support.



10. If you are using the front slot, attach the front cover with the continuous paper positioned as shown below.



11. Turn on the printer.

12. Remove any slack in the paper by pressing the LF/FF button.

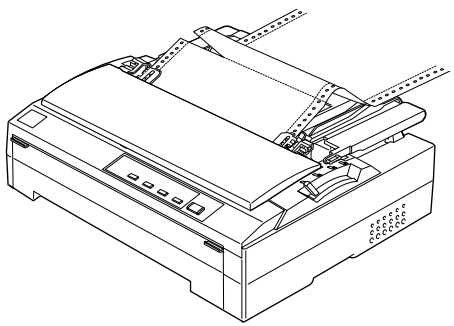
C ***Caution:***
Always remove any slack from the paper; otherwise print quality may be reduced.

13. When the printer receives data, it will start printing at the current position without advancing the paper. If necessary, follow the steps in "Adjusting the Top-of-Form Position" on page 3-35 to adjust the current position of the paper.

> 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.*

14. Attach the printer cover by inserting the front tabs into the slots on the printer, then lowering the cover into place.

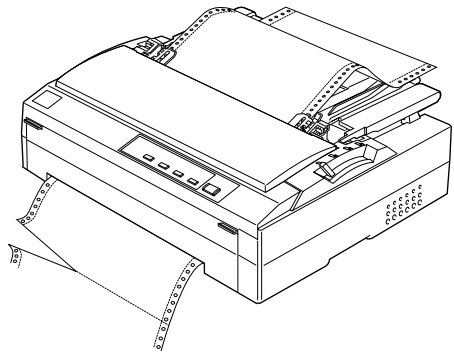
15. Send a print job to the printer. The printer starts printing from the top-of-form position. After you finish printing, tear off the printed document at the perforation nearest the paper exit slot.



Removing the paper from the pull tractor

To remove continuous paper from the pull tractor, follow the steps below.

1. After you finish printing, tear off the paper supply at the perforation nearest the paper entry slot.



2. To feed the paper forward and eject it, hold down the LF/FF button.

C ***Caution:***
Never press the Load/Eject *or* Tear Off/Bin *button when you are using the pull tractor; the paper could come off the pull tractor and jam the printer.*

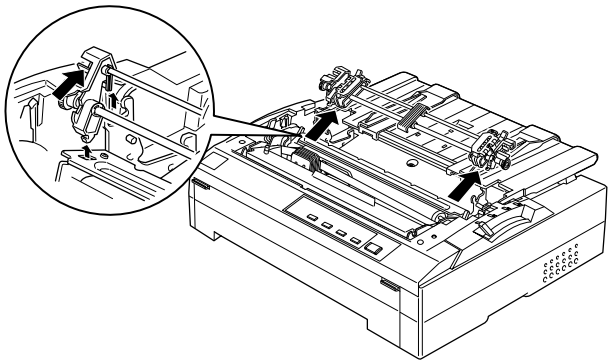
Removing the tractor from the pull tractor position

To remove the tractor from the pull position, follow the steps below.

1. Remove any paper loaded on the pull tractor as described in the previous section.

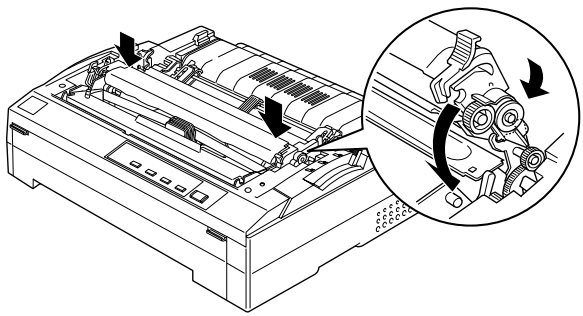
2. Turn off the printer. Then lift the printer cover by its back edge and then pull it straight up and off the printer.

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 front or rear push position as described earlier in this chapter.

5. To replace the paper tension unit, lower it onto the printer's mounting pegs. Then press down on both ends of the unit until it clicks into place.



6. Replace the printer cover.

Using two tractors in a push/pull combination

Using two tractors at once is recommended for printing on continuous pre-printed forms, multi-part forms, and labels, and for printing high quality graphics. To reduce paper jams and improve continuous paper feeding, you can install the optional additional tractor (C80020] for FX-880, C80021] for FX-1180) and then use two tractors at the same time.

To use two tractors at once, follow these steps:

1. Install one tractor in the front or rear push position as described earlier in this chapter.

2. Load continuous paper onto the front or rear push tractor as described earlier in this chapter.

3. Set the paper release lever to the front or rear push position, depending on the position of your push tractor.

4. 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 pages is even with the top of the printer's ribbon.

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

5. Install the other tractor in the pull position as described earlier in this chapter.

6. Fit the holes of the paper over the pins on both sprockets of the pull tractor.

   C ***Caution:***
   Do not pull up the paper by hand to fit it on the pull tractor; this may damage the printer. Press the LF/FF *button to move the paper.*

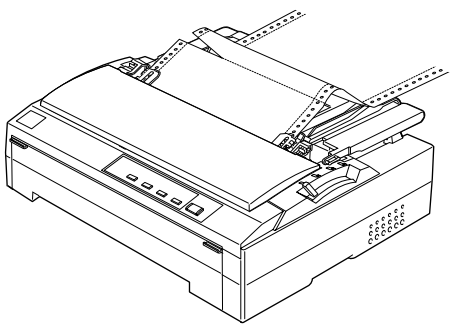
7. Set the paper release lever to the pull tractor position. Then use the micro adjust mode (described on page 3-35) to remove any slack in the paper between the push and pull tractors.

8. Move the paper release lever back to the position you set in step 3.

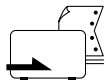
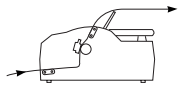
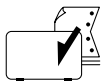
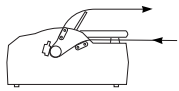
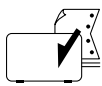
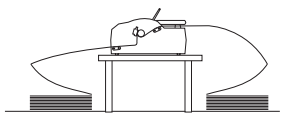
9. When the printer receives data, it will start printing at the current position without advancing the paper. If necessary, follow the steps in "Adjusting the Top-of-Form Position" on page 3-35 to adjust the current position of the paper.

10. Attach the printer cover. Make sure the paper guide is installed and lying flat on the printer, and the continuous paper support is in the upright position.

11. Send a print job to the printer. The printer starts printing from the current position without advancing the paper. After you finish printing, tear off the printed document at the perforation nearest the paper exit slot.



The table below summarizes the various methods of feeding continuous paper with two tractors and shows which paper release lever setting to use for each method.

Tractor positions	**Paper release lever position**	**Paper path**
Pull + front push	Front push tractor 	
Pull + rear push	Rear push tractor 	
Front push + rear push	Front push tractor or rear push tractor 	

Switching Between Printing on Continuous Paper and Single Sheets

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

Removing the tractor from the pull tractor position

Note:

- *If continuous labels are loaded in the printer, remove them before switching to single sheets. See "Removing continuous paper with labels" on page 3-5.*
- *If the 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 3-27.*

To switch from printing on continuous paper from a push tractor to printing on single sheets, follow the steps below.

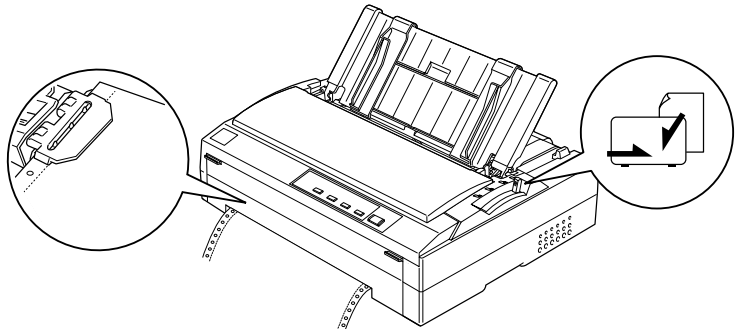
1. If any printed pages remain in the printer, press the Tear Off/Bin button to advance the paper to the tear-off position. Then tear off the printed pages.

   C ***Caution:***
   Make sure you 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.*

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. Lower the continuous paper support on the paper guide until it clicks into place, then move the paper guide to the upright position.

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



5. Load single sheets as described in Chapter 4.

Switching to printing on continuous paper

To switch from printing on single sheets to printing on continuous paper with a push tractor, follow the steps below.

Note:
To switch from printing with the optional front sheet guide to printing with the front push tractor, you need to remove the front sheet guide.

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

   C ***Caution:***
   Never use the knob to eject paper; 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 front or rear push position and that continuous paper is loaded on it as described earlier in this chapter.

3. Set the paper release lever to the front or rear push position, depending on the tractor position you are using.

Your printer loads the 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 the steps below.

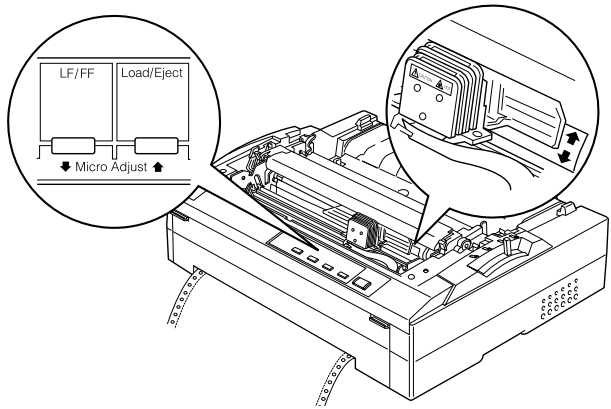
C ***Caution:***
Never use the knob to adjust the top-of-form position; this may damage the printer or cause it to lose the top-of-form position.

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 the printer is turned on.
2. Load paper. (If the tractor is in a push position, press the Load/Eject button to advance continuous paper to the current top-of-form position.) If necessary, lift up the printer cover so you can see the paper position.
3. Hold down the Pause button for about three seconds. The Pause light starts flashing and the printer enters the micro adjust mode.

4. Press the LF/FF D button to move the top-of-form position up on the page, or press the Load/Eject U button to move the top-of-form position down on the page.



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 setting as a reference point when adjusting the top-of-form position.*

5. 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 are using the tractor in the front or rear push position, 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 auto tear-off mode. The Tear Off/Bin light flashes when the paper is in the tear-off position.

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, as described on page 3-38.

C ***Caution:***

- *Never use the tear-off feature with the pull tractor; the paper may come off the pull tractor and jam the printer. After you finish printing, tear off the printed document at the perforation nearest the paper exit slot.*
- *Never use the tear-off feature to feed 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, press the Tear Off/Bin button to advance the paper to the tear-off edge.

Advancing paper to the tear-off position automatically

To automatically advance your printed documents to the tear-off position, turn on the auto tear-off mode and select the appropriate page length for continuous paper in the default setting mode. 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. To enter the default-setting mode, see "Making Default Settings" on page 5-3.

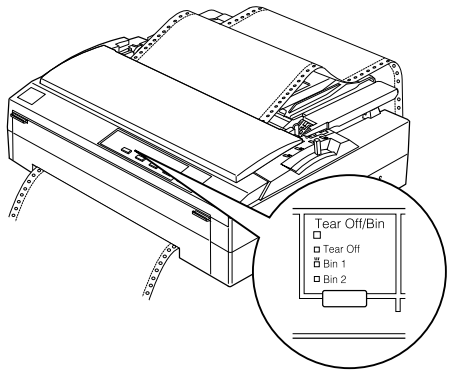
Adjusting the tear-off position

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 the steps below.

C ***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.

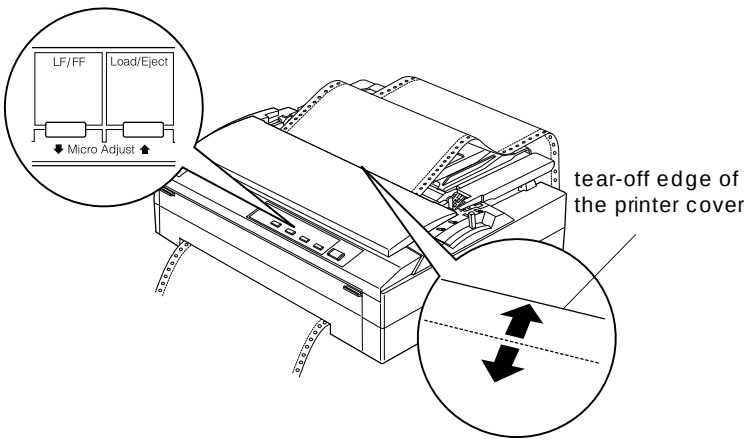
Note:
Your tear-off position setting remains in effect until you change it, even if you turn off the printer.

1. Make sure the Tear Off/Bin light is 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. Hold down the Pause button for about three seconds. The Pause light begins flashing and the printer enters the micro adjust mode.

3. Press the LF/FF D button to feed paper backward, or press the Load/Eject U button to feed paper forward, until the paper perforation is aligned with the tear-off edge of the printer cover.



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.

4. Tear off the printed pages.

5. Press the Pause button to turn off micro adjust mode.

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

Chapter 4

Printing on Single Sheets

Available Paper Types 4-2

Using the Paper Guide 4-2
Installing the paper guide 4-3
Loading paper in the paper guide 4-4

Loading Envelopes 4-6

Available Paper Types

The table below shows the types of paper you can load, the paper slots you can use with each paper type, and the paper thickness lever setting(s) for each paper type. For more information on the paper thickness lever, see page 3-3.

Paper type	Paper thickness lever position	Available paper slot(s)
Ordinary paper	0 or 1	front and rear
Multi-part forms (carbonless) 2 parts (original and one copy) 3 parts (original and two copies) 4 parts (original and three copies) 5 parts (original and four copies) 6 parts (original and five copies)	 1 2 3 4 5	front
Envelopes	2 to 6	rear

Note:

- *If the temperature is 5°C (41°F) or less, set the paper thickness lever one position lower to improve print quality.*
- *If the temperature is 35°C (95°F) or more, set the paper thickness lever one position higher to improve print quality.*
- *Do not load paper that is curled or has been folded.*

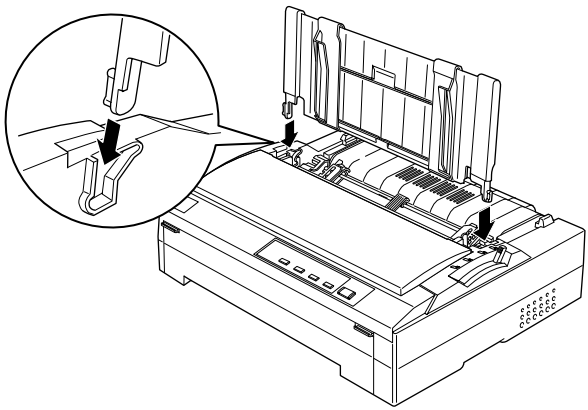
Using the Paper Guide

Using the paper guide that comes with your printer, you can load one single sheet or envelope at a time from the top of the printer. Your single-sheet paper can be up to 257 mm (10.1 inches) wide on FX-880 and 420 mm (16.5 inches) wide on FX-1180. (For detailed paper specifications, see Appendix C.)

C ***Caution:***
Do not load multi-part forms, carbon paper, or labels in the paper guide.

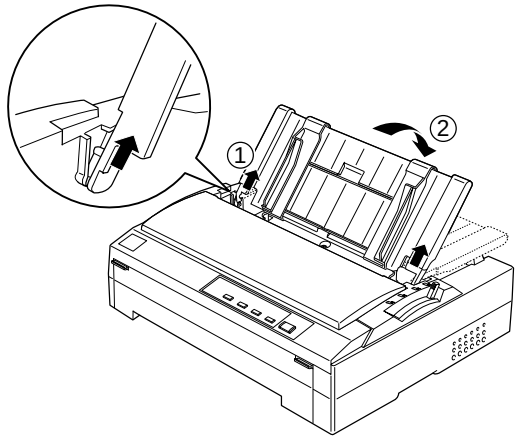
Installing the paper guide

If the paper guide is not installed on your printer, attach it by inserting the tabs on the paper guide straight down into the mounting slots on the printer. Then place the paper guide in the upright position.



Note:
You can use the paper guide only when the tractor is installed in the front or rear push position. To switch from printing on single sheets using the paper guide to printing on continuous paper from a tractor, see page 3-33.

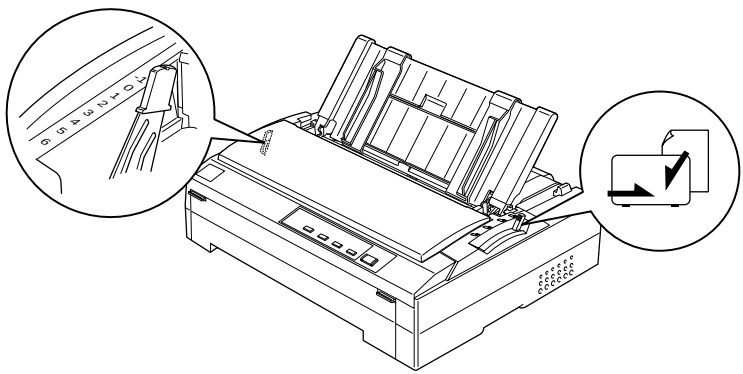
When you are not using the paper guide, lay it flat on the printer to prevent it from obstructing your paper or being damaged. To lay the paper guide down, lift the paper guide up slightly, then lower it until it is lying flat on top of the printer.



Loading paper in the paper guide

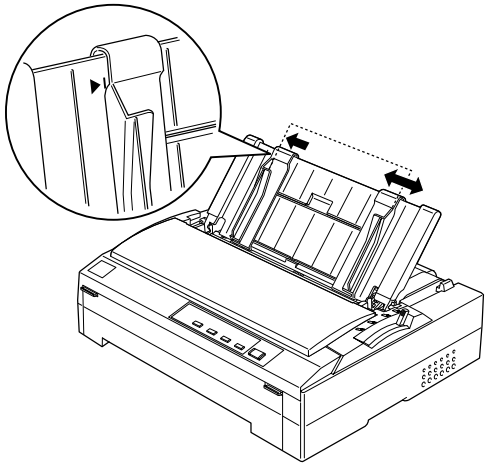
To load paper in the paper guide, follow the steps below.

1. Make sure the paper guide is in the upright position. Then set the paper thickness lever (located under the printer cover) to 0 if you are using ordinary single-sheet paper. (If you are using envelopes, see “Loading Envelopes” on page 4-6 for instructions on setting the paper thickness lever.) Also move the paper release lever to the single-sheet position.

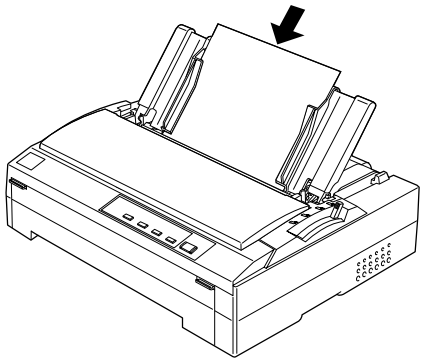


2. Press the Operate button to turn on the printer, if necessary.

3. Slide the left edge guide until it locks in place next to the triangle mark on the paper guide. Next adjust the right edge guide to match the width of your paper.



4. 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.



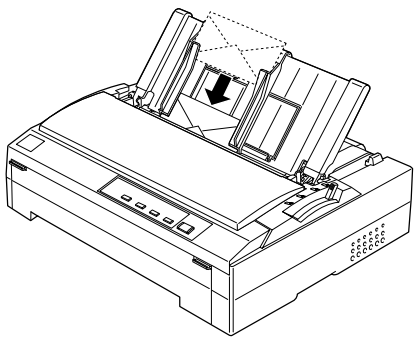
If the first printed line on your page appears too high or low, you can use the micro adjust feature to adjust the top-of-form position. See “Adjusting the Top-of-Form Position” on page 3-35.

Loading Envelopes

You can load envelopes one at a time using the paper guide on the top of the printer, or you can load multiple envelopes using the optional high-capacity cut-sheet feeder (bin 1 of the double-bin cut-sheet feeder).

Before loading envelopes, set the paper thickness lever to a position from 2 (for thin envelopes) to 6 (for thick envelopes).

To load single envelopes, follow the instructions in "Loading paper in the paper guide" on page 4-4. To load multiple envelopes, see "Loading paper in the high-capacity cut-sheet feeder" on page A-10.



Note:

- *As shown above, place the envelope printable side down and insert the top edge of the envelope into the printer first.*
- *The print head must not print past the left or right edge of the envelope or other thick paper. Make sure your application program prints entirely within the printable area of your envelope. See Appendix C for more information on the printable area of envelopes.*
- *If you are using No. 6 envelopes, make sure the left edge guide is aligned with the arrow on the paper guide.*

Chapter 5

Changing Printer Settings From the Printer's Control Panel

Selecting a Built-In Font 5-2

Making Default Settings 5-3
Understanding default settings 5-3
Changing default settings 5-9

5

Selecting a Built-In Font

Your printer comes with the six built-in fonts shown in the following table. You can select a font using the buttons on the printer's control panel as described below.

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

Font	Sample
Draft	
Draft Condensed	
Roman	
Roman Condensed	
Sans Serif	
Sans Serif Condensed	

Follow these steps to select a built-in font from the control panel:

1. Make sure that the printer is not printing. If it is, press the Pause button to stop printing.

2. Hold down the Pause button for about three seconds. The Pause light begins flashing and the printer enters the font selection mode.

3. Press the Tear Off/Bin button until the two Font lights indicate the font you want as shown on the next page.

n o	Draft
f o	Draft Condensed
n n	Roman
f n	Roman Condensed
n f	Sans Serif
f f	Sans Serif Condensed

n=On, f=Flashing, o=Off

4. Make sure that the font you want is selected, and then press the Pause button to exit the font selection mode.

Making 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.

For a detailed description of the settings you can change in the default-setting mode, see the following section. For instructions on changing the settings, see "Changing default settings" later in this chapter.

Understanding default settings

This section describes the settings and options available in the default-setting mode. These settings are divided into two groups, shown in the tables on pages 5-4 and 5-8. The settings are explained in detail after each table.

To access and change a setting, note the group (1 or 2) it is in, check its description in the next pages for more information, then see the section on changing default settings at the end of this chapter.

Default-setting mode 1

Setting	Options
Skip over perforation	Off, On
Auto tear-off	Off, On
Auto line feed	Off, On
Print direction	Bi-D, Uni-D
Software	ESC/P, IBM 2380 Plus for FX-880, IBM 2381 Plus for FX-1180
I/F (interface) mode	Auto, Parallel, Optional
Auto I/F (interface) wait time	10 seconds, 30 seconds
0 slash	0, Ø
High speed draft	Off, On(10 cpi), On(12 cpi)
Input buffer	Off, On
Buzzer	Off, On
Auto CR (carriage return)*	Off, On
IBM character table*	Table 2, Table1

* This setting is available only in IBM 2380/2381 Plus emulation mode (IBM 2380 Plus for FX-880, IBM 2381 Plus for FX-1180).

Skip over perforation

This feature is available only when continuous paper is selected. When you turn on this feature, the printer provides a one-inch (25.4 mm) margin between the last line printed on one page and the first line printed on the next page. Because most application program margin settings override margin settings 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 front or rear push tractor, the printer automatically advances the paper perforation to the tear-off position, where you can easily tear off the printed page(s). When the printer receives data again, it automatically moves the 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 front or rear 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" in Chapter 3 for more information.

Auto line feed

When auto line feed is on, the printer accompanies each carriage return (CR) code received with a line feed (LF) code.

Print direction

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

Software

When you select ESC/P, the printer operates in the EPSON ESC/P mode. When you select IBM, the printer emulates an IBM printer.

I/F (interface) mode

The printer provides a slot for an optional interface in addition to its built-in parallel interface. You can choose Auto (automatic), Parallel, or Optional for the interface mode. When you select Auto, the printer automatically selects the interface that is receiving data, and uses that interface until the end of the print job. The Auto setting allows you to share the printer among multiple computers without changing the interface mode.

If only one computer is connected to the printer, you can select Parallel or Optional, depending on which interface your computer uses.

Auto I/F (interface) wait time

When the printer is in the auto interface mode and it receives no data from the currently selected interface for the amount of time specified with this setting, it determines which interface is receiving data and switches to that interface. You can specify either 10 seconds or 30 seconds for the auto interface wait time.

0 slash

The zero character has a slash (Ø) 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 high speed draft mode is on, you can choose between two different font sizes: 10 cpi (characters per inch) or 12 cpi. When you select 10 cpi, the printer prints up to 410 cps (characters per second); at 12 cpi, it prints up to 455 cps. When high speed draft mode is off, the printer prints in normal draft mode (310 cps at 10 cpi).

Input buffer

The input buffer stores up to 32KB of data sent from your computer, freeing your computer for other tasks while the printer prints. When the buffer is off, the buffer cannot store data, so the computer must wait for the printer to print each character before sending the next character.

Buzzer (beeper)

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

Auto CR (carriage return)

This setting is available only in IBM 2380 Plus/2381 Plus emulation mode. When auto carriage return is on, each line feed (LF) code or ESC J code is accompanied by a carriage return (CR) code so the printer moves the next printing position to the left margin. When this setting is off, you must send a CR code after the line feed code to move the printing position to the left margin.

IBM character table

This setting is available only in IBM 2380 Plus/2381 Plus emulation mode. When you select Table 1, hex codes 00H to 1FH and 80H to 9FH of the character tables are used for the control codes. When you select Table 2, hex codes 00H to 1FH are used for the control codes and 80H to 9FH are used for characters. See Appendix C for character samples.

Default-setting mode 2

Setting	Options
Page length for front tractor	Length in inches: 3, 3.5, 4, 5.5, 6, 7, 8, 8.5, 11, 70/6, 12, 14, 17
Page length for rear tractor	Length in inches: 3, 3.5, 4, 5.5, 6, 7, 8, 8.5, 11, 70/6, 12, 14, 17
Character table	Standard model: Italic, PC 437, PC 850, PC 860, PC 863, PC 865, PC 861, BRASCII, Abicomp, Roman 8, ISO Latin 1 All other models: Italic, PC 437, PC 850, PC 437 Greek, PC 853, PC855, PC 852, PC 857, PC 866, PC 869, MAZOWIA, Code MJK, ISO 8859-7, Bulgaria, PC 774, Estonia, PC 866 LAT., ISO 8859-2, PC 866 UKR
International character set for Italic table*	Italic U.S.A., Italic France, Italic Germany, Italic U.K., Italic Denmark 1, Italic Sweden, Italic Italy, Italic Spain 1

* The options available for this setting vary depending on the country.

Page length for front tractor

This setting allows you to set the page length (in inches) for the continuous paper loaded on the front push tractor.

Page length for rear tractor

This setting allows you to set the page length (in inches) for the continuous paper loaded on the rear push tractor.

Character table

You can select among 11 standard character tables as well as tables for 19 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.

Changing default settings

Follow the steps below 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 three sheets of A4 or letter size single-sheet paper or three pages of continuous paper that is at least 279 mm (11 inches) long and 210 mm (8.3 inches) wide. See Chapter 3 for instructions on loading continuous paper, or Chapter 4 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 from the paper guide.*

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

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

2. Using the tables on pages 5-4 and 5-8, determine whether the setting you want to change is in default-setting mode 1 or 2.

3. To change settings in default-setting mode 1, hold down the Tear Off/Bin button while you press the Operate button to turn on the printer. To change settings in default-setting mode 2, hold down the Tear Off/Bin and LF/FF buttons while you press the Operate button to turn on the printer.

   The printer enters the default-setting mode you selected and prints the language selection instructions (one page).

4. Press the Load/Eject button until the Paper Out and Pause lights indicate the language you want, as described in the language selection instructions.

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

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

   Note:
   The arrows in the instructions indicate the printer's current settings.

6. When you finish making settings, press the Operate button to turn off the printer and exit the default-setting mode.

Note:
You may exit the default-setting mode by turning off the printer at any time that it is not printing. Any settings you have made remain in effect until you change them again.

Chapter 6

Using EPSON Status Monitor 2

About the EPSON Status Monitor 2 Utility 6-2

Installing EPSON Status Monitor 2 6-2

Accessing EPSON Status Monitor 2 6-3

Status Monitor Overview 6-4
- EPSON Status Monitor 2 window 6-4
- Printer Status window 6-9

Using the Background Monitoring Feature 6-10
- Setting monitoring preferences 6-10
- Using the background monitoring icon 6-12

About the EPSON Status Monitor 2 Utility

EPSON Status Monitor 2 is a utility program for Windows 95 that allows you to monitor your printer's status, alerts you when printer errors occur, and provides troubleshooting instructions when needed. This chapter tells you how to use the Status Monitor to get printer status information and how to set the background monitoring feature to automatically alert you whenever your printer's status changes. For more information on using EPSON Status Monitor 2, see the online help included with this utility.

Before using the Status Monitor, be sure to read the README file on Disk 1 of the EPSON Status Monitor 2 software. You can also find this README file in the EPSON Status Monitor 2 folder, located in the EPSON folder on your hard drive. This file contains the latest information on the Status Monitor.

Installing EPSON Status Monitor 2

After you have installed the printer driver for Windows 95, follow the steps below to install the EPSON Status Monitor 2 utility program.

Note:
Install the printer driver before installing the Status Monitor utility. If you installed the Status Monitor before the driver, install the Status Monitor again after completing the driver installation.

1. Insert Disk 1 of the EPSON Status Monitor 2 software in a disk drive.

2. Click the Start button on the task bar, and then click Run.

3. Type A:\Setup (if you inserted the disk in a drive other than drive A, substitute the appropriate letter) and click OK.

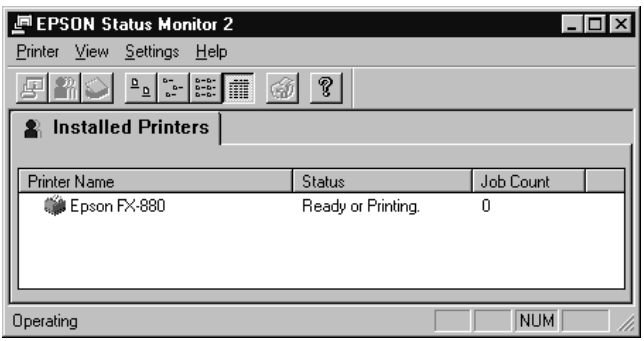
4. Follow the on-screen instructions, then click Finish to complete the installation procedure.

See the following sections for instructions on using the EPSON Status Monitor 2 utility.

Accessing EPSON Status Monitor 2

After you install EPSON Status Monitor 2 and restart your computer, the Status Monitor starts automatically and adds a printer-shaped background monitoring icon to the Windows 95 taskbar.

Double-click the background monitoring icon to open the EPSON Status Monitor 2 window shown below. You can also open this window from the Start button. Click Start, point to Programs, then EPSON, then click the EPSON Status Monitor 2 icon.



Note:

- *The EPSON Status Monitor 2 utility program is available for use with Windows 95 only.*
- *To monitor your printer on a network, you must install an optional Ethernet interface card (C72357*] *) in your printer and use the Status Monitor utility that comes with this card. See the manual that comes with the interface card for instructions on using the Status Monitor in a network environment.*

Status Monitor Overview

This section summarizes the EPSON Status Monitor 2 window's main features and describes how to use the Status Monitor to get general and detailed printer status information.

EPSON Status Monitor 2 window

Toolbar and Status bar

You can access many Status Monitor menu commands directly by clicking the buttons on the toolbar. When you point to a toolbar button, the corresponding menu command appears briefly on your screen, and an explanation of the button's function appears in the status bar at the bottom of the EPSON Status Monitor 2 window.

Installed Printers list

This list displays information on the EPSON printers connected directly to your computer. If you select List from the View menu, this list displays only the printer names and icons. If you select Details, the list displays the information below.

- Printer Name

  When you install the Status Monitor, it automatically adds the names and icons of the EPSON printers connected to your computer to this list. You can add or delete printers to be monitored by choosing Add Printer or Delete Printer from the Settings menu. To save computer memory, delete printers you do not need to monitor from the Installed Printers list. (Doing so does not remove the printer driver from your computer.)

The appearance of the icon next to each printer name changes depending on the printer's status as described in the table below. See online help for more information.

Icon appearance	Description
Green	The printer is ready to print, or currently printing.
Yellow	The printer needs routine maintenance.
Red	A printer error has occurred and your printer cannot print. See Chapter 7 for troubleshooting information.
Dimmed	There is a communication problem between the printer and the Status Monitor.

q Status

The Status column displays brief messages describing the current status of the printer.

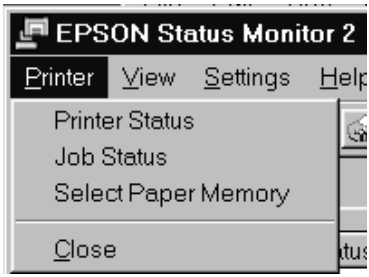
q Job Count

The Job Count column displays the number of jobs waiting to print.

Note:
You can rearrange the order of the printers in the list by clicking the Printer Name, Status, *and* Job Count *title bars.*

Printer menu

This menu allows you to get detailed information on printer and print job status for any printer you select in the Installed Printers list.



q	Printer Status	Opens the Printer Status window, which provides detailed information on the selected printer's status. For information on using the Printer Status window, see page 6-9.
q	Job Status	Provides details on jobs waiting to print.
q	Select Paper Memory	Not available.
q	Close	Closes the EPSON Status Monitor 2 window.

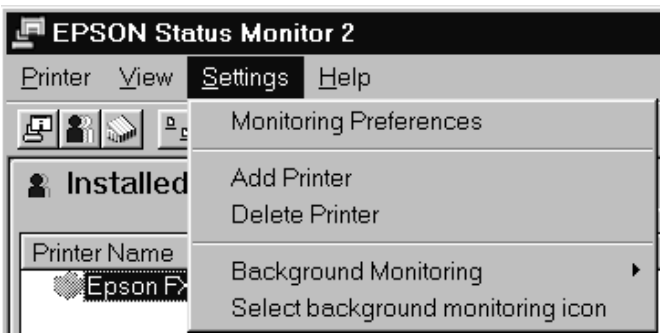
View menu

This menu lets you control the appearance and content of the EPSON Status Monitor 2 window and the Installed Printers list.

Toolbar / Status Bar	Shows or hides the toolbar and status bar in the EPSON Status Monitor 2 window.
Large Icons / Small Icons	Changes the size of the printer icons in the Installed Printers list.
List	Displays only the printer names and icons in the Installed Printers list.
Details	Displays the printer name, icon, status, and number of jobs waiting to print in the Installed Printers list.
Refresh	Updates the status information shown in the Installed Printers list.

Settings menu

This menu allows you to control the Status Monitor's background monitoring feature, as well as add and delete printers from the Installed Printers list.

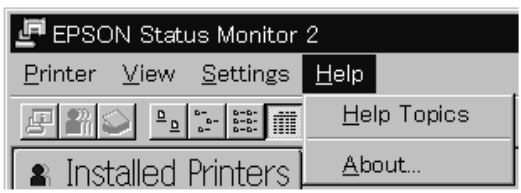


q	Monitoring Preferences	Opens the Monitoring Preferences dialog box, where you can activate or deactivate background monitoring and adjust the monitoring settings for the selected printer. For more information, see “Setting monitoring preferences” on page 6-10.
q	Add Printer / Delete Printer	Allows you to select which printers you want to monitor by adding or deleting printers in the Installed Printers List.
q	Background Monitoring	Activate or deactivate the background monitoring feature.
q	Select background monitoring icon	Changes the appearance of the background monitoring icon that is displayed on the taskbar when background monitoring is active.

For more information on using the background monitoring feature, see page 6-10.

Help menu

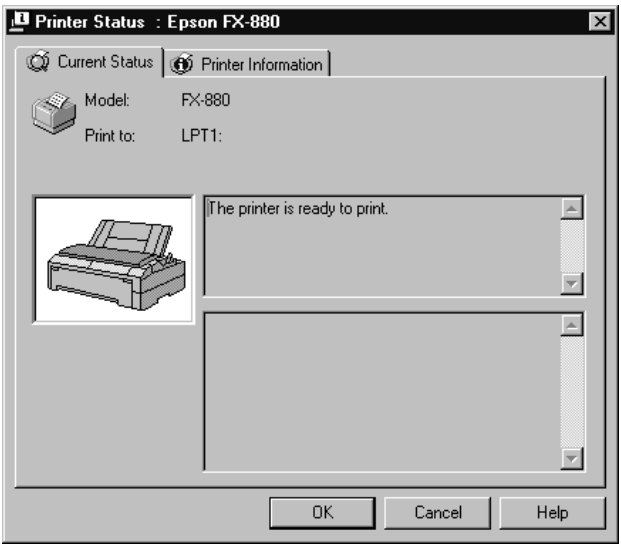
Choose Help Topics to get online help about EPSON Status Monitor 2. Click About to view the Status Monitor’s version number and copyright information.



Printer Status window

You can open the Printer Status window shown below to see detailed information on the status of the selected printer.

To open the Printer Status window, double-click a printer in the Installed Printers list, or select the printer and then choose Printer Status from the Printer menu. You can also access the Printer Status window by clicking the Details button in a Status Alert dialog box.



The Printer Status window contains two menus that provide detailed printer information (described below). Click the tabs at the top of the Printer Status window to open these menus.

Current Status menu

This menu gives you detailed printer status information using a graphic display and a status message box. The current printer status is described in the upper message box. If a printer error occurs, troubleshooting tips appear in the lower message box.

Printer Information menu

If your printer is connected to your computer through a network, this menu provides information on network connections and other printer resources.

Using the Background Monitoring Feature

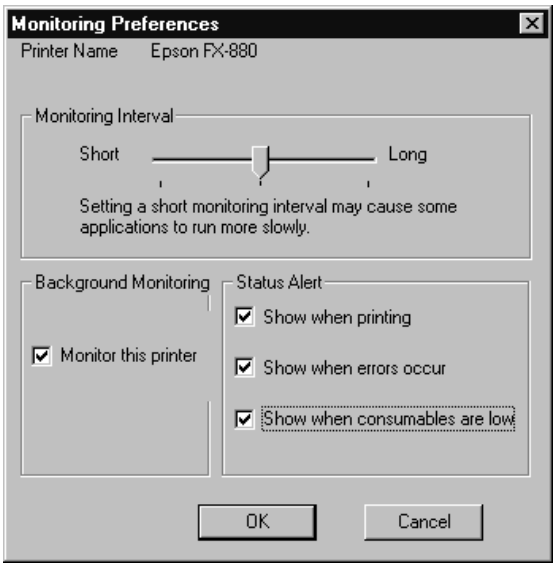
The Status Monitor's background monitoring feature lets you monitor your printer more conveniently by automatically updating the selected printer's status whenever you are using your computer. As described in the next section, activating background monitoring for your printer is a two-step process: first you check that the basic background monitoring feature is active, then you select a printer in the Installed Printers list and activate background monitoring for that printer. You can also set other monitoring preferences for the selected printer.

Setting monitoring preferences

Follow the steps below to activate background monitoring and set other monitoring preferences for each printer you want to monitor.

1. Make sure the Status Monitor's basic background monitoring feature is active. It is active if the printer-shaped background monitoring icon appears on the taskbar at the bottom of your computer screen. If background monitoring is inactive, open the EPSON Status Monitor 2 window from the Start menu, as described on page 6-3. Then point to Background Monitoring on the Settings menu and click Monitor from restart or Monitor now to activate background monitoring.

2. Select the printer you want to monitor from the Installed Printers list, and then click Monitoring Preferences on the Settings menu. The dialog box below appears.



3. Use the slider to adjust the monitoring interval, if necessary.

   Note:
   Setting a short monitoring interval may cause some applications to run more slowly.

4. Click Monitor this printer to activate background monitoring for the selected printer and view the Status Alert options.

5. Click the Status Alert options to specify when you want the Status Alert dialog box to appear. The Status Alert dialog box displays short messages describing printer status, and provides a Details button that allows you to open the Printer Status window for the selected printer.

6. Click OK to save your settings and close the Monitoring Preferences dialog box.

Using the background monitoring icon

A printer-shaped background monitoring icon appears on the taskbar whenever the background monitoring feature is active.

Double-clicking the background monitoring icon opens the EPSON Status Monitor 2 window. Right-clicking this icon opens a pop-up menu where you can choose whether the Status Alert dialog box will appear in front of other windows on the desktop. This pop-up menu also allows you to deactivate background monitoring.

If you deactivate background monitoring, the background monitoring icon disappears from the taskbar. To activate background monitoring again, see step 1 on page 6-10.

Note:
You must activate the background monitoring feature before you can set monitoring preferences for printers in the Installed Printers list as described on page 6-8.

Chapter 7
Troubleshooting

Using the Error Indicators 7-2

Problems and Solutions 7-3
- Power supply problems 7-3
- Paper loading or feeding problems 7-4
- Wrong top-of-form position 7-7
- Wrong tear-off position 7-8
- Printing or printout quality problems 7-9

Clearing Paper Jams 7-13

Aligning Vertical Lines in Your Printout 7-14

Printing a Self Test 7-15

Printing a Hex Dump 7-17

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, 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
n Paper Out n Pause	●●●	**No paper is loaded in the selected paper source.** Load paper in the printer or select a different paper source; the Paper Out light goes off. Then press the Pause button; the Pause light goes off and the printer starts printing.
	●●●	**The paper is not loaded correctly.** Remove your paper and reload it correctly. See Chapter 3 (continuous paper) or Chapter 4 (single sheets) for instructions on loading the type of paper you want to use.
n Pause	●●●●●	**The paper release lever is set to the wrong position.** Set the paper release lever to the position for the paper source you want to use. If paper from another paper source is currently in the paper path, press the Load/Eject button to eject the paper; then move the paper release lever to the desired position.
f Paper Out n Pause	●●●	**A single sheet of paper is not fully ejected.** Press the Load/Eject button to eject the sheet.
	●●●	**Continuous paper is not fed to the standby position.** Tear off the printed page at the perforation; then press the Load/ Eject button. The printer feeds the paper to the standby position.
	●●●	**Paper is jammed in the printer.** To clear the paper jam, see "Clearing Paper Jams" on page 7-13.
f Paper Out f Pause	–	**The print head is overheated.** Wait a few minutes; the printer resumes printing automatically once the print head cools.
f Paper Out f Pause f Tear Off/Bin f 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.

n = on, o = off, f = 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 section below:

Power supply problems	7-3
Paper loading or feeding problems	7-4
Wrong top-of-form position	7-7
Wrong tear-off position	7-8
Printing or printout quality problems	7-9

You can also use the self test to determine whether the printer or the computer is causing the problem. See page 7-15 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 page 7-17.

To clear a paper jam, see page 7-13.

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.

W ***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 when you turn on the printer.	
Cause	**What to do**
The power cord is not properly plugged into the electrical outlet or your printer.	Press the Operate button to turn off the printer, and make sure the power cord is firmly plugged into the electrical outlet and the printer, if necessary. Then press the Operate button to turn on the printer.
The electrical outlet does not work.	Use a different outlet.

Paper loading or feeding problems

The printer does not load single-sheet paper or does not feed it properly.	
Cause	**What to do**
Continuous paper is in the paper path.	Press the Load/Eject button to feed the continuous paper back to the standby position. Set the paper release lever to the single-sheet position and insert a new sheet. (See Chapter 3 for more information on switching to printing on single sheets.)
The paper release lever is set to a tractor position.	Set the paper release lever to the single-sheet position.

The paper on the paper guide is positioned too far to the left or right for the printer to detect that it is there.	Move the paper (and the edge guides) a little to the left or right.
Single-sheet paper is not loaded properly.	See Chapter 4 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 Thickness Lever" in Chapter 3.
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
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 paper does not feed properly with the optional cut-sheet feeder.

Cause	What to do
The cut-sheet feeder is not installed properly.	Reinstall it as described in Appendix A.

Too many sheets are loaded in the cut-sheet feeder. You cannot load more than 150 sheets of paper in the high-capacity cut-sheet feeder.	Load less than 150 sheets of paper. See Appendix A 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.	Add more paper to the cut-sheet feeder.

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 position for the paper source you want to use. For more information on setting the paper release lever, see the section in Chapter 3 on loading paper with the tractor you want to use.
Single-sheet paper is in the paper path.	Press the Load/Eject button to eject the sheet.
Continuous paper is not loaded properly.	See Chapter 3 for instructions on loading continuous paper with 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" in Chapter 3.

The printer does not feed continuous paper to the standby position.	
Cause	**What to do**
You have not torn 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

Your printing appears 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 front or rear tractor do not match the size of the continuous paper you are using.	Check the page length settings for the front or rear tractor using the printer's default-setting mode or the EPSON Remote! utility. See "Making Default Settings" in Chapter 5, or "Using the EPSON Remote! utility" in Chapter 2.
The top margin or top-of-form position setting is incorrect.	Check and adjust the margin or top-of-form position settings in your application software. See the printable area specifications in Appendix C. You can also adjust the top-of-form position in micro adjust mode. However, settings made in Windows applications override settings made in micro adjust mode. See "Adjusting the Top-of-Form Position" in Chapter 3.

The printer driver settings you want to use are not selected in your software.	Choose the correct printer driver setting 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" in Chapter 3.

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" in Chapter 3.
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" in Chapter 3.
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.

C ***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 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 front or rear tractor do not match the size of the paper you are using.	Check the page length settings for the front or rear tractor using the printer's default-setting mode or the EPSON Remote! utility. See "Making Default Settings" in Chapter 5, or "Using the EPSON Remote! utility" in Chapter 2.

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 to turn off the Pause light.
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 page 1-11 and your computer 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 2.

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" in Chapter 3.
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.

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. Also, other parts of the printer must 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 "Making Default Settings" in Chapter 5, or "Using the EPSON Remote! utility" in Chapter 2.

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, because the printer's auto line feed setting is on.	Turn off the auto line feed setting using the printer's default-setting mode or the EPSON Remote! utility. See "Making Default Settings" in Chapter 5, or "Using the EPSON Remote! Utility" in Chapter 2.
The line space setting in your application software is incorrect.	Adjust the line space setting in your application software.

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 use the correct interface cable and that the communications protocol is correct. See page 1-11 and your computer documentation. If you installed an optional serial interface card, also see page A-25.
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 EPSON Remote!.
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 configured correctly for your printer. See your application documentation. If necessary, install or reinstall the printer driver software as described in Chapter 2.
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" on page 7-14.

Clearing Paper Jams

To clear a paper jam, follow these steps:

1 Press the Operate button to turn off the printer.

2. Open the printer cover.

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

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

   If the paper is stuck where the printer ejects it, gently pull the paper out of the printer.

   C ***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 change the top-of-form or tear-off position.

5. Close the printer cover and press the Operate button to turn on the printer. Make sure the Paper Out light is not flashing and the Pause light is 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.

During bidirectional adjustment, the printer prints three sheets of alignment patterns, labeled High Speed Draft, Draft, and NLQ (near letter quality). As described below, you select the best alignment pattern from each sheet.

Note:

- *To print the instruction sheet and alignment patterns, you need four single sheets or four pages of continuous paper of at least the following sizes:*

Paper type	FX-880	FX-1180
continuous paper	241 × 279 mm (9.5 × 11 inches)	376 × 279 mm (14.8 × 11 inches)
single sheet	A4 or letter size	A3 landscape

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

Follow these steps to perform the bidirectional adjustment:

1. Make sure paper is loaded, then turn off the printer.

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

2. While holding down the Pause button, press the Operate button to 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. Then select the pattern with the best alignment for each of the remaining sets of alignment patterns.

4. After you select the best pattern in the final set of alignment patterns and save your selection by pressing the Tear Off/Bin button, press the Operate button to turn off the printer and exit the bidirectional adjustment mode.

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 the self test using either single sheets or continuous paper. See Chapter 3 for instructions on loading continuous paper, or Chapter 4 for instructions on loading single sheets.

Note:
Use paper of at least the following width:

Paper type	FX-880	FX-1180
continuous paper	241 mm (9.5 inches)	376 mm (14.8 inches)
single sheet	A4 or letter size	A3 landscape

To perform a self test, follow these steps:

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

   C ***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 press the Operate button to turn on the printer. To run the test using the printer's near 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 self test prints faster than the near letter-quality test.

   After a few seconds, the printer loads the paper automatically and begins printing the 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. If paper remains in the printer, press the Load/Eject button to eject the printed page. Then turn off the printer.

C ***Caution:***
Do not turn off the printer while it is printing the self test. Always press the Pause *button to stop printing and the* Load/Eject *button to eject the printed page before you turn off the printer.*

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 it receives from the computer as hexadecimal values.

You can print a hex dump using either single sheets or continuous paper. See Chapter 3 for instructions on loading continuous paper, or Chapter 4 for instructions on loading single sheets.

Note:
Use paper that is at least 210 mm (8.3 inches) wide, such as A4 or letter size paper.

To print a hex dump, follow the steps below.

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

   C ***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 press the Operate button to 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.

   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. If characters are printable, they appear in the right column as ASCII characters. Nonprintable codes, such as control codes, are represented by dots.

4. To turn off hex dump mode, press the Pause button, eject the printed page(s), and then turn off the printer.

C ***Caution:***
Do not turn off the printer while it is printing the hex dump. Always press the Pause *button to stop printing and the* Load/Eject *button to eject the printed page before you turn off the printer.*

Appendix A

Enhancing Your Printer With Options

A

Paper Handling Options A-2

Using the Optional Cut-Sheet Feeders A-4
- Installing an optional cut-sheet feeder A-4
- Loading paper in the single-bin cut-sheet feeder A-6
- Loading paper in the high-capacity cut-sheet feeder A-10
- Assembling the double-bin cut-sheet feeder A-13
- Selecting your paper path (bin 1 or bin 2) A-14

Using an Optional Front Sheet or Front Paper Guide A-15
- Installing the front sheet or front paper guide A-16
- Loading paper in the front sheet or front paper guide A-18

Using the Roll Paper Holder A-20
- Assembling the roll paper holder A-20
- Installing the roll paper holder A-21
- Loading roll paper A-22
- Removing roll paper A-25

Installing an Interface Card A-25

Using a Serial Interface Card (C82305] or 82306]) A-27
- Selecting a baud rate A-27
- Handshake timing A-27
- Error handling A-27

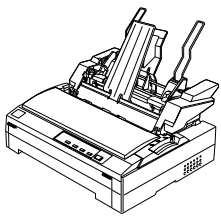
Paper Handling Options

The following table shows the paper handling options that are available for your printer.

Option	Part number for FX-880	Part number for FX-1180
High-capacity cut-sheet feeder	C80638]	C80640]
Single-bin cut-sheet feeder	C80637]	C80639]
Additional tractor unit	C80020]	C80021]
Roll paper holder	#8310	#8310
Front paper guide	C81402]	C81403]
Front sheet guide	C81400]	C81401]

To purchase options, contact your dealer.

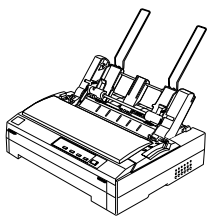
High-capacity cut-sheet feeder (C80638] for FX-880, C80640] for FX-1180)



Feeds up to 150 sheets of paper or 25 plain bond envelopes into the printer without reloading. You can load single sheets of paper, single-sheet multi-part forms, and envelopes.

For instructions on using this option, see page A-10.

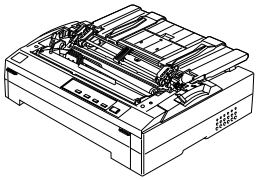
Single-bin cut-sheet feeder (C80637] for FX-880, C80639] for FX-1180)



Feeds up to 50 sheets of paper into the printer without reloading. You can load only ordinary single sheets in this feeder.

For instructions on using this option, see page A-6.

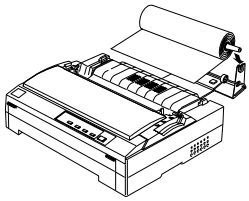
Additional tractor unit (C80020*] for FX-880, C80021*] for FX-1180)



Use the additional tractor in the pull position along with your standard tractor installed in the front or rear push position to improve paper handling and reduce the chance of paper jams. This setup is especially useful with continuous multi-part forms.

For instructions on using this option, see Chapter 3.

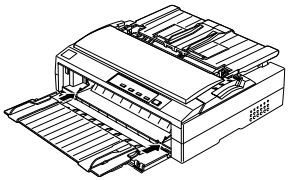
Roll paper holder (#8310)



Allows you to use your printer with 8.5-inch roll paper like that used with telex machines.

For instructions on using this option, see page A-20.

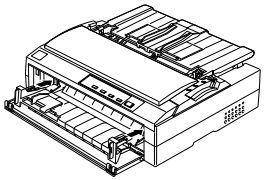
Front sheet guide (C81400*] for FX-880, C81401*] for FX-1180)



Allows you to load single sheets and carbonless single-sheet multi-part forms of up to 6 parts.

For instructions on using this option, see page A-15.

Front paper guide (C81402*] for FX-880, C81403*] for FX-1180)



Allows you to load single sheets and carbonless single-sheet multi-part forms of up to 6 parts. You can use the optional front paper guide without removing the tractor from the front push position.

For instructions on using this option, see page A-15.

Note:
*The asterisk (*] *) is a substitute for the last digit of the product number, which varies by country.*

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 (C80637] / C80369]) and the high-capacity cut-sheet feeder (C80638] / C80640]). 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 single-sheet 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.

C ***Caution:***
Do not load multi-part 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 on page A-13. To load paper in a bin, see "Loading paper in the single-bin cut-sheet feeder" on page A-6, or "Loading paper in the high-capacity cut-sheet feeder" on page A-10.

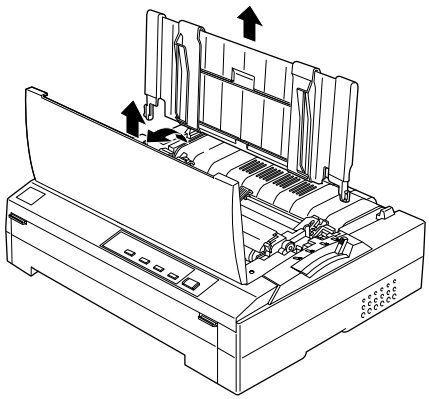
Note:
You cannot install and use the optional cut-sheet feeders when the tractor unit is installed in the pull position. To remove the tractor from the pull position, see page 3-28.

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 on the next page.

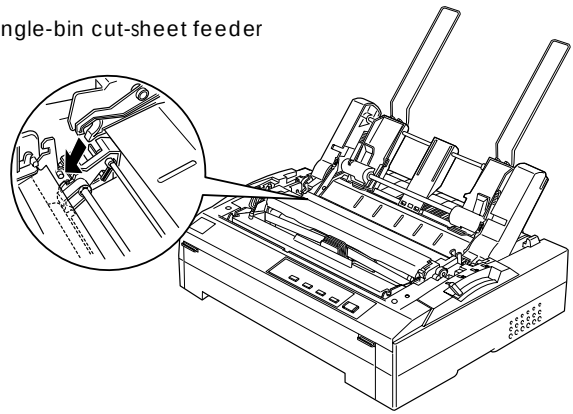
Note:
Before you install the double-bin cut-sheet feeder, you need to assemble it as described on page A-13.

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.

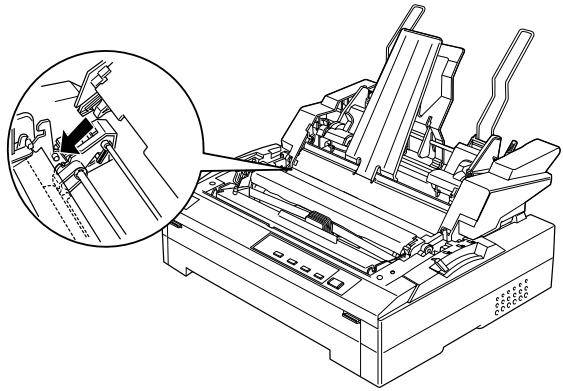


2. Holding the cut-sheet feeder in both hands, press down on the latch levers and fit the notches over the printer's mounting posts, as shown below. Release the latch levers to lock the feeder in place. If you are installing the high-capacity or double-bin cut-sheet feeder, see the illustration on the next page.

single-bin cut-sheet feeder



high-capacity cut-sheet feeder



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-14.

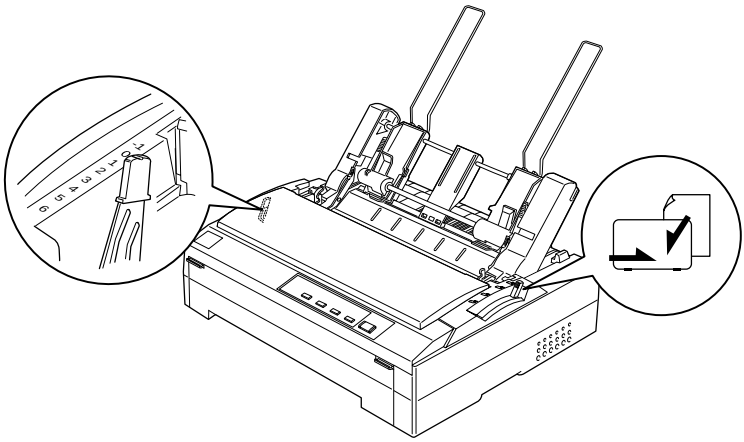
You are now ready to load paper with your single-bin, high-capacity, or double-bin cut-sheet feeder. For instructions on loading paper in the single-bin cut-sheet feeder, see the next section. For instructions on loading paper in the high-capacity cut-sheet feeder, see page A-10.

Loading paper in the single-bin cut-sheet feeder

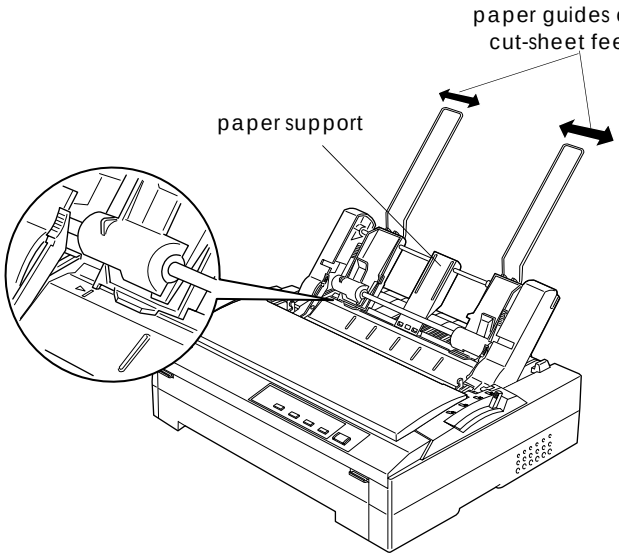
The single-bin cut-sheet feeder holds up to 50 sheets of paper. When it is installed, you still can use the paper guide to load single sheets and envelopes one at a time. Follow the steps below to load paper in the single-bin cut-sheet feeder.

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

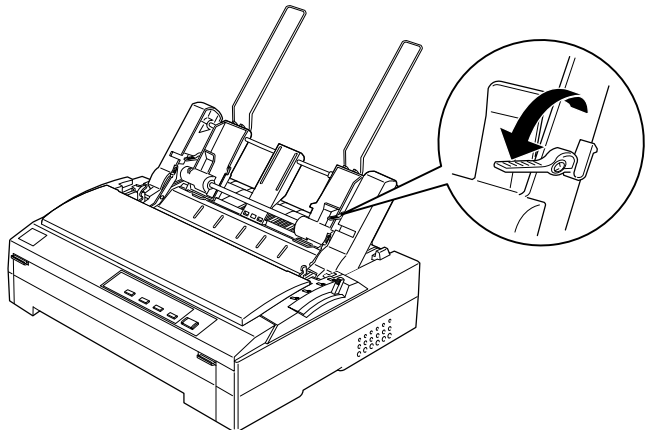
1. Make sure the paper guide is removed, and set the paper release lever to the single-sheet position. Also make sure the paper thickness lever (located under the printer cover) is set to 0.



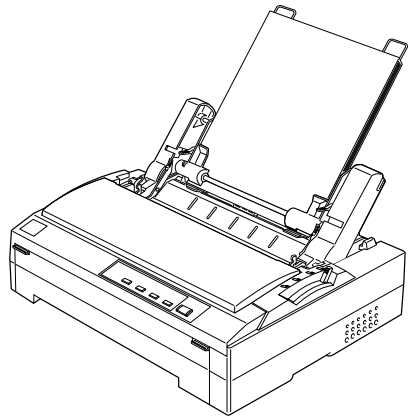
2. Slide the left paper guide of the cut-sheet feeder so it is aligned with the triangle mark. Next, slide the right paper guide to roughly match the width of your paper. Slide the paper support midway between the paper guides.



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

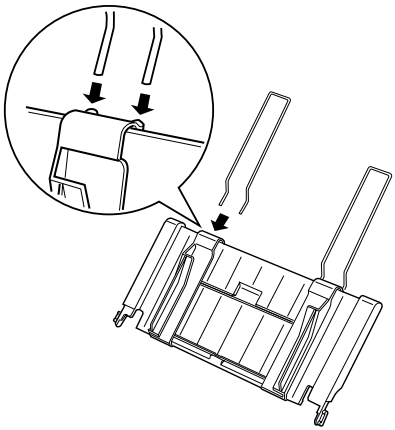


4. Take a stack of paper (up to 50 sheets) and fan it. Next, tap the side and bottom edges of the paper on a flat surface to even up the stack.
5. Insert the paper stack printable side down along the left paper guide.

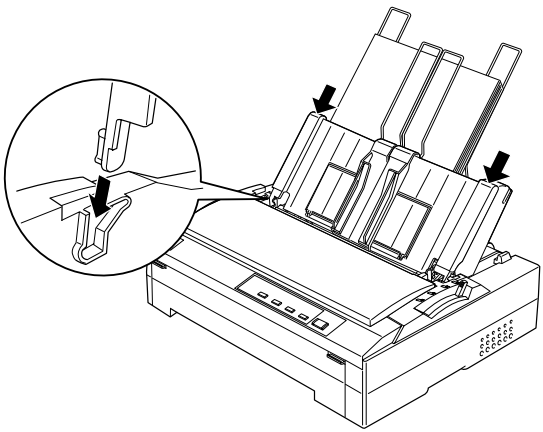


6. Adjust the right paper guide so that it matches your paper's width. Make sure the position of the guide allows the paper to move up and down freely.
7. Push back the paper set levers to clamp the paper against the guide rollers.

8. Attach the stacker-support wires to the paper guide as shown below, if necessary.



9. 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.

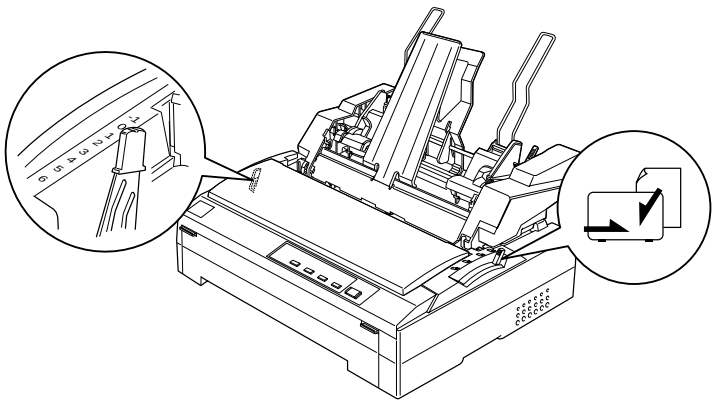
If the first line on your page appears too high or low, you can adjust its position using the micro adjust feature. See “Adjusting the Top-of-Form Position” on page 3-35.

Loading paper in the high-capacity cut-sheet feeder

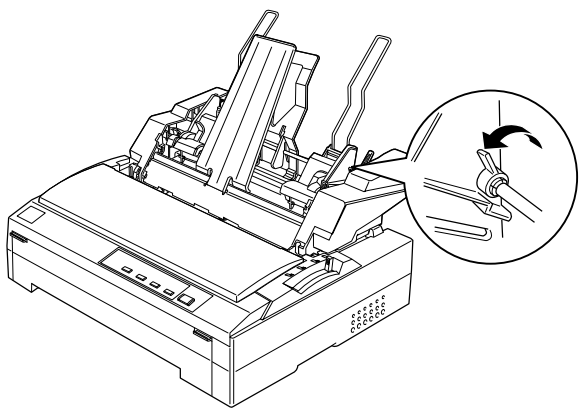
The high-capacity cut-sheet feeder holds up to 150 sheets of paper or up to 25 envelopes.

C ***Caution:***
Do not load multi-part forms, carbon paper, or labels in the high-capacity cut-sheet feeder.

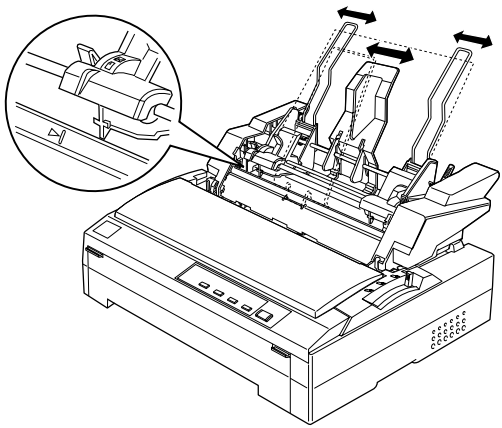
1. Set the paper release lever to the single-sheet position. Also make sure the paper thickness lever (located under the printer cover) is set to 0 if you are using ordinary single-sheet paper. (If you are using envelopes, see "Loading Envelopes" on page 4-6 for instructions on setting the paper release lever.)



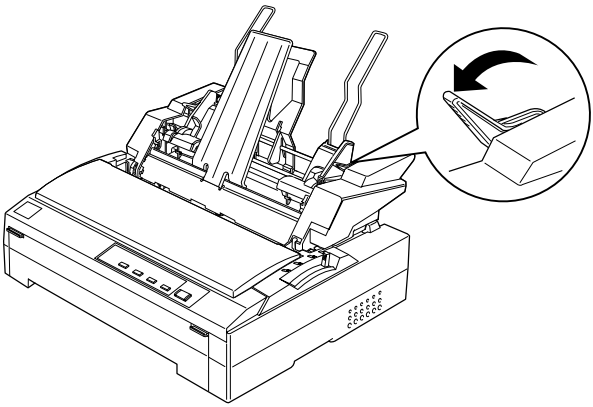
2. Pull the lock levers on the edge guides forward to release them.



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.

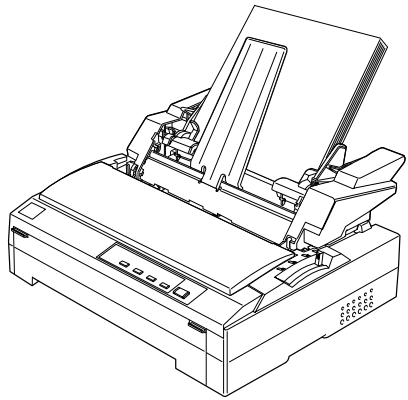


4. Pull both paper set levers forward until the paper guides retract and lock open to allow paper loading.



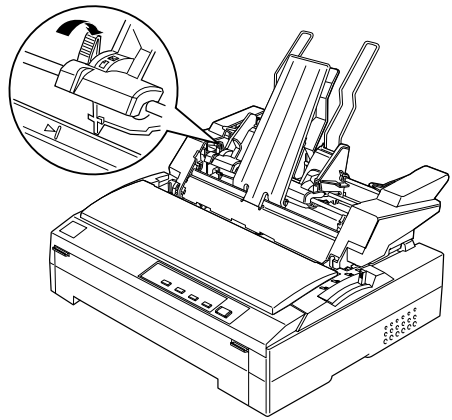
5. Take a stack of paper (up to 150 sheets) and fan it. Next, tap the side and bottom edges of the paper on a flat surface to even up the stack.

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 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.



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

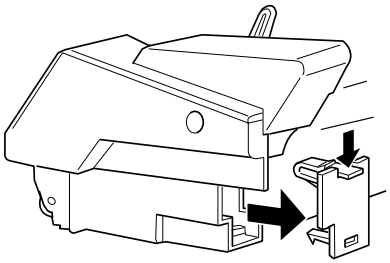
The cut-sheet feeder automatically loads paper when the printer receives data.

If the first line on your page appears too high or low, you can adjust its position using the micro adjust feature. See "Adjusting the Top-of-Form Position" on page 3-35.

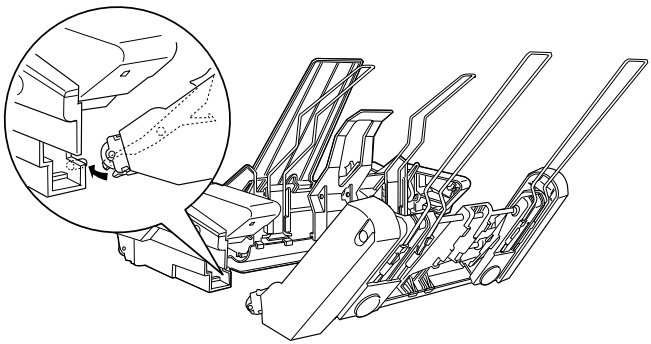
Assembling the double-bin cut-sheet feeder

Using the double-bin cut-sheet feeder allows you to load two types of single-sheet paper in the printer at the same time and easily switch between them. Before you install the double-bin cut-sheet feeder, you need to connect the single-bin cut-sheet feeder (C80637] / C80639]) to the high-capacity cut-sheet feeder (C80638] / C80640]).

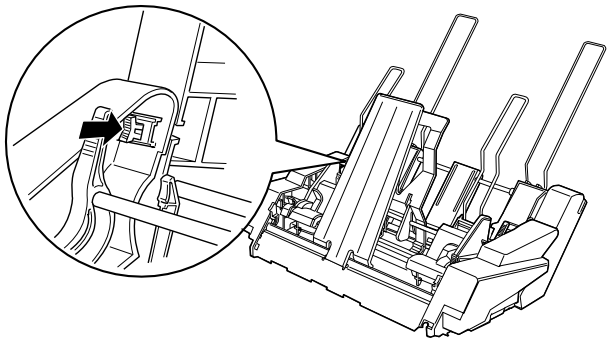
1. Remove the gear cover from the back of the high-capacity cut-sheet feeder by pressing down the tab and pulling the cover backward. Store it in a safe place.



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.



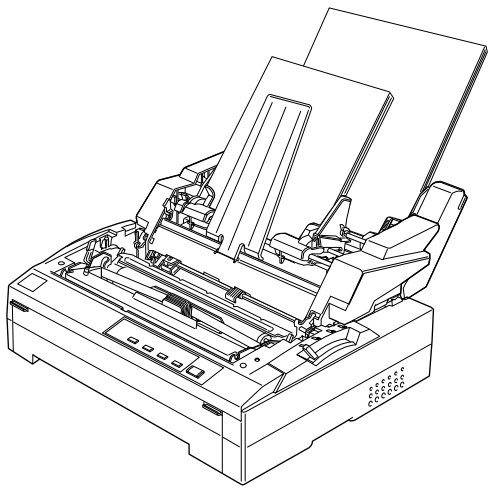
3. Lock the two cut-sheet feeders together by pushing firmly on the tab locks.



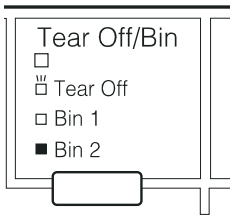
To install the double-bin cut-sheet feeder on your printer, see “Installing an optional cut-sheet feeder” on page A-4.

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.



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.



n = On o = Off f = Flashing

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

Using an Optional Front Sheet or Front Paper Guide

The optional front sheet guide (C81400] / C80401]) and front paper guide (C81402] / C80403]) fit inside the front of the printer. These options allow you to load single sheets and carbonless single-sheet multi-part forms of up to 6 parts (one original and five copies). Paper used with front guides must be 148 to 257 mm (5.8 to 10.1 inches) wide and can only be loaded one sheet at a time.

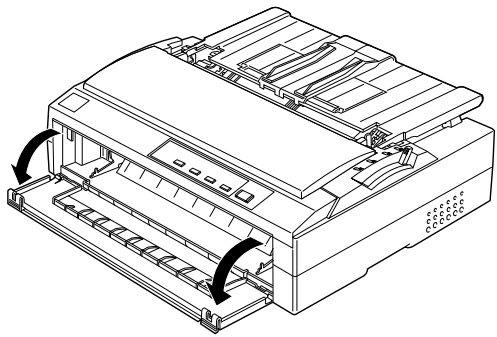
The optional front sheet guide provides you with the best paper jam prevention, but you need to remove the tractor from the front push position to use it. You can use the optional front paper guide without removing the tractor from the front push position.

The installation and paper loading procedures described below apply to both the front paper guide and the front sheet guide. Separate illustrations are provided where necessary; please refer to the appropriate illustrations when installing and using these options.

Installing the front sheet or front paper guide

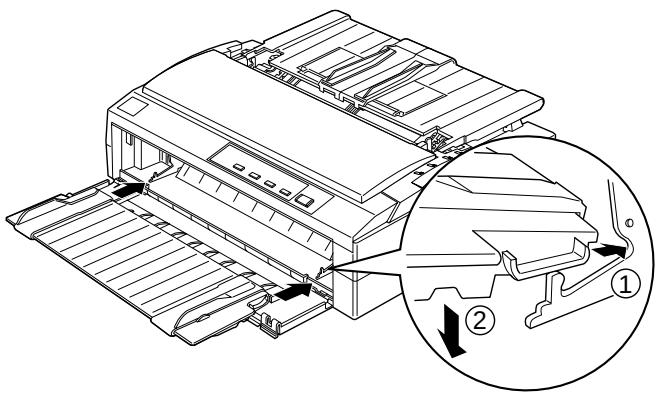
To install the front sheet or front paper guide, follow the steps below.

1. Open the front cover. If you are installing the front sheet guide, remove the tractor unit if it is installed in the front push position. To remove it, press the tractor's lock tabs, then tilt the tractor up and pull it out of the printer.

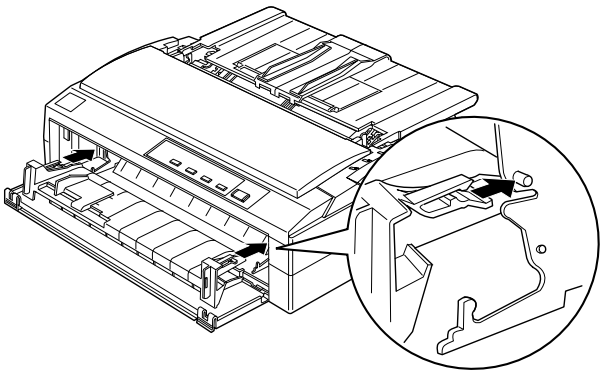


2. Fit the plastic tabs on the front paper or front sheet guide over the mounting notches on the printer, as shown below.

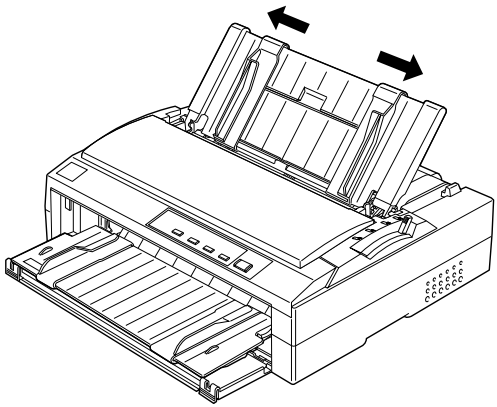
front sheet guide



front paper guide



3. 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.



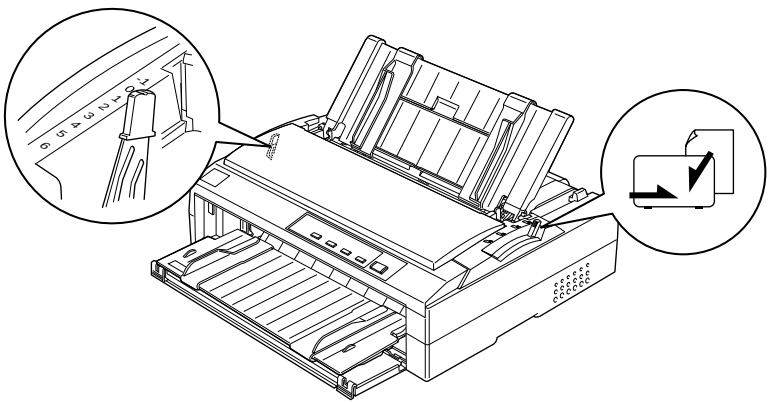
You are now ready to load paper in the front sheet or front paper guide. See the next section for instructions.

Loading paper in the front sheet or front paper guide

You can load single sheets or multi-part forms one at a time in the front sheet or front paper guide. Follow the steps below.

C ***Caution:***
Do not load labels or envelopes in the front sheet or front paper 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.



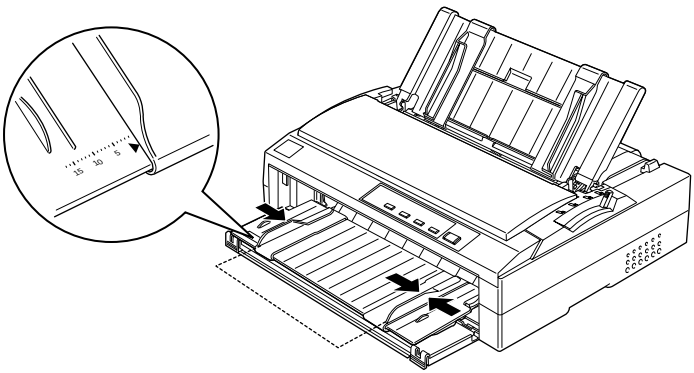
If you are loading a single-sheet multi-part form, set the paper thickness lever to the proper position, as shown in the table below.

Multi-part form type	Paper thickness lever position
2 parts (original + 1 copy)	1
3 parts (original + 2 copies)	2
4 parts (original + 3 copies)	3
5 parts (original + 4 copies)	4
6 parts (original + 5 copies)	5

3. Press the Operate button to turn on the printer, if necessary.

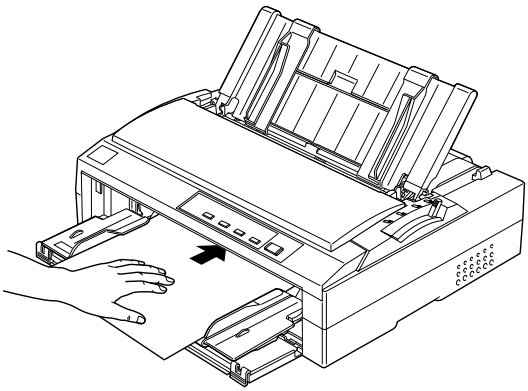
4. Slide the left edge guide to the triangle mark on the front paper or front sheet guide. Then adjust the right edge guide to match the width of your paper.

   Note:
   You can slide the left edge guide to the left in 1/10-inch increments to increase the left margin on your printout.

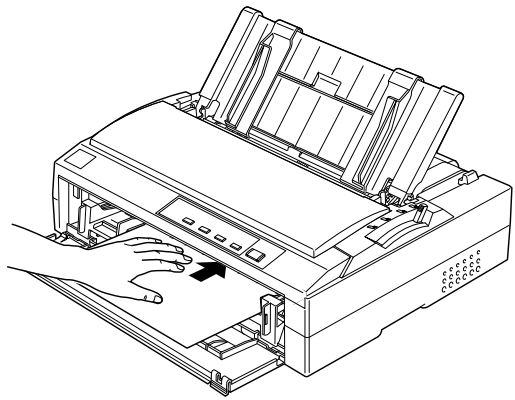


5. Slide the paper printable side up between the edge guides until it meets resistance. The printer loads the paper automatically.

   front sheet guide



front paper guide



If the first line on your page appears too high or low, you can adjust its position using the micro adjust feature. See “Adjusting the Top-of-Form Position” on page 3-35.

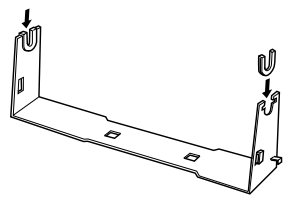
Using the Roll Paper Holder

The optional roll paper holder 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 requiring variable paper lengths. Before you install and use the roll paper holder, you need to assemble it.

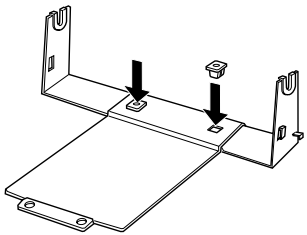
Assembling the roll paper holder

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

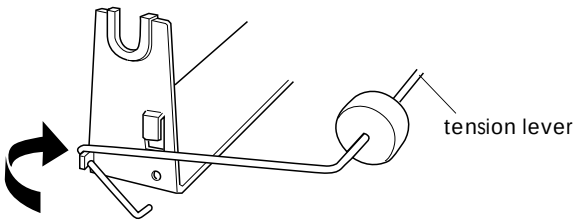
1. Fit the arc bearings into the stand as shown.



2. Place the base plate on the stand and fasten the two together with the plastic spacing clips. Make sure you orient the stand and base plate as shown below.



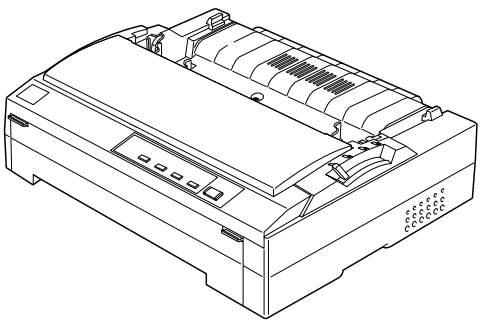
3. Hook the tension lever onto both ends of the stand as shown below. While pulling up on the tension lever, fit the wire ends of the tension lever into the holes in the stand. The roll paper holder is assembled.



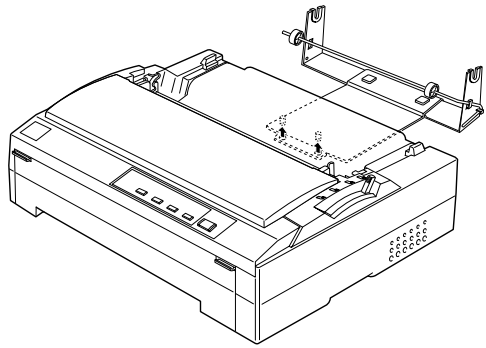
Installing the roll paper holder

To install the roll paper holder on your printer, follow the steps below.

1. Make sure the printer is turned off.
2. Remove the paper guide, then remove the tractor if it is installed in the pull or rear push position. Reinstall the paper tension unit if necessary.



3. 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.

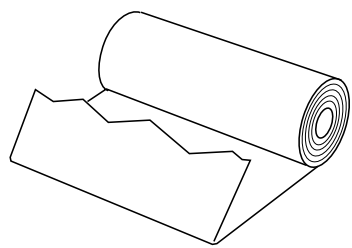


C ***Caution:***
The roll paper holder is not fastened to the printer; only the printer's weight and the two positioning pegs hold it in place. If you pick up the printer, be careful not to drop the roll paper holder.

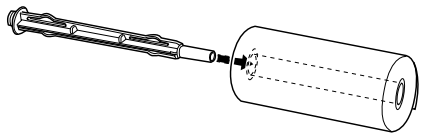
Loading roll paper

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

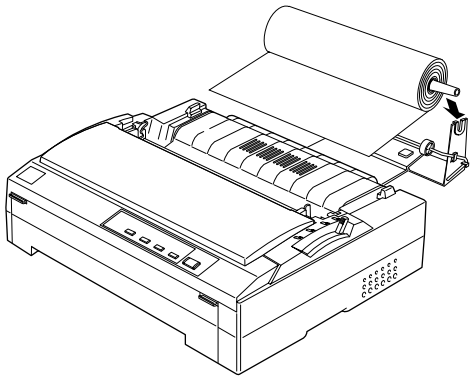
1. Make sure the printer is turned off and the paper guide is removed. Also make sure that the tractor is not installed in the pull or rear push position, and that the paper tension unit is installed.
2. Set the paper release lever to the single-sheet position. Also set the paper thickness lever to the proper position for the thickness of your roll paper.
3. Cut the leading edge of the roll paper straight across.



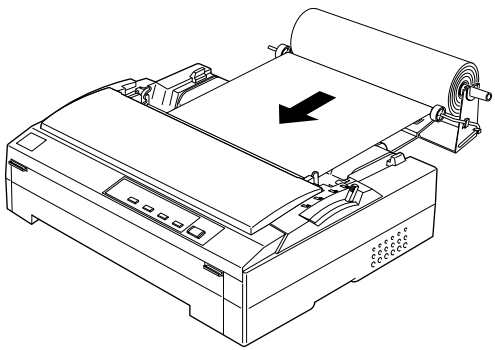
4. Insert the roll paper holder shaft into the center of the paper roll as shown.



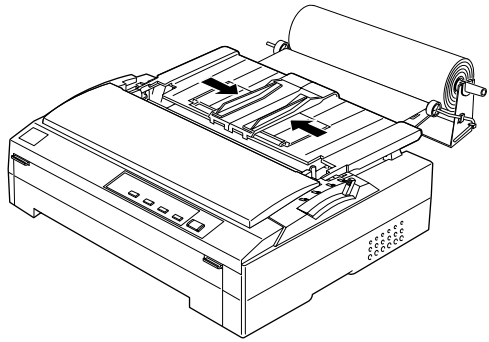
5. Place the shaft and paper roll on the roll paper holder so the paper feeds from the bottom of the roll. Then turn on the printer.



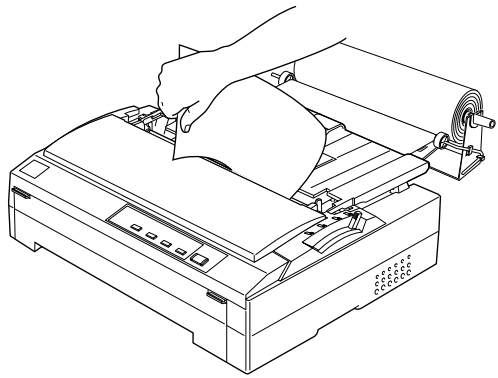
6. Bring the leading edge of the paper up over the rear of the printer and insert it into the printer until it meets resistance. The printer loads the roll paper automatically.



7. Install the paper guide over the roll paper to separate the printout from the unused paper. Slide the edge guides to the middle of the paper guide.

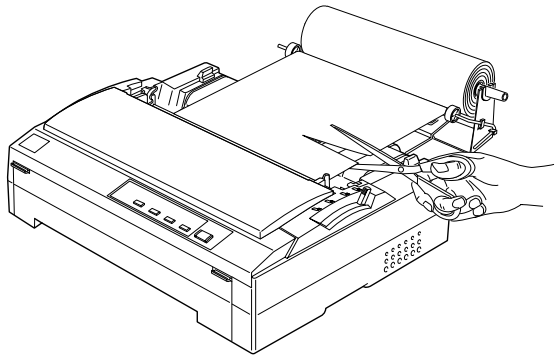


You are now ready to print. When you finish printing, press the LF/FF button to advance the paper; then tear off the paper using the tear-off edge of the printer cover (pull it towards you for a clean cut).



Removing roll paper

Roll paper cannot be fed backward. To remove roll paper, remove the paper guide, cut the roll paper behind where it feeds into the printer; then press the Load/Eject button to eject the remaining paper.



Installing an Interface Card

You can use optional interface cards to supplement your printer's built-in parallel interface. The EPSON interface cards below are compatible with your printer. (Not all interfaces are available worldwide.)

Model number	Card type
C82305] / C82306]	Serial interface
C82307] / C82308]	32KB intelligent serial interface
C82310] / C82311]	32KB intelligent parallel interface
C82312]	LocalTalk interface
C82313]	32KB IEEE-488 interface
C82314]	Coax interface
C82315]	Twinax interface
C82345]	IEEE-1284 parallel interface
C82357]	Ethernet interface

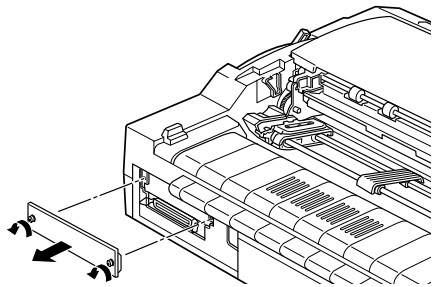
The asterisk (]) is a substitute for the last digit, which varies by country.

If you are not sure whether you need an optional interface or would like to know more about interfaces, contact your dealer.

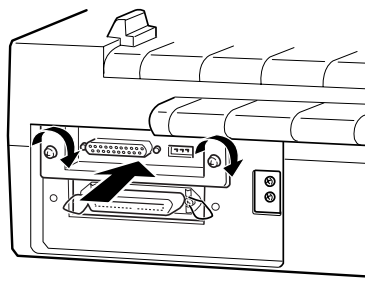
Follow the steps below to install an optional interface card.

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

2. Remove the screws securing the shield plate to 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 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, reverse the steps above.

Using a Serial Interface Card (C82305] or 82306])

To use a serial interface card (C82305] or C82306]), see the sections below regarding baud rate, handshake timing, and error handling. For all other data transfer conventions, such as word structure and communications protocol, see your interface card manual.

Selecting a baud rate

You can select from the following baud rates: 300, 600, 1200, 1800, 2400, 4800, 9600, and 19200 bps (bits per second). To set the baud rate, see the bit-rate selection table in your interface card manual.

Handshake timing

When the unused area for data in the input buffer drops to 256 bytes, the printer outputs an X-OFF code or sets the DTR flag to 1 (MARK) to indicate that it cannot receive data. When the unused area increases to 512 bytes, the printer outputs an X-ON code or sets the DTR flag to 0 (SPACE) to indicate that it is ready to receive data.

Error handling

When the printer detects a parity error, it prints an asterisk (]). The printer ignores all other errors, including framing and overrun errors.

Appendix B

Cleaning and Transporting the Printer

B

Cleaning the Printer B-2

Transporting the Printer B-3

Cleaning the Printer

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

1. Remove any paper loaded in the printer, and turn off the printer.
2. Remove the paper guide. If 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 and the paper guide are still dirty or dusty, clean them with a soft, clean cloth dampened with mild detergent dissolved in water. Keep the printer cover and front cover closed to prevent water from getting inside the printer.

C ***Caution:***

- *Never use alcohol 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 oils can damage the printer mechanism. Contact your EPSON dealer if you think lubrication is needed.*

Transporting the Printer

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

1. Remove any paper loaded in the printer, and turn off the printer.
2. Unplug the power cord from the electrical outlet; then disconnect the interface cable from the printer. If an optional cut-sheet feeder is installed, remove it.
3. Remove the paper guide. If any options are installed, remove them.

> ***Warning:***
> *You need to move the print head by hand to remove the ribbon cartridge. If the printer has been used recently, the print head may be hot; let it cool before touching it.*

4. Remove the ribbon cartridge by following step 3 through 6 and then steps 11 and 12 of "Installing or Replacing the Ribbon Cartridge" in Chapter 1.
5. Make sure that the paper tension unit is installed and the tractor is installed in the rear push position. (See Chapter 3 for instructions on installing the tractor in the rear push position.) Also make sure that the printer cover and front cover are closed.
6. Pack the printer, paper guide, ribbon cartridge, and power cord (if necessary) in the printer's original box with the original packing materials. Also pack options in their original boxes and packing materials.

Appendix C

Specifications

Printer Specifications C-2
- Mechanical C-2
- Electrical C-4
- Environmental C-5
- Paper C-5
- Safety approvals C-11
- CE marking C-11

Command Lists C-12
- EPSON ESC / P control codes C-12
- IBM 2380 / 2381 Plus emulation control codes C-16

Character Tables C-17

C

Printer Specifications

Mechanical

Printing method:	9-pin impact dot matrix	
Printing speed:	High speed draft	410 cps at 10 cpi (455 cps at 12 cpi maximum)
	Draft	310 cps at 10 cpi
	Near letter quality	77 cps at 10 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 1/216-inch increments	
Printable columns:	FX-880: 80 columns (at 10 cpi) FX-1180: 136 columns (at 10 cpi)	
Resolution:	Maximum 240 × 144 dpi (near letter quality)	
Interfaces:	One standard bidirectional, 8-bit, parallel interface with IEEE 1284 nibble mode support and one optional interface slot	
Paper feed methods:	Friction (front, rear) Push tractor (front, rear) Pull tractor (front, bottom, rear) Push and pull tractor (additional tractor is required) (front, rear) Cut-sheet feeder (optional) Roll paper holder (optional)	

Paper feed speed:	Continuous	5 inches / second
	Intermittent	62 ms / line at 1 / 6-inch line spacing

Paper capacity:

Single-bin cut-sheet feeder
up to 50 sheets of 82 g / m^2 (22 lb) paper

Note:
The total thickness of the paper stack can be up to 5 mm (0.20 inches).

High-capacity cut-sheet feeder
up to 150 sheets of 82 g / m^2 (22 lb) paper
up to 25 plain or bond envelopes
up to 30 airmail envelopes

Note:
The total thickness of the paper stack can be up to 15 mm (0.59 inches).

Buffer:

32KB or 0KB (selectable in the default-setting mode or the EPSON Remote! utility)

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

Barcode fonts

EAN-13, EAN-8, Interleaved 2 of 5, UPC-A, UPC-E, Code 39, Code 128, POSTNET

Character tables:

One Italic and 10 graphical character tables. (Nineteen graphical character tables are available in some countries.) See page C-17 for more information on the available character tables.

Character sets:

13 international character sets.

Reliability:	Total print volume	6.5 million lines (except print head)
	Print head life	approx. 200 million characters (Draft, 10 cpi, 14 dots / character)
Dimensions and weight:	FX-880:	
	Height	154 mm (6.1 inches)
	Width	415 mm (16.3 inches)
	Depth	350 mm (13.8 inches)
	Weight	approx. 7.6 kg (16.8 lb)
	FX-1180:	
	Height	154 mm (6.1 inches)
	Width	590 mm (23.2 inches)
	Depth	350 mm (13.8 inches)
	Weight	approx. 9.6 kg (21.2 lb)
Ribbon:	Black ribbon cartridge	#8750 for FX-880 #8755 for FX-1180
	Ribbon life	approx. 3 million characters (Draft, 10 cpi, 14 dots / character)

Electrical

	120 V Model	220 to 240 V Model
Input voltage range	103.5 to 132 V	198 to 264 V
Rated frequency range	50 to 60 Hz	
Input frequency range	49.5 to 60.5 Hz	
Rated current	0.7 A (maximum 1.6 A depending on the character type)	0.4 A (maximum 0.9 A depending on the character type)
Power consumption	Approx. 36 W (ISO/IEC 10561 letter pattern)	

This product is also designed for IT power systems with a phase-to-phase voltage of 220 to 240 V.

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

Environmental

	Temperature	Humidity (without condensation)
Operation (plain paper)	5 to 35°C (41 to 95°F)	10 to 80% RH
Operation (recycled paper, envelope, label, or roll paper)	15 to 25°C (59 to 77°F)	30 to 60 % RH
Storage	-30 to 60°C (-22 to 140°F)	0 to 85%

Paper

Note:

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

  Temperature 15 to 25°C (59 to 77°F)
  Humidity 30 to 60% RH

- *Do not load paper that is curled or has been folded.*

Single sheets:

		Front entry		Rear entry	
		Minimum	Maximum	Minimum	Maximum
Width*	(mm)	148	FX-880: 257 FX-1180: 420	148	FX-880: 257 FX-1180: 420
	(inches)	5.8	10.1 16.5	5.8	10.1 16.5
Length**	(mm)	182	364	92	364
	(inches)	7.2	14.3	3.6	14.3
Thickness	(mm)	0.065	0.14	0.065	0.14
	(inches)	0.0025	0.0055	0.0025	0.0055
Weight	(g/m^2)	52	90	52	90
	(lb)	14	24	14	24
Quality		Plain paper, bond paper, and recycled paper			

*182 to 216 mm (7.2 to 8.5 inches) for the optional cut-sheet feeder for FX-880.
182 to 420 mm (7.2 to 16.5 inches) for the optional cut-sheet feeder for FX-1180.
**210 to 364 mm (8.3 to 14.3 inches) for the optional cut-sheet feeder.

Single-sheet multi-part forms (for the optional front sheet or front paper guide only):

		Minimum	Maximum
Width	(mm) (inches)	148 5.8	FX-880: 257 10.1 FX-1180: 420 16.5
Length	(mm) (Inches)	182 7.2	364 14.3
Copies		1 original + 5 copies	
Total thickness	(mm) (inches)	0.12 0.0047	0.46 0.018
Weight per sheet of multi part	(g/m^2) (lb)	40 12	58 15
Quality		Carbonless multi-part forms with a line of glue at the top or one side of the form	

Continuous paper (ordinary and multi-part):

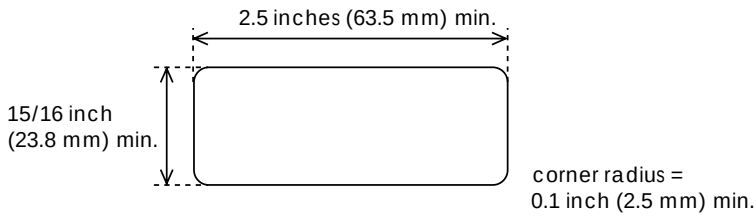
		Minimum	Maximum
Width	(mm) (inches)	101.6 4.0	FX-880: 254.0 10.0 FX-1180: 406.4 16.0
Length, one page	(mm) (inches)	101.6 4.0	558.8 22.0
Copies		1 original + 5 copies	
Total thickness	(mm) (inches)	0.065 0.0025	0.46 0.018
Weight, ordinary paper	(g/m^2) (lb)	52 14	82 22
Weight, per sheet of multi part	(g/m^2) (lb)	40 12	58 15
Quality		Plain paper, recycled paper, and carbonless multi-part forms with spot gluing or paper stapling on both sides	

Note:
Do not load thick paper, such as multi-part forms with five or six pars, in the rear slot.

Continuous labels (front and bottom entry only):

Note:
Use only labels mounted on continuous backing sheets.

	Minimum	Maximum
Label size	See the figure below.	
Width, backing sheet (mm)	101.6	FX-880: 254.0 / FX-1180: 406.4
Width, backing sheet (inches)	4.0	FX-880: 10.0 / FX-1180: 16.0
Length, backing sheet (mm)	101.6	558.8
Length, backing sheet (inches)	4.0	22.0
Thickness, backing sheet (mm)	0.07	0.09
Thickness, backing sheet (inches)	0.0028	0.0035
Total thickness (mm)	0.16	0.19
Total thickness (inches)	0.0063	0.0075
Label weight (g/m^2)	68	
Label weight (lb)	17	
Quality	Plain paper	



Envelopes (rear entry only):

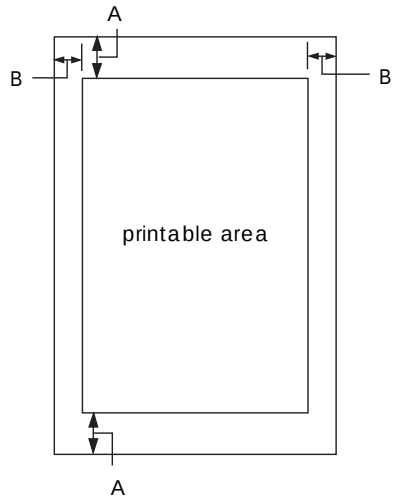
			Minimum	Maximum
Envelope size (No. 6)	Width	(mm) (inches)	165 6.5	
	Length	(mm) (inches)	92 3.6	
Envelope size (No10)	Width	(mm) (inches)	241 9.5	
	Length	(mm) (inches)	105 4.1	
Total thickness		(mm) (inches)	0.16 0.0063	0.52 0.020
			Differences in thickness within the printable area must be less than 0.25 mm (0.0098 inches).	
Weight		(g/m^2) (lb)	45 12	90 24
Quality			Bond envelopes, plain envelopes, and airmail envelopes without glue on the flap	

Roll paper (rear entry with optional roll paper holder only):

		Minimum	Maximum
Width	(mm) (inches)	216 8.5	
Length	(mm) (inches)	—	
Thickness	(mm) (inches)	0.07 0.0028	0.09 0.0035
Weight	(g/m^2) (lb)	52 14	82 22
Quality		Plain paper	

Printable area

Single sheets

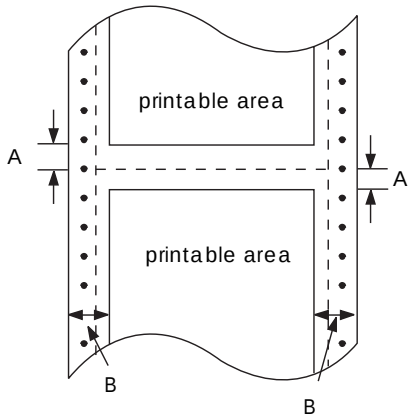


A The minimum top and bottom margins are 4.2 mm (0.2 inch).

B FX-880:
The minimum left and right margins are 3 mm (0.1 inch).
The maximum printable width is 203.2 mm (8.0 inches). For paper wider than 209.2 mm (8.2 inches), the side margins increase to match the width of the paper.

FX-1180:
The minimum left and right margins are 3 mm (0.1 inch).
The maximum printable width is 345.4 mm (13.6 inches). For paper wider than 351.4 mm (13.8 inches), the side margins increase to match the width of the paper.

Continuous paper

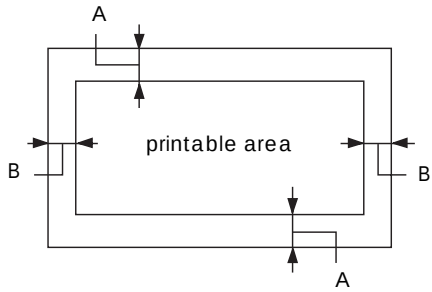


A The minimum top and bottom margins (above and below the perforation) are 4.2 mm (0.17 inch).

B FX-880:
The minimum left and right margins are 13 mm (0.51 inch).
The maximum printable width is 203.2 mm (8.0 inches). For paper wider than 229.2 mm (9.0 inches), the side margins increase to match the width of the paper.

FX-1180:
The minimum left and right margins are 13 mm (0.51 inch).
The maximum printable width is 345.4 mm (13.60 inches). For paper wider than 371.4 mm (14.6 inches), the side margins increase to match the width of the paper.

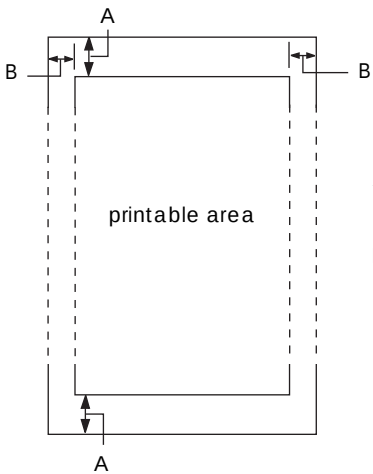
Envelopes



A The minimum top and bottom margins are 4.2 mm (0.17 inch).

B The minimum left and right margins are 3 mm (0.12 inch).

Roll paper



A The minimum top and bottom margins are 4.2 mm (0.17 inch).

B The minimum left and right margins are 3 mm (0.12 inch). The maximum printable width is 203.2 mm (8.0 inches) for the FX-880.

Safety approvals

120 V model:

Safety standards	UL1950 CSA C22.2 No. 950
EMI	FCC part 15 subpart B class B CSA C108.8 class B

230 V model:

Safety standards	EN 60950 (VDE, NEMKO)
EMI	EN 55022 (CISPR pub. 22) class B AS / NZS 3548 class B

Acoustic noise: Approx. 55 dB (A) (ISO 7779 pattern)

CE marking

230 V model:

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 801-2 IEC 801-3 IEC 801-4

Command Lists

Your printer supports the following EPSON ESC/P control codes and IBM 2380 Plus for FX-880 or IBM 2381 Plus for FX-1180 emulation control codes.

EPSON ESC/P control codes

Selecting an EPSON ESC/P printer in your software allows you to use advanced fonts and graphics. See the *ESC/P Reference Manual* for details.

General operation:
ESC @, ESC U, ESC EM

Paper feeding:
FF, LF, ESC 0, ESC 2, ESC 3, ESC 1, ESC A, CR

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

Print position motion:
ESC $, ESC ¥, ESC D, HT, ESC B, VT, ESC J

Font selection:
ESC k, 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 -

Spacing:
ESC Space

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

Bit image:
ESC K, ESC L, ESC Y, ESC Z, ESC ^, ESC *

Bar code:
ESC (B

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 = (*n*1 + (256 × *n*2))

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 (120 dpi)
m = 2: 2 dots, 3: 3 dots, 4: 4 dots, 5: 5 dots

s: Space adjustment value
$-3 \le s \le 3$ (1/240-inch units)

v1, *v2*: Bar length
v1 + *v2* × 256 (1/72-inch units)

Note:
The v1 and v2 values are ignored when POSTNET is selected. The long bar length of POSTNET is always 0.125 inches; the short bar length is always 0.050 inches.

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

The table below shows the valid data for each barcode type. 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 7/72 inch above the baseline.

IBM 2380/2381 Plus emulation control codes

This printer emulates the IBM Proprinter using the commands below. For detailed information, see the IBM 2380 Plus / 2381 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 0, ESC 1, ESC 2, ESC 3, 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

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 _

Spacing:
BS, SP

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

Bit image:
ESC K, ESC L, ESC Y, ESC Z

Barcode:
ESC [f, ESC [p

Download:
ESC = (draft mode only)

Character Tables

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

Note:

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

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

You can choose between the two IBM character tables shown below when you select IBM 2380 Plus / 2381 Plus emulation in the default-setting mode, as described in Chapter 5. (When you select Table 1, hex codes 00 to 1FH and 80 to 9FH are replaced; when you select Table 2, hex codes 00 to 1FH are replaced.)

Table 1 Table 2

PC 437 (USA, Standard Europe)

PC 850 (Multilingual)

PC 860 (Portuguese)

PC 863 (Canadian-French)

PC 865 (Norwegian)

PC 861 (Icelandic)

BRASCII (Brazilian Portuguese)

Abicomp (Brazilian Portuguese) ISO Latin 1

Roman 8

PC 437 Greek (Greek) ***PC 869 (Greek)****

C

ISO 8859-7 (Latin/Greek) ***PC 853 (Turkish)****

PC 857 (Turkish)*

ISO Latin 1T (Turkish)*

PC 855 (Cyrillic)*

PC 866 (Russian)*

PC 852 (East Europe)*

MAZOWIA (Poland)*

C

Code MJK (CSFR)*

Bulgaria*

Estonia*	***PC 774 (LST 1283:1993)****

ISO 8859-2*

PC 866 LAT. (Latvian) ***PC 866 UKR***

Italic

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

International character sets for the Italic table

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

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

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Customer Support Information

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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. See the section for your country below.

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, NT, 95, or 3.1):

Software application(s) you normally use with your printer and their version number(s):

For United States and Canada Users

If you purchased your printer in the United States or Canada, EPSON provides customer support through the following services:

Electronic support services

Service	Access
World Wide Web	From the Internet, you can reach EPSON's home page at **http://www.epson.com.**
EPSON Internet FTP Site	If you have Internet FTP capability, use your Web browser (or other software for FTP downloading) to log onto **ftp.epson.com** with the user name **anonymous** and your e-mail address as the password.
EPSON Download Service	You can call the EPSON Download Service at **(800) 442-2007**. Set your communications software to 8 data bits, 1 stop bit, no parity. Modem speed can be up to 28.8 Kbps.
EPSON Forum on CompuServe®	Members of CompuServe can type **GO EPSON** at the menu prompt to reach the Epson America Forum. For a free introductory CompuServe membership, call (800) 848-8199 and ask for representative #529.

Automated telephone services

Service	Access
EPSON SoundAdvice™	For pre-recorded answers to commonly asked questions about EPSON products 24 hours a day, seven days a week, call **(800) 442-2110**.
EPSON FaxAdvice™	Access EPSON's technical information library by calling **(800) 442-2110**. You must provide a return fax number to use this service.
EPSON Referral Service	For the location of your nearest Authorized EPSON Reseller or Customer Care Center, call **(800) 442-2110**.

EPSON also provides technical support and information on the installation, configuration, and operation of EPSON products. Dial **(800) 922-8911**, **(310) 782-2600** (U.S.), or **(905) 709-9475** (Canada), 6 A.M. to 6 P.M., Pacific Time, Monday through Friday.

Before you call, please have the following information ready:

Product name

Product serial number

Computer configuration

Description of the problem

You can purchase ink cartridges, paper, manuals, accessories, and parts from EPSON Accessories at **(800) 873-7766** (U.S. sales only). In Canada, please call **(800) 873-7766** for dealer referral.

Note:
If you need help using software with an EPSON product, see the documentation for that program for technical support information.

For United Kingdom and the Republic of Ireland Users

If you purchased your printer in the UK or the Republic of Ireland, Epson (UK) Limited provides a range of customer services and technical support.

Note:
For customers in the Republic of Ireland, please use the correct dialing codes when dialing the UK telephone numbers listed in the following sections. For example, the Enquiry Desk fax number, 01442 227271, should be dialed as 0044 1442 227271 from the Republic of Ireland.

Enquiry Desk

The Enquiry Desk team can be contacted by calling 0800 220546 in the UK or 1 800 409132 from the Republic of Ireland, by faxing 01442 227271, or via the Internet at info@epson.co.uk. They can provide the following information:

- Information and literature on new EPSON products (also available from Faxon EPSON)
- Where to purchase genuine EPSON consumables, accessories, and options

Customer Support

Our Customer Support team can provide the following services:

- Technical information on installing, configuring, and operating your EPSON products
- Arranging for faulty EPSON products to be repaired within the warranty period

For information on contacting our Customer Support team, please see the Service and Support Information booklet that came with your EPSON product.

If this booklet is not available, details can be found on Faxon EPSON faxback service, EPtec Bulletin Board Service, or on EPSON's World Wide Web site. See below for details.

Faxon EPSON

Contact Faxon EPSON Faxback Service for:

- Literature and specifications on the latest EPSON products
- Support information including troubleshooting tips, switch settings, and driver information

To use Faxon EPSON, call 01442 227332 using a touch-tone phone. You will be asked to follow a simple routine to register your document request. Once you have entered your telephone and fax numbers, Faxon EPSON will fax a copy of the document catalogue to your fax machine.

When you have found the documents that you need in the catalogue, call Faxon EPSON again and enter the document ID numbers. The documents will be faxed to you automatically.

EPtec - Bulletin Board Service for latest drivers and utilities

You can call the EPSON Bulletin Board Service at 01442 227479. No membership is required. Make sure that your communications software is set to 8 data bits, 1 stop bit, no parity bit, ANSI terminal mode emulation, and a modem speed of up to 28.8 Kbps. Downloading protocols supported include Xmodem, Ymodem, and Zmodem. See the documentation that came with your communications software and modem for more information.

When you first connect to the Bulletin Board Service, you will be asked for your name, company name, phone number, and a password (which you can invent yourself).

World Wide Web

If you can connect to the Internet and have a Web browser, you can access EPSON's World Wide Web site at http://www.epson.com. Here you will find information on the latest EPSON products, software drivers, and answers to frequently asked questions.

For Australian Users

EPSON Australia wishes to provide you with a high level of Customer Service. As well as this *User's Guide*, we provide the following sources for obtaining information:

EPSON FAXBACK

EPSON FAXBACK will fax you the latest specifications and pricing for most EPSON products offered in Australia. There is also technical information including details of the latest software and drivers available. Phone (02) 9903 9075 and the system will guide you through a number of choices before faxing the information to your fax machine.

EPSON Bulletin Board System

This is where you can download the latest software and drivers. Visit the BBS to check out the latest versions. If you have a modem, phone (02) 9417 5090.

Internet URL http://www.epson.com.au

Access the Epson Australia World Wide Web pages. Worth taking your modem here for the occasional surf! You can get the same information as offered on the EPSON FAXBACK and the EPSON Bulletin Board plus more.

Your dealer

Don't forget that your dealer can often help identify and resolve problems. The dealer should always be the first call for advice on problems. They can often solve problems quickly and easily as well as give you advice on the next step to take.

EPSON Helpdesk

EPSON Helpdesk is provided as a final backup to make sure our clients have access to advice. Operators on the Helpdesk can aid you in diagnosing hardware and software problems. They can also advise you on the latest EPSON products and where the nearest dealer or service agent is located. Many types of queries are answered here.

The Helpdesk numbers are:

Phone:	(02) 9903 9040
Fax:	(02) 9903 9189

We encourage you to have all the relevant information on hand when you ring. The more information you prepare, the faster we can help solve the problem. This information includes the *User's Guide* for your EPSON product, type of computer, operating system, application programs, and any other information you feel is required.

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For Singapore Users

Contact the telephone and fax numbers below.

Phone:	(065) 337-7911
Fax:	(065) 334-1185

For Hong Kong Users

To obtain technical support as well as other after-sales services, users are welcome to contact EPSON Hong Kong Limited.

Internet home page

EPSON Hong Kong has established a local home page in both Chinese and English on the Internet to provide users with the following information:

Product information

Answers to Frequently Asked Questions (FAQs)

Latest versions of EPSON printer drivers

Users can access our World Wide Web home page at http://www.epson.com.hk.

Electronic Bulletin Board System

An electronic Bulletin Board System (BBS) is also available to obtain printer information and the latest versions of printer drivers. You can log onto the following number for the BBS service:

BBS:	(852) 2827-4244

Technical support hotline

You can also contact our technical staff at the following telephone and fax numbers:

Phone:	(852) 2585-4399
Fax:	(852) 2827-4383

For Philippines Users

To obtain technical support as well as other after sales services, users are welcome to contact the EPSON Philippines Representative Office at the telephone and fax numbers below.

Phone:	(632) 813-6552
Fax:	(632) 813-6545
BBS:	(632) 814-0595

Glossary

ASCII
American Standard Code for Information Interchange. A standardized coding system for assigning numerical codes to letters and symbols.

auto line feed
When this setting 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). This increases the print speed but may reduce precise vertical alignment. Bidirectional printing is this 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 constitute the set of characters used in a particular language.

characters per inch (cpi)
A measurement of the size of text characters.

condensed printing
Printing in which the width of each character is approximately 60% of the width of standard characters. Useful for fitting wide tables or spreadsheets onto a page.

continuous paper
Paper that has sprocket-feed holes on both sides, is perforated between pages, and is supplied in a folded stack. Also called fanfold paper.

control code
A special code used to control a printer function such as a carriage return or line feed.

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
A value or setting that takes effect when the equipment is turned on, reset, or initialized. Also known as a factory setting.

dithering
A way of arranging dots on a page to simulate a shade or tone.

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 or Draft Condensed as the font. The Draft font uses fewer dots per character for faster printing. See also *high-speed draft* and *near letter quality*.

driver
See *printer driver*.

ESC/P
Abbreviation for EPSON Standard Code for Printers. This is 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.

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 code and control panel button that advances the paper to the next top-of-form position.

halftones
Patterns of black or colored dots used to reproduce an image.

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.

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 and ASCII characters. Also called data dump.

high-speed draft
A draft printing mode you can select using the default-setting mode or the EPSON Remote! utility. High-speed draft uses a minimum number of dots per character to produce extremely high-speed printing. See also *draft* and *near letter quality*.

interface
The connection (via a cable) between the computer and the printer over which print data is transmitted to the printer.

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*.

line feed (LF)
A control code and control panel button that advances the paper one line space.

micro adjust
The printer feature that allows you to precisely adjust the tear-off and top-of-form positions.

near letter quality (NLQ)
The print mode used by your printer when a font other than Draft or Draft Condensed is selected. Printing with near letter-quality fonts provides better readability and appearance at a reduced print speed. See also *draft* and *high-speed draft*.

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 due to margins.

printer driver
A software program that runs, or "drives," a printer. Printer drivers send commands to your printer to tell it how to print your print job.

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 in the number of dots per inch (dpi).

self test
A method for checking the operation of the printer. When you run the self test, the printer prints the characters stored in its ROM (Read Only Memory).

tear off button
A control panel button that feeds the perforation of continuous paper to the tear-off position and then feeds the paper back to the top-of-form position.

tear-off position
The position of your continuous paper when you finish printing if auto tear-off mode is on or if you press the Tear Off/Bin button. Using the micro adjust feature, you can adjust the position so that the paper's perforation meets the printer's tear-off edge.

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.

unidirectional printing
Printing in which the print head prints in one direction only. Unidirectional printing is useful for printing graphics because it allows precise vertical alignment. You can select unidirectional printing using the printer's default-setting mode or the EPSON Remote! utility. See also *bidirectional printing.*

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