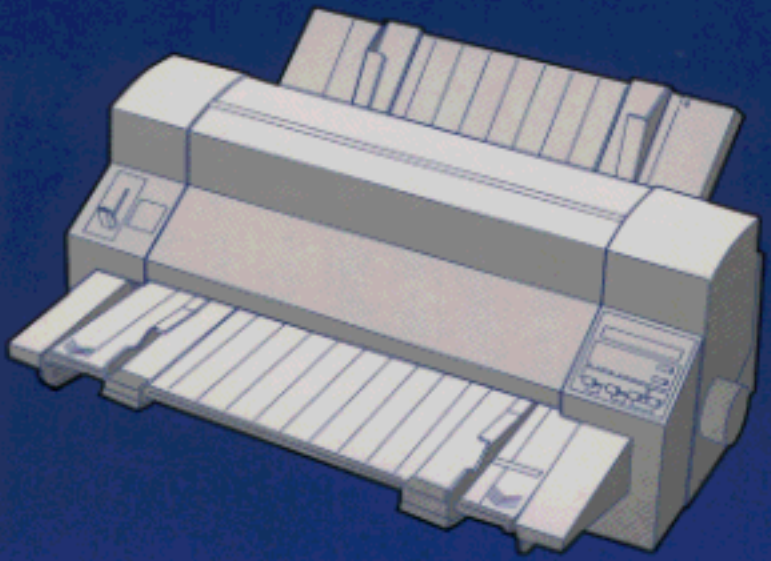
EPSON



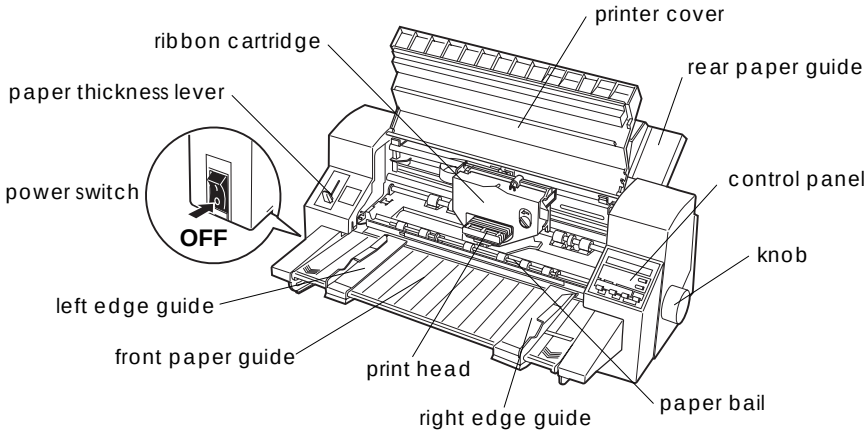
24-PIN DOT MATRIX PRINTER

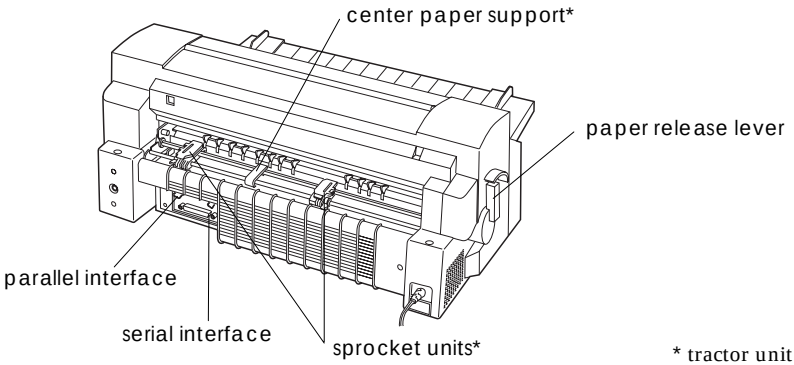
DLQ-3000+

User's Guide

4007796
501-00

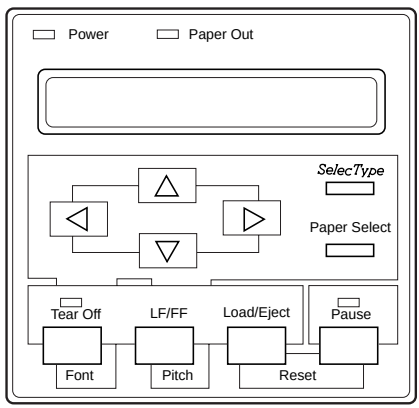
Printer Parts





* tractor unit parts

Control Panel



EPSON®

24-Pin Dot Matrix Printer

DLQ-3000+

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Printed on Recycled Paper.

User's Guide

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
Model:	P821A

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

August 1997

Y. Ishii
President of EPSON EUROPE B.V.

Safety Information

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 ampere rating of all devices plugged into the wall outlet does not exceed the wall outlet's ampere rating.
- ❑ Unplug the printer before cleaning. Clean 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; 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.

- 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.

  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

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 (⏚).

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.

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Glossary

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Introduction

Your new EPSON® DLQ-3000+ 24-pin dot matrix printer offers high performance with a wide range of features in a compact design. You will find the same high-quality printing and ease of operation you have come to expect from EPSON printers.

Features

Here are some of the features that make your printer a great value:

- ❑ High-speed draft mode printing of up to 444 characters per second (cps) at 10 characters per inch (cpi)
- ❑ The ability to handle a wide range of paper types, including single sheets, continuous paper, multi-part forms (one original plus up to six copies), labels, envelopes, postcards, overlapping forms, and continuous forms with labels
- ❑ High-precision printouts even on multi-part forms, made possible by keeping the paper flat, not rolled, during printing
- ❑ Easy paper handling for both single sheets and continuous paper
- ❑ An AUTO function on the paper thickness lever that automatically compensates for the thickness of paper in the printer
- ❑ Eight barcode fonts and four scalable fonts, as well as one draft and nine letter-quality bitmap fonts
- ❑ A large printable area: 70 lines on A4 size paper and 66 lines on letter size paper

- ❑ Color printing with a color-ribbon cartridge (S015067).
- ❑ Bidirectional communication with IEEE 1284 Nibble Mode support.
- ❑ Support of advanced EPSON ESC / P 2™ commands and IBM® 2391 Plus emulation
- ❑ An advanced control panel, including a display screen that provides you with current printer current status information. Also, using the control panel, you can enter SelecType mode, which enables you to make more printer settings than are available through many application programs.
- ❑ An automatic interface selection feature. You can connect more than one computer at a time, and the printer switches from one to the other as it receives data.
- ❑ Software, including a printer driver and a remote control panel utility that lets you change printer settings quickly and easily
- ❑ For Windows 95 users, the EPSON Status Monitor utility. This program monitors printer status, alerts you when printer errors occur, and provides simple troubleshooting tips.

Options

The following options are available for your printer:

- ❑ The cut-sheet feeder which automatically feeds up to 200 sheets of plain paper without reloading.
- ❑ Interface cards, which are available to supplement the printer's built-in parallel and serial interface.

Chapter 6, “Using Printer Options,” contains detailed information about installing and using these options.

How to Use This Manual

This manual provides illustrated, step-by-step instructions for setting up and operating your printer.

Chapter 1 **“Setting Up the Printer”** contains information on unpacking, setting up, and connecting the printer. Be sure to read this chapter first.

Chapter 2 **“Setting Up Your Software”** describes how to set up your software, which includes a printer driver for Microsoft® Windows® operating systems, the EPSON Status Monitor utility for Windows 95, and two DOS-based printer utilities.

Chapter 3 **“Paper Handling”** explains how to load and use single sheets, continuous paper, and other types of paper.

Chapter 4 **“Controlling the Printer”** contains information on controlling the printer using the control panel. To change many of the printer’s default settings, see “SelecType” in this chapter.

Chapter 5 **“Using EPSON Status Monitor 2”** explains how to use the EPSON Status Monitor 2 utility for Windows 95.

Chapter 6 **“Using Printer Options”** explains how to use optional accessories with your printer.

Chapter 7 **“Maintenance and Transportation”** provides maintenance information, including transportation guidelines.

Chapter 8 **“Troubleshooting”** contains troubleshooting information. If the printer does not operate properly or the printed results are not what you expect, see this chapter for solutions.

Appendix A **"Specifications"** provides specifications for the printer and the optional cut-sheet feeder.

Appendix B **"Command Lists and Character Tables"** lists the printer's commands and character tables.

Appendix C **"Contacting Customer Support"** lists the best ways for getting help and more information about EPSON products and services.

A **Glossary** and an **Index** are provided at the end of this manual.

Warnings, Cautions, and Notes

Warnings *must be followed to avoid bodily injury.*

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

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

Chapter 1

Setting Up the Printer

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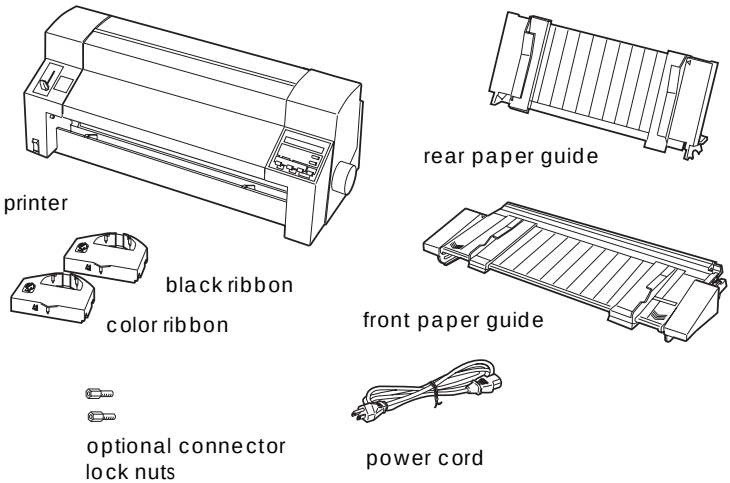
This chapter describes how to set up your printer and connect it to your computer.

Unpacking the Printer

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



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.

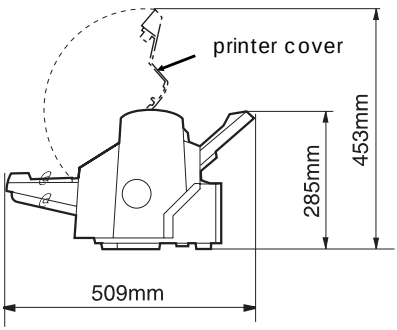
Caution:

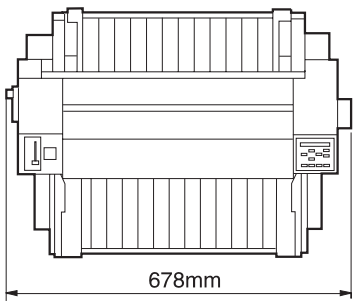
- ❑ *Be sure to remove all protective materials before you turn on the printer.*
- ❑ *There are several models of the printer designed for different voltages, and it is not possible to adjust the printer for use at another voltage. If the label on the back of the printer does not show the correct voltage 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, as shown below.





- ❑ Place the printer near a wall outlet where you easily unplug the power cord.

- ❑ 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.

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 3-13 for details.

Using a printer stand

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

- ❑ Use a stand that supports at least 33 kg (72.8 lb).

- ❑ 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.

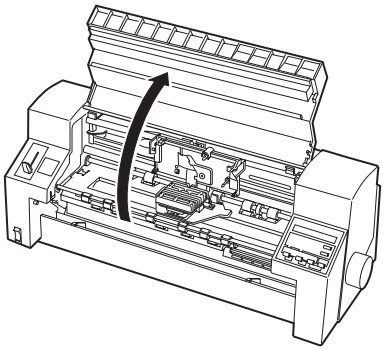
Assembling the Printer

Installing the ribbon cartridge

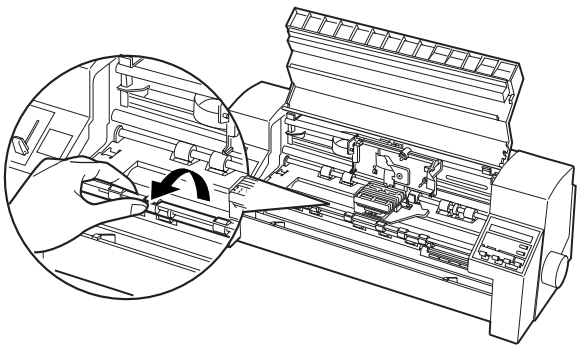
Before installing the ribbon cartridge, make sure that the power cord is not plugged into an electrical outlet.

To install the ribbon cartridge, remove it from its packaging and then follow these steps:

1. Hold the center of the front edge of the printer cover (not the right side), and lift gently up and away from you.

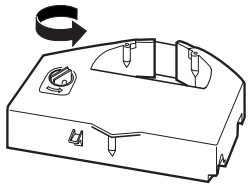


2. Open the paper bail.



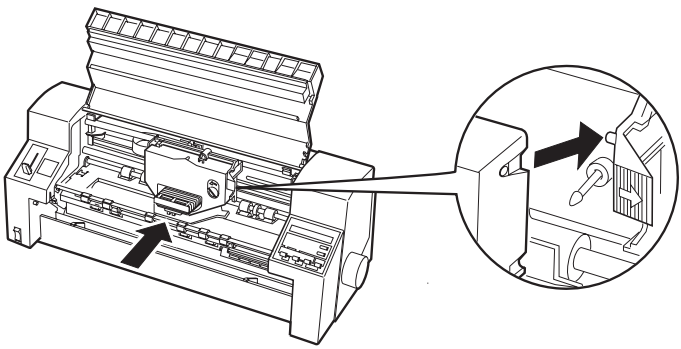
Warning:
Never move the print head while the printer is turned on; this can damage the printer.

3. Turn the ribbon-tightening knob in the direction of the arrow to take up any slack in the ribbon.

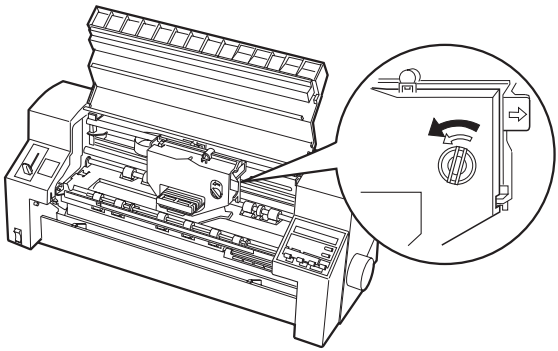


4. Hold the ribbon cartridge with the exposed ribbon down and the ribbon-tightening knob facing you.

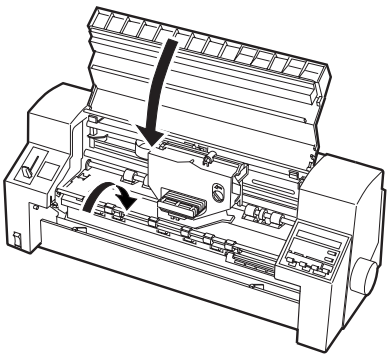
   As shown below, guide the ribbon under the print head, and snap the cartridge into place from left to right so that the tabs on both sides of the cartridge fit into the notches in the cartridge holder. Then pivot the bottom of the cartridge into place.



5. Turn the ribbon-tightening knob again to remove any slack in the ribbon and to make sure the ribbon moves freely.



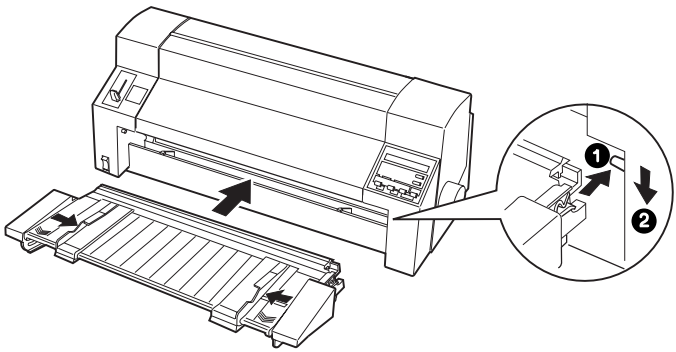
6. Close the paper bail and the printer cover.



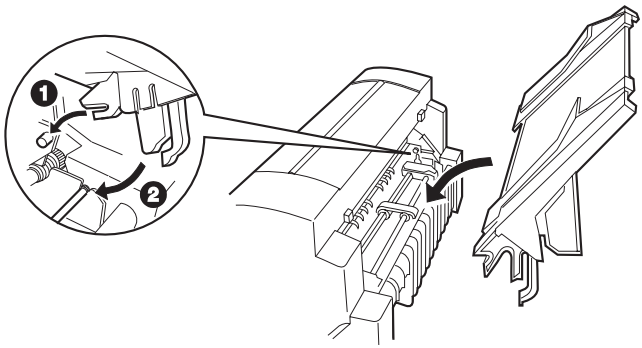
Attaching the paper guides

To attach the front and rear paper guides, follow these steps.

1. Slide the edge guides slightly to the center. Hold the front paper guide horizontally with both hands. Slide the slots on both sides of it onto the mounting pegs in the printer as shown below. Then lower it until it locks into place.



2. In the same way, place the rear paper guide clips over the mounting pins ① and bar ②; then lower it until it locks into place.



Plugging In the Printer

1. Make sure the printer is turned off. The printer is off when the ○ side of the power switch is pressed.

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.

   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

Your printer has two separate interface connections: an IEEE-1284 compatible parallel interface and an EIA-232D serial interface. See page A-18 for more information.

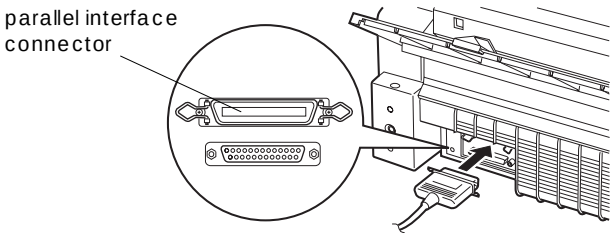
If your computer requires a different type of printer interface, see page 6-11 for a list of compatible, optional interfaces.

To connect the printer to your computer using the built-in parallel or serial interface, follow the steps below.

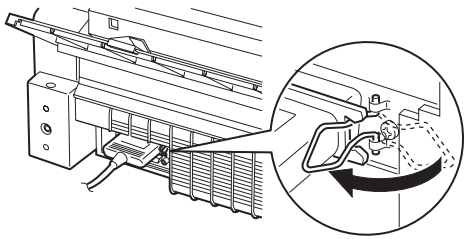
1. Make sure both the printer and computer are turned off.

2. Plug the cable connector securely into the appropriate interface connector as shown below.

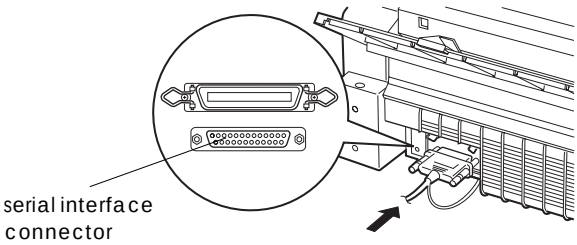
parallel interface



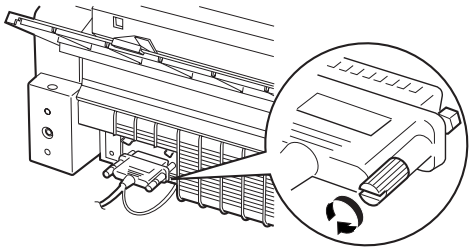
Squeeze the wire clips together until they lock in place on both sides of the connector.



serial interface

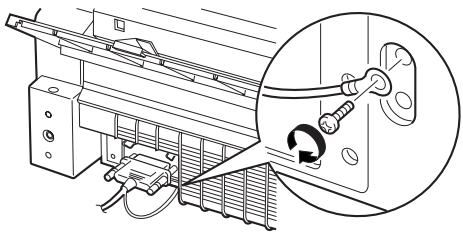


Tighten the screws on both sides of the connector.



Note:
If the screws that come with the cable do not fit into the connector lock nuts on the interface, replace the lock nuts with the optional lock nuts provided with the printer.

3. If your cable has a ground wire, connect it to the printer's ground connector as shown below.



4. Plug the other end of the cable into the computer.

Before using the printer's serial interface with SelecType, make sure that the printer's serial communication settings match those on your computer. See "SelecType" on page 4-8 for more information.

Now that the printer hardware is set up, see Chapter 2 for instructions on installing and using the printer software.

Chapter 2

Setting Up Your Software

2

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The EPSON printer software that comes with your printer includes the printer driver software, a status monitor utility for use with Windows 95, and two DOS-based utilities.

A printer driver is software that allows your computer to control the printer. You need to install the printer driver so your software applications can take full advantage of the printer's capabilities.

For instructions on installing the printer software, see the next section if you are using Windows 95, or see page 2-9 for Windows 3.1, page 2-13 for Windows NT 4.0, page 2-17 for Windows NT 3.5x, or page 2-21 for DOS programs.

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

For Windows 95 Users

Follow the steps below to install the printer driver for Windows 95. For instructions on installing the EPSON Status Monitor 2 utility, see page 2-8.

Installing the printer driver using My Computer

1. Make sure Windows 95 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.

Note:
When you install your printer driver, the EPSON Label Form utility program is also installed. For information on accessing this DOS-based utility, see page 2-23.

Once you install your printer driver for Windows 95, you can install the EPSON Status Monitor 2 utility program. This utility monitors the status of your printer, alerts you when errors occur, and provides you with troubleshooting tips. See page 2-8 for instructions on installing the Status Monitor.

Installing the printer driver using plug-and-play

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.*

- *You cannot install the EPSON Label Form utility program using plug-and-play. To install the utility, see "Installing the printer driver using My Computer" on page 2-2.*

1. Make sure the printer is connected to your computer as described on page 1-10.

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

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. You see the New Hardware Found screen.

   Note:
   If you do not see the New Hardware Found screen, or if you run into any kind of problem, click Cancel *and follow the instructions under "Installing the printer driver using My Computer" on page 2-2.*

5. Make sure the screen displays your printer model name. Then click the Driver from disk provided by hardware manufacturer radio button.

   Note:
   The next time you turn on your computer after you install the driver, Windows 95 may display the New Hardware Found screen again. 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. If you inserted the disk in drive A, type "Win95" and click OK. Otherwise, change the drive letter in the Copy manufacturer's files from box and click OK.

9. You can type a unique name for the printer in the printer name box in the Add Printer Wizard dialog box. We recommend that you keep the model name as shown.

To use the 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 Printers folder using the printer model name or the name you selected.

Once you install your printer driver for Windows 95, you can install the EPSON Status Monitor 2 utility program. This utility monitors the status of your printer, alerts you when errors occur, and provides you with troubleshooting tips. See page 2-8 for instructions on installing the Status Monitor.

Using the printer driver

Before you start printing, you should make sure that the printer driver settings match your document requirements. While many Windows applications override the printer settings made with the driver, some do not.

See this section for instructions on how to access the printer driver, check the printer driver settings, and change settings if necessary.

Accessing the printer driver from Windows applications

When you access the printer driver from a Windows application, any settings you make apply only to the application you are using. The access method explained below is typical for many Windows applications, but the way you access your printer driver may differ depending on your application. See your application manual for details.

To access the printer driver setting, select Print Setup or Print from the File menu of your application software. The Printer or Print Setup dialog box appears.

To access the printer driver from the Print dialog box, choose Printer, Setup, Properties, or Options, depending on the options available in your application. (You may need to choose a combination of these options.) The Properties window appears. The Paper and Graphics menus contain the printer driver settings. Click the tabs at the top of the window to open these menus.

Accessing the printer driver from the Start menu

When you access the printer driver from the Windows 95 Start menu, the settings you make apply to any Windows applications you open afterward. To access the printer driver from the Start menu, follow these steps:

1. Click the Start button, and then point to Settings.
2. Click Printers.
3. Right-click your printer icon, and click Properties. The Properties window appears.
4. The Paper and Graphics menus contain the printer driver settings. Click the tabs at the top of the window to open these menus.

Checking and changing printer driver settings

Before printing, check that the printer driver settings on the Paper and Graphics menus are appropriate for the kind of document you want to print, and change settings as needed. When you are finished making changes, click OK to apply the settings, or click Restore Defaults to return the settings to their factory defaults.

Paper menu

- ❑ Paper size — Select the size of the paper loaded in the printer. 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.
- ❑ 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.
- ❑ Color — Press the Color button to open the Color dialog box, where you can select Color control and Color rendering intent options.

Once you've checked your printer driver settings, you are ready to print. If you have any trouble while printing, see Chapter 8, "Troubleshooting."

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 already installed the Status Monitor before the driver, install the Status Monitor again after completing the driver installation.

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

2. Click START and Run.

3. Type A:\SETUP (if you inserted the driver 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 Chapter 5, “Using EPSON Status Monitor 2,” for instructions on how to use the Status Monitor.

For Windows 3.1 Users

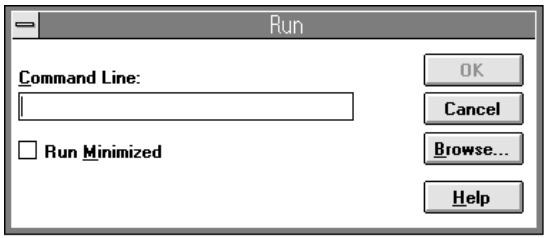
Installing the printer driver using Program Manager

Follow the steps below to install the printer driver for Windows 3.1.

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

2. Insert the 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 driver disk in a drive other than "A", substitute the appropriate letter.) Click OK. The EPSON Printer Driver Setup dialog box appears.

5. Select your printer and click OK. The installation program begins copying the printer driver files.After a few moments, the installation program creates the EPSON program group in Windows.

6. When the installation is complete, click OK to exit the installation program.

Windows will now use the EPSON DLQ-3000+ printer as its default printer on port LPT1. If you need to change the default printer or the port assignment, use the Printers utility in the Control Panel.

Note:
When you install your printer driver, the EPSON Label Form utility program is also installed. For information on accessing this DOS-based utility, see page 2-23.

Using the printer driver

Before you start printing, you should make sure that the printer driver settings match your document requirements. While many Windows applications override the printer settings made with the driver, some do not.

See this section for instructions on how to access the printer driver, check the printer driver settings, and change settings if necessary.

Accessing the printer driver from Windows applications

When you access the printer driver settings from a Windows application, any settings you make apply only to the application you are using. The access method explained below is typical for many Windows applications, but the way you access your printer driver may differ depending on your application. See your application manual for details.

To access the printer driver settings, select Print Setup or Print from the File menu of your application software. If you choose Print Setup, you see your application's Print Setup dialog box, where you can make settings for paper size, paper source, and orientation. Some applications also feature an Options button, which allows you to access the printer driver's Options dialog box.

If you choose Print, you see your application's Print dialog box. To access the printer driver settings, choose Printer, Setup, or Options, depending on the options available in your application software. (You may need to choose a combination of these options.)

Note:
Your application software may let you access only a portion of the printer driver.

Accessing the printer driver from the Control Panel

When you access the printer driver from the Windows 3.1 Control Panel, the settings you make apply to any Windows applications you open afterward. To access the printer driver from the Control Panel, follow these steps:

1. In the Main window, double-click the Control Panel icon.
2. Double-click the Printers icon. The Printers dialog box appears.
3. Make sure your printer is highlighted, then click Setup. The printer driver settings window appears.

Checking and changing printer driver settings

Before printing, check that the printer driver settings are appropriate for the kind of document you want to print, and change settings as needed. When you are finished making changes, click OK to apply the settings, or click Cancel to cancel your changes.

If you accessed the printer driver from your application, some of the settings below may appear in your application's Page Setup dialog box. If you accessed the driver from the Control Panel, these settings appear in the printer driver settings window.

- ❑ Resolution — Click the printing resolution you want.
- ❑ Paper Size — Select the size of the paper loaded in the printer. If you don't see your paper size, use the scroll bar to scroll through the list. If your paper size is not included in the list, click User Defined Size and enter the paper size in the dialog box that appears.
- ❑ Paper Source — Click the paper source you want to use.
- ❑ Orientation — Select Portrait or Landscape. The diagram on the screen changes according to the orientation you select.

To access the following settings from your application, you may need to click Printer, Setup, Options, or some combination of these buttons. If you accessed the driver from the Control Panel, click Options to access these settings.

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

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

Once you've checked your printer driver settings, you are ready to print. If you have any trouble while printing, see Chapter 8, "Troubleshooting."

For Windows NT 4.0 Users

Installing the printer driver

Note:
Printer driver installation may require network administration privileges. Ask your network administrator for more details.

1. Make sure Windows NT 4.0 is running and the printer is off.
2. Insert the 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 driver 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.

Note:
When you install your printer driver, the EPSON Label Form utility program is also installed. For information on accessing this DOS-based utility, see page 2-23.

Using the printer driver

Before you start printing, you should make sure that the printer driver settings match your document requirements. While many Windows applications override the printer settings made with the driver, some do not.

See this section for instructions on how to access the printer driver, check the printer driver settings, and change settings if necessary.

Accessing the printer driver from Windows applications

When you access the printer driver from a Windows application, any settings you make apply only to the application you are using. The access method explained below is typical for many Windows applications, but the way you access your printer driver may differ depending on your application. See your application manual for details.

To access the printer driver, select Print Setup or Print from the File menu of your application software. If you choose Print Setup, you see your application's Print Setup dialog box. If you choose Print, you see your application's Print dialog box.

To access the printer driver from the Print dialog box, choose Printer, Setup, Properties, or Options, depending on the options available in your application. (You may need to choose a combination of these options.) The Properties window appears. The Page Setup and Advanced menus contain the printer driver settings. Click the tabs at the top of the window to open these menus.

Accessing the printer driver from the Start menu

When you access the printer driver from the Windows NT Start menu, the settings you make apply to any Windows applications you open afterward.

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

1. Click the Start button, and then point to Settings.
2. Click Printers.
3. Right-click your printer icon, and click Document Defaults. The screen diaplays the Default Document Properties window, which contains the Page Setup and Advanced menus. Click the tabs at the top of the windows to open these menus.

Checking and changing printer driver settings

Before printing, check that the printer driver settings on the Page Setup and Advanced menus are appropriate for the kind of document you want to print, and change settings as needed. When you are finished making changes, click OK to apply the settings, or click Cancel to return the settings to their previous values.

Page Setup menu

- ❑ Paper Size — Select the size of the paper you want to use. If you don't see your paper size, select it from the Paper Size list.
- ❑ Paper Source — Click the paper source you want to use. If you don't see your paper source, select it from the Paper Source list.
- ❑ Orientation — Select Portrait or Landscape.

- ❑ Color Appearance — Select Gray Scale or Color.

Advanced menu

- ❑ Paper / Output — Check the Paper Size, Orientation, and Paper Source settings you made on the Page Setup menu and change them if necessary. Select the paper source and then choose paper size from the Change Setting list box.
- ❑ Graphic — Select Resolution and then choose the printing resolution from the Change Setting list box. Click Color appearance and select Gray Scale or Color in the bottom of the window.
- ❑ Document Options — Double-click Halftone Color Adjustment to open this 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 settings, you are ready to print. If you have any trouble while printing, see Chapter 8, "Troubleshooting."

For Windows NT 3.5x Users

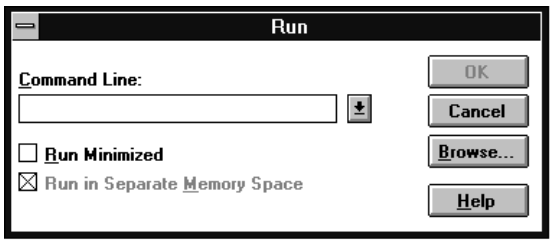
Installing the printer driver

Note:
Printer driver installation may require network administration privileges. Ask your network administrator for more details.

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

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

3. From the File menu, select Run. You see the Run dialog box. In the command line box, type A:\SETUP, and click OK. If you inserted the driver disk in a drive other than "A", substitute the appropriate letter.



4. Select your printer icon in the EPSON Printer Driver Setup dialog box. Click OK and follow the on-screen instructions.

Note:
When you install your printer driver, the EPSON Label Form utility program is also installed. For information on accessing this DOS-based utility, see page 2-23.

Using the printer driver

Before you start printing, you should make sure that the printer driver settings match your document requirements. While many Windows applications override the printer settings made with the driver, some do not.

See the following for instructions on how to access the printer driver, check the printer driver settings, and make settings if necessary.

Accessing the printer driver from Windows applications

When you access the printer driver settings from a Windows application, any settings you make apply only to the application you are using. The access method explained below is typical for many Windows applications, but the way you access your printer driver may differ depending on your application. See your application manual for details.

To access the printer driver, select Print Setup or Print from the File menu of your application software. The Print or Print Setup dialog box appears. 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. You see the Document Properties dialog box, which contains the Form and Orientation settings. To open the Advanced Document Properties dialog box, you may need to click Options. The Advanced Document Properties dialog box includes the Graphics Resolution, Color, and Optimization settings. (See page 2-20 for details on these settings.)

Note:
Your application software may only let you access a portion of the printer driver.

Accessing the printer driver from the Control Panel

When you access the printer driver from the Windows NT 3.5x Control Panel, the settings you make apply to any applications you open afterward. To access the printer driver from the Control Panel, follow these steps:

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

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 settings described below.

4. Click Options to open the Advanced Document Properties dialog box, which contains the Graphics Resolution, Color, and Optimization settings.

Checking and changing printer driver settings

Before printing, check that the printer driver settings are appropriate for the kind of document you want to print, and change settings as needed. When you are finished making changes, click OK to apply the settings, or click Cancel to cancel your settings.

Document Properties dialog box

- ❑ Form — Select the kind of form loaded in the printer. If you don't see your form, 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 your resolution, select it from the Graphics Resolution list.
- ❑ Color — Click the Color radio button when you print in color.
- ❑ Optimization — Turn the Print Text as Graphics setting on or off.

If you need to make settings for contrast, brightness, input RGB Gamma, and so forth, 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, you are ready to print. If you have any trouble while printing, see Chapter 8, "Troubleshooting."

For DOS Program Users

Installing the printer driver

To install a printer driver in most DOS applications, you must select the printer you are using during the installation or setup procedure.

Choose the EPSON DLQ-3000+ printer at the appropriate step in the procedure. If the list in your application does not include the DLQ-3000+ printer, choose the first available printer from this list:

DLQ-3000
LQ-2070
LQ-2170
LQ-1170
LQ-1070 / 1070+
DLQ-2000
LQ-1060
LQ-1050
LQ-2550
LQ-2500

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

LQ
EX
FX
LX
RX
MX
EPSON printer
Standard printer
Draft printer

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

Using the printer utilities

The following DOS utilities are included with the printer:

- ❑ EPSON Remote! allows you to change the printer's default settings from your computer.
- ❑ EPSON Label Form enables you to register the label position and thickness before you use continuous forms with labels or overlapping multi-part forms with labels.

Installing the printer utilities

Follow the steps below when installing the EPSON Remote! and EPSON Label Form utilities.

1. Insert the Disk 1 of your printer driver software into your computer's disk drive.
2. From the DOS prompt, type A:\SETUP. (If you inserted the driver disk in a drive other than "A", substitute the appropriate letter.) Then press Enter.
3. Select your printer's name in the Printer Model window and press Enter. Then C:\EPUTIL appears as the default directory.
4. Press Enter. All the necessary files are copied to C:\EPUTIL.

Accessing the printer utilities

To access the EPSON utilities, follow these steps:

1. From the DOS prompt, make sure the current directory is drive C.

2. To access the EPSON Remote! utility, type PRNSET, and press Enter.

   To access the EPSON Label Form utility, type EPUTIL\EPLABEL, and press Enter.

3. Follow the on-screen instructions to use the utilities.

Chapter 3

Paper Handling

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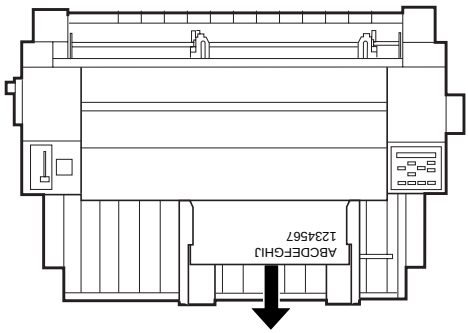
Your printer can print on a wide variety of paper types, including single sheets, continuous paper, multi-part forms, labels, envelopes, postcards, overlapping forms, and continuous forms with labels. This chapter explains how to use these paper types with your printer.

Caution:
Do not use paper that is folded (except envelope flaps), creased, curled, torn, stained, or stamped. Always use new, clean paper that meets the paper specifications described on page A-4.

Selecting a Paper-Feeding Method

Your printer can accommodate a variety of paper types through four paper-feeding methods: front and rear paper guides, tractor, or optional cut-sheet feeder. The paper-feeding method you select depends on the type of paper you want to use.

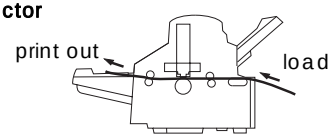
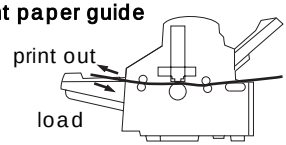
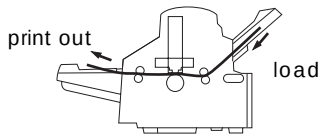
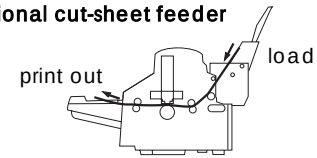
For all four paper-feeding methods, the printer prints on the paper and then ejects it as shown below.



Note:
Be sure to load paper printable side up.

Paper-feeding methods and paper types

Basically, there are two types of paper and four methods for loading, or feeding paper. The table below shows the relationship between paper types and paper-feeding methods, as well as paper loading and ejecting orientation.

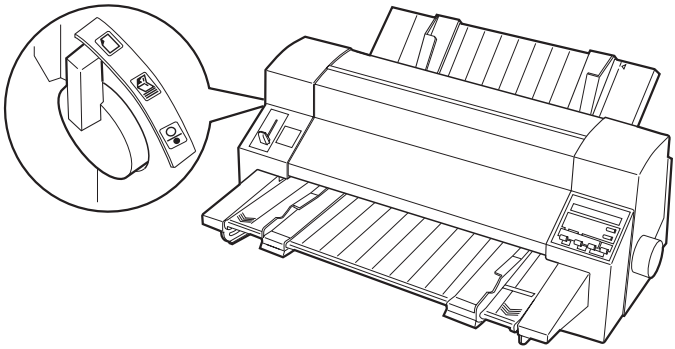
	Paper path	Release lever position
Continuous paper	tractor 	
Single sheets	front paper guide 	
	rear paper guide 	
	optional cut-sheet feeder 	

Continuous paper includes labels, multi-part forms, continuous forms with labels, overlapping multi-part forms, and overlapping multi-part forms with labels.

Single sheets includes envelopes, postcards, and single-sheet multi-part forms. You can use only single-sheet multi-part forms that are glued at the top of the forms in the optional cut sheet feeder.

Setting the paper release lever

You can set the paper path you want to use by adjusting the paper release lever. The paper release lever has three positions: for tractor feeding, for single-sheet feeding and for paper release, as described below.



Single-sheet feeding position – for loading single sheets (including envelopes and postcards) from a paper guide or the optional cut-sheet feeder.

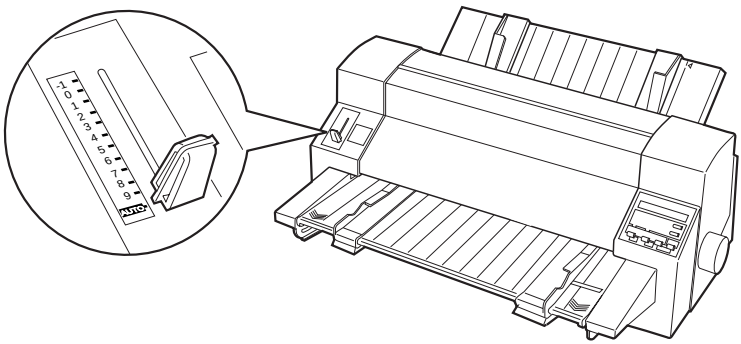
Tractor feeding position – for loading continuous paper (including labels and overlapping forms) from the tractor.

Paper release position – for removing paper from the printer manually when a paper jam error ocurrs. For more information, see “Clearing a Paper Jam” on page 8-24.

Adjusting the Paper Thickness Lever

You can get the best printing quality by adjusting the paper thickness lever according to the type of paper you use.

Usually, set the paper thickness lever to the AUTO position as shown below; your printer automatically adjusts itself to the thickness of the paper loaded in the printer.



If you are not content with the printing quality, especially when using special paper such as multi-part forms, manually set the paper thickness lever to the appropriate position referring to the table on the next page.

The higher the number you set the paper thickness lever to, the wider the space between the platen and print head. If your printout appears faint or characters seem skipped or missing, this setting may be too high. On the other hand, if the setting is too low, your printout may appear smudged, the paper may not feed correctly, or the ribbon may become damaged.

Use the table on the next page as a guide, but adjust the paper thickness lever as necessary.

The following table provides guidelines for selecting the appropriate lever position for the type of paper you use.

Paper type	Paperthickness lever position
Ordinary paper (single sheets or continuous paper)	0 or 1
Multi-part forms (carbonless) 2 parts (original plus + 1 copy) 3 parts (original plus + 2 copies) 4 parts (original plus + 3 copies) 5 parts (original plus + 4 copies) 6 parts (original plus + 5 copies) 7 parts (original plus + 6 copies)	 2 3 5 6 7 9
Labels	2 or 3
Envelopes	5 to 9
Postcards	3
*Continuous forms with labels	Auto
Overlapping multi-part forms	Auto
*Overlapping multi-part forms with labels	Auto

* For this paper, make the thickness settings using the EPSON Label Form Utility. See page 2-23, for instructions on accessing the utility.

Caution:
Do not set the paper thickness lever to AUTO *when using labels whose backing sheet is exposed. Set it to the appropriate position according to the table above.*

Note:
In Overlapping Form *and* NO.3 *modes, the printer automatically operates on* AUTO *function even though the paper thickness lever may be set to another position.*

Using Single Sheets

Your printer can print on single sheets of paper from 92 to 420 mm (3.6 to 16.5 inches) wide. See page A-4 for detailed single-sheet paper specifications.

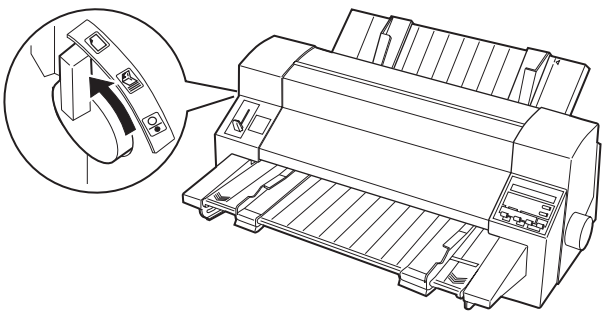
You can load one sheet of paper at a time in the front or rear paper guide, or you can load a stack of paper in the optional cut-sheet feeder. (See page 6-2 for more information on the optional cut-sheet feeder.)

Note:
If you load long paper (for example, legal size paper), leave enough space at the back of the printer so that the paper is not obstructed.

Loading single sheets from the front

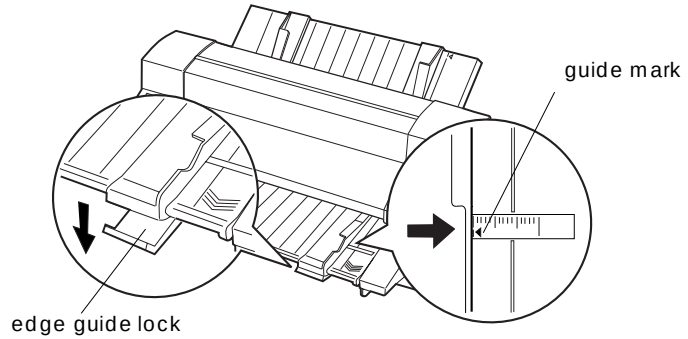
1. Make sure the front paper guide is attached as described on page 1-8. Then close the tractor unit sprocket covers located on the back of your printer and push down the sprocket lock levers to lock the sprocket units in place.

2. Set the paper release lever to the single-sheet position as shown below.



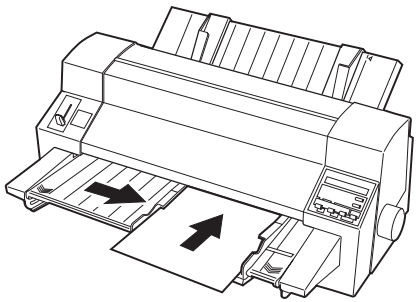
3. Turn on the printer. The Power light comes on.

4. Push down on the right edge guide lock to unlock the right edge guide, slide the right edge guide until it rests against the guide mark, then push up on the right edge guide lock to secure the right edge guide.



Note:
If you load A3-size paper in landscape orientation (long edge first), slide both right and left edge guides as far to the sides as they will go. You may need to slightly lift the right edge guide to move it over the edge guide mark.

5. Push down on the left edge guide lock to unlock the left edge guide, and while adjusting the left edge guide to match the width of your paper, insert a sheet of paper between the edge guides until it meets resistance. Be sure to load your paper printable side up. Then push up on the left edge guide lock to secure the left edge guide.



After a few seconds, the printer automatically advances the paper to the loading position. The printer is ready to start printing.

Caution:

- *Use the knob on the right side of the printer only to clear paper jams when the printer is off. Otherwise, you may damage the printer or cause it to lose the top-of-form position.*
- *Do not open the printer cover while paper is being fed; otherwise the printer cannot load the paper correctly.*

Note:

- *If the platen rotates but the printer does not load the paper, completely remove the paper and then insert it all the way into the printer again.*
- *If you need to adjust the position of the paper after it is loaded, see "Adjusting the printing position" on page 3-38. To move and save the loading position of the paper, use the SelecType "T-Margn Manual F" setting. For more information on SelecType settings, see page 4-8.*

After printing a sheet, the printer ejects it onto the front paper guide and the Paper Out and Pause lights come on. If you are printing a multiple-page document, remove the printed sheet and insert a new sheet into the paper guide. The printer automatically advances the paper and resumes printing.

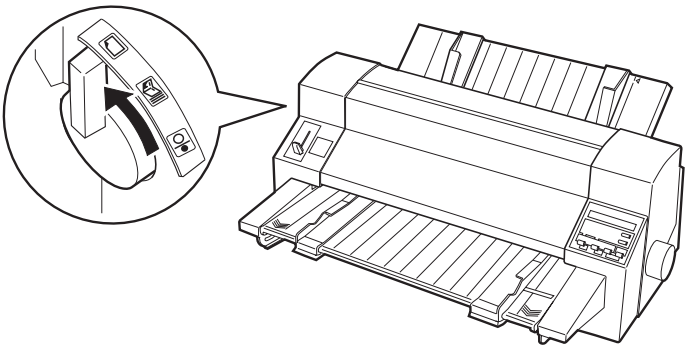
Note:

If the printer does not eject the printed sheet, press the Load/Eject *button.*

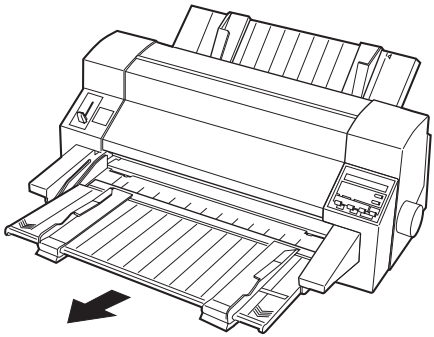
Loading single sheets from the rear

1. Make sure the front and rear paper guides are attached.

2. Push the paper thickness lever to the single-sheet position.

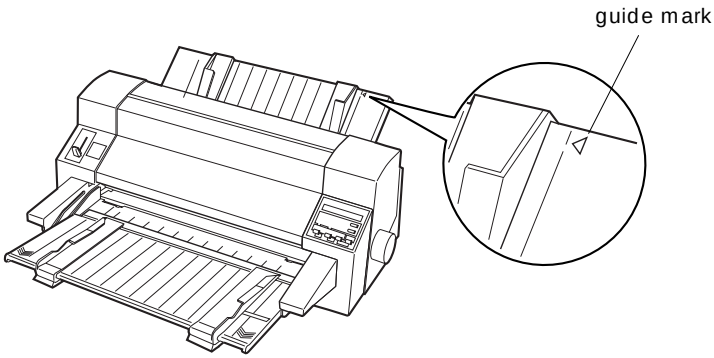


3. Pull out the front paper guide extension until it is fully extended if you plan to stack the printed sheets.



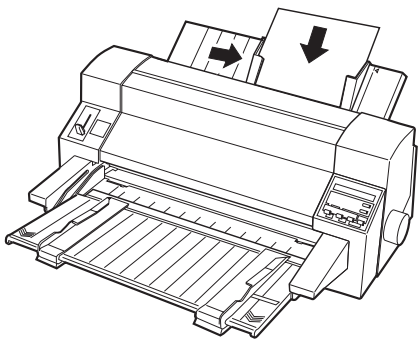
4. Turn on the printer. The Power light comes on.

5. Slide both right and left edge guides of the front paper guide all the way to each side. Next, slide the right edge guide of the rear paper guide until it rests against the guide mark.



Note:
If you load A3-size paper in landscape orientation (long edge first), slide both right and left edge guides as far to the sides as they will go. You may need to slightly lift the right edge guide to move it over the edge guide mark.

6. While adjusting the left edge guide to match the width of your paper, insert the paper between the edge guides printable side up until it meets resistance. The printer automatically advances the paper to the loading position. The printer is ready to start printing.



Caution:

- *Use the knob on the right side of the printer only to clear paper jams when the printer is off. Otherwise, you may damage the printer or cause it to lose the top-of-form position.*
- *Do not open the printer cover while paper is being fed; otherwise you cannot load the paper correctly.*

Note:

- *If the platen turns without loading the paper, completely remove the paper and then insert it all the way into the printer again.*
- *If you need to adjust the position of the paper after it is loaded, see "Adjusting the printing position" on page 3-38. To move and save the loading position of the paper, use the SelecType "T-Margn Manual R" setting. For more information on SelecType settings, see page 4-8.*

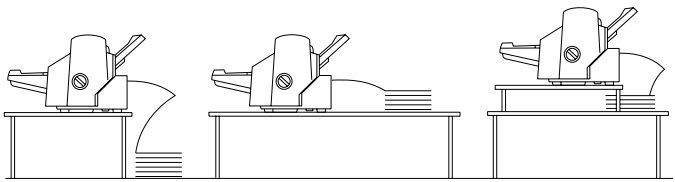
Using Continuous Paper

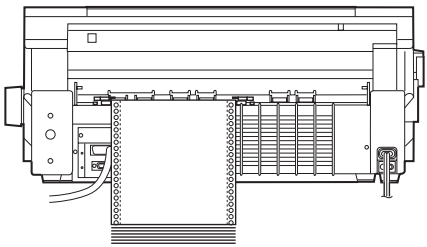
Your printer can print on continuous paper from 101.6 to 406.4 mm (4.0 to 16.0 inches) wide. You can load continuous paper from the built-in tractor unit.

Note:
See page A-5 for detailed specifications on continuous paper.

Positioning your continuous paper supply

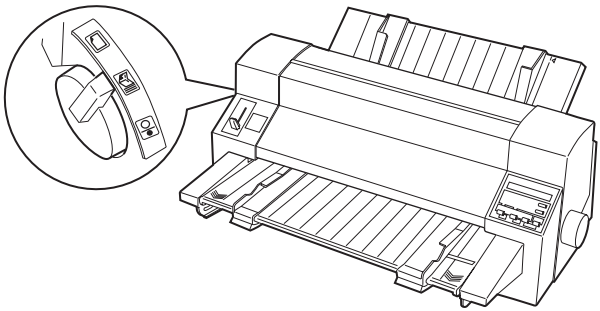
When you load continuous paper, make sure you line up your paper supply with the tractor so the paper feeds smoothly into the printer, as shown below.



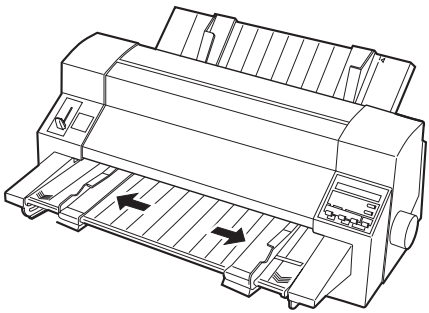


Loading continuous paper with the tractor

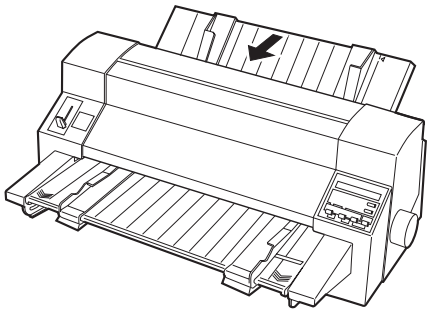
1. Set the paper release lever to the tractor position, as shown below.



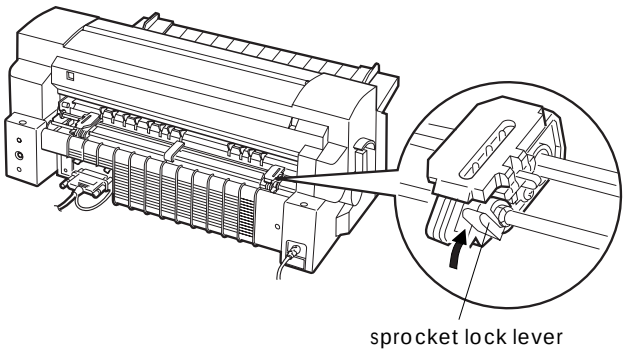
2. Slide the front edge guides as far apart as they can go.



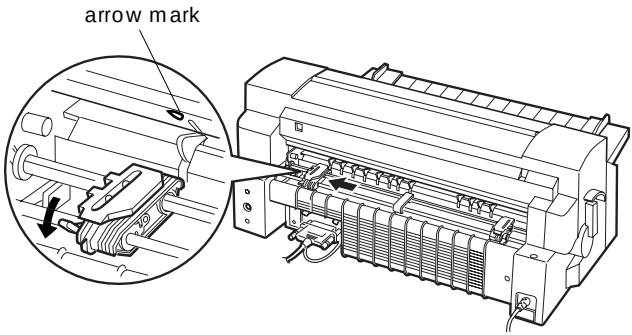
3. Remove the rear paper guide by pulling it toward the printer as shown below, and lifting it away from the printer.



4. Release the sprocket lock levers by pushing them up.

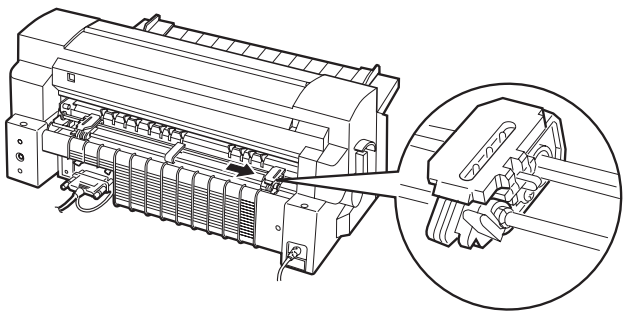


5. Facing the back of the printer, position the left sprocket unit so that the sprocket pins are to the left of the arrow mark on the back of printer. Then push down the lock lever to lock the sprocket in place.

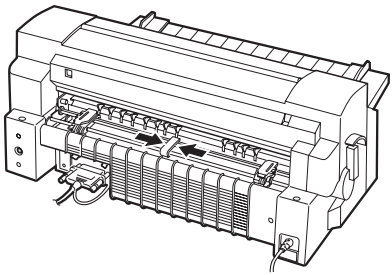


Note:
Printing starts at the arrow mark on the back of the printer. The unprintable area is to the left of the arrow mark.

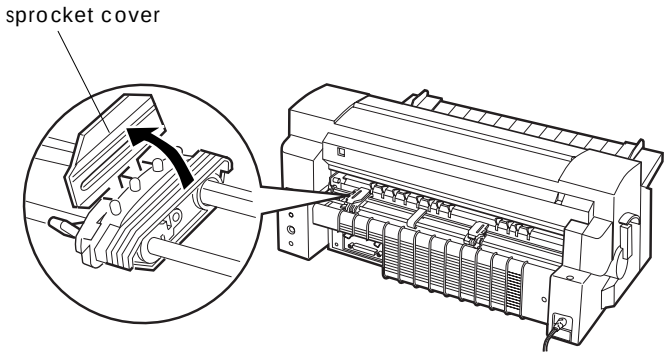
6. Slide the right sprocket unit to roughly match the width of your paper, but do not lock it.



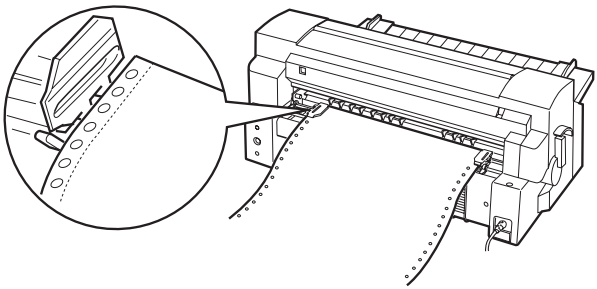
7. Slide the center paper support to the middle between the two sprocket units.



8. Open the sprocket covers.

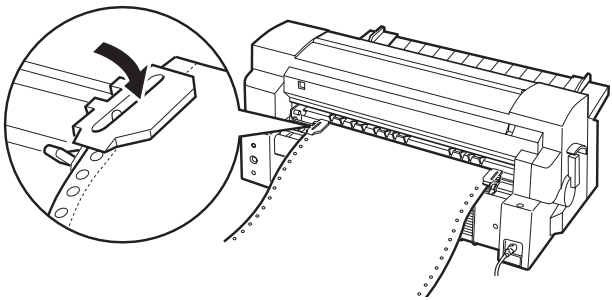


9. Fit the first three holes of the continuous paper over the sprocket pins on both sides. Be sure to position your paper supply so that the printable side faces up.

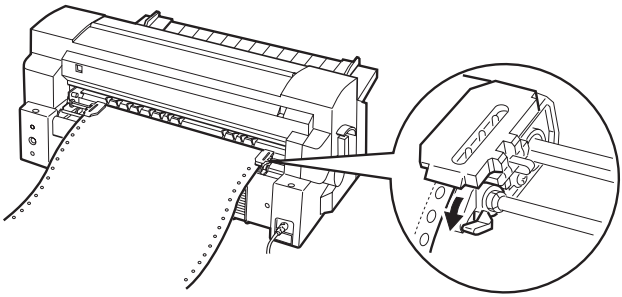


Caution:
Make sure the first sheet of your continuous paper has a clean, straight edge so that it can feed smoothly into the printer.

10. Close the sprocket covers and push down the sprocket lock lever to lock the sprocket in place.



11. Slide the right sprocket unit to remove any slack in the paper. Then push down the sprocket lock lever to lock the sprocket in place.



12. Turn on the printer if it is turned off. The printer is ready to start printing.

When using continuous paper, you can use the tear-off function to tear off printed pages and save the blank pages that are usually wasted between print jobs. For more information, see the next section.

Note:
Always make sure there is at least one more sheet than required; continuous paper may not feed properly if it is not fed through the sprocket.

Caution:

- *Use the knob on the right side of the printer only to clear paper jams when the printer is off. Otherwise, you may damage the printer or cause it to lose the top-of-form position.*
- *Do not open the printer cover while paper is being fed; otherwise you cannot load the paper correctly.*

Note:
If you need to adjust the position of the paper after it is loaded, see "Adjusting the printing position" on page 3-38. To move and save the loading position of the paper, use the SelecType "T-Margin Tractor" setting. For information on SelecType settings, see page 4-8.

Using the tear-off function

After you have finished printing, you can use the tear-off function to advance continuous paper on the tractor to the tear-off edge of the printer. You can then easily tear off printed sheets. When you resume printing, the printer automatically feeds paper back to the loading position so you can save paper that would normally be lost between documents.

You can use the tear-off function in two ways: manually by pressing the Tear Off button on the control panel, or automatically by making the appropriate SelecType setting or using EPSON Remote!. (See page 4-8 for information on making SelecType settings.)

If the perforation between pages is not aligned with the tear-off edge, you can adjust the tear-off position using the micro-feed feature as described on page 3-39.

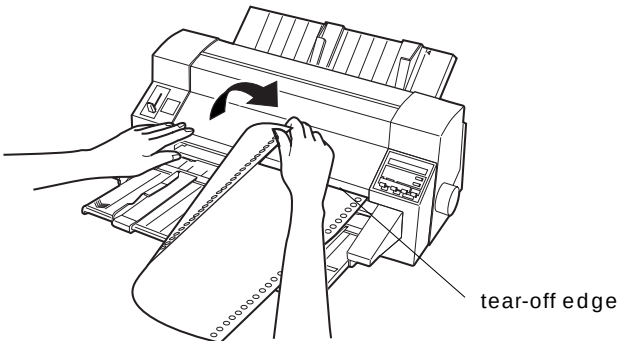
Caution:
Never use the tear-off function when you use labels; otherwise they may come off their backing sheet and jam the printer.

Using the Tear Off button

When using the tractor, you can use the Tear Off button to advance continuous paper to the tear-off position; follow the steps below.

1. Make sure printing has finished. Then press the Tear Off button. The printer advances the paper to the tear-off edge.

2. Tear off all printed pages. If the perforation is not aligned with the tear-off edge, adjust the tear-off position using the micro-feed feature. See "Adjusting the tear-off position" on page 3-39.



3. When you resume printing, the printer feeds the paper back to the top-of-form position and begins printing. (You can also manually feed the paper back to the top-of-form position by pressing the Tear Off button.)

Using auto tear-off mode

When you turn on the auto tear-off function with SelecType setting or EPSON Remote!, the printer advances continuous paper to the tear-off position when you finish printing.

***Caution**:*
Always turn off the auto tear-off function in SelecType 2 when you use labels; otherwise they may come off their backing sheet and jam the printer.

The printer advances paper to the tear-off position only when it receives a full page of data or a form-feed command and then receives no more data for three seconds.

For instructions on how to activate the auto tear-off function, see "SelecType" on page 4-8 or open the EPSON Remote! utility as described on page 2-23 and follow the on-screen instructions. While using SelecType mode or the utility, also make sure the page length is set correctly for your continuous paper.

The steps below describe how to use auto tear-off.

1. When you finish printing on continuous paper, the printer advances the perforation of the final printed page to the tear-off position.

2. Tear off all printed pages. (If the perforation is not aligned with the tear-off edge, you can adjust the tear-off position using the micro-feed feature. See "Adjusting the tear-off position" on page 3-39.)

3. When you resume printing, the printer automatically feeds the paper back to the top-of-form position and begins printing. (You can also manually feed the paper back to the top-of-form position by pressing the Tear Off button.)

You can leave auto tear-off mode on even when you are using single sheets because the mode is disabled when you move the paper release lever to the single-sheet position.

Removing continuous paper

1. After you finish printing, press the Tear Off button. The printer advances the paper to the tear-off position.

   Note:
   When the auto tear-off function is on, the printer advances the paper perforation to the tear-off position automatically. You can turn on the auto tear-off function by using SelecType or the EPSON Remote! utility. For instructions, see "SelecType" on page 4-8, or open EPSON Remote! as described on page 2-23 and follow the on-screen instructions.

2. Tear off the printed pages.

3. Press the Load/Eject button to feed the continuous paper backward out of the printer and into the standby position.

4. To completely remove continuous paper from the printer, open the sprocket covers. Remove the paper from the tractor unit, and then close the sprocket covers.

Using Special Paper

Multi-part forms

Your printer can print on both single-sheet and continuous multi-part forms. It can use multi-part forms with up to seven parts including the original.

Caution:
Use only carbonless multi-part forms.

Before printing, set the paper thickness lever to the appropriate position for your multi-part forms referring to the table on page 3-6.

You can load single-sheet multi-part forms from the front and rear paper guides or with the optional cut-sheet feeder. For instructions, see "Using Single Sheets" on page 3-7 or "Loading paper from the cut-sheet feeder" on page 6-5. You can load continuous multi-part forms in the same way as you load ordinary continuous paper. For instructions, see "Using Continuous Paper" on page 3-13.

Caution:

- *When printing on multi-part forms, make sure that your software settings keep the printing entirely within the printable area of the forms. Printing on the edge of a multi-part form can damage the print head. For information about the printable area, see the paper specifications on page A-5 or A-7.*
- *Single-sheet multi-part forms that are glued at the side of the form should be loaded only from the front or rear paper guide, not from the optional cut-sheet feeder.*

Labels

When selecting labels for printing, always choose labels mounted on continuous backing sheets with sprocket holes for use with a tractor. Do not use labels on shiny single-sheet backing, because the backing sheet tends to slip and may not feed properly.

Caution:
Use labels only under normal operating conditions because labels are especially sensitive to temperature and humidity.

Loading labels

1. Make sure of the following:

   - ❑ Your software settings keep the printing entirely within the printable area. For information about the printable area, see the paper specifications on page A-8.

     Caution:
     Printing on the edge of a label can damage the print head.

   - ❑ The auto tear-off function is turned off in SelecType 2.

   - ❑ If you use labels whose backing sheet is exposed, make sure the paper thickness lever is *not* set to AUTO. Set it to the appropriate position according to the table on page 3-6.

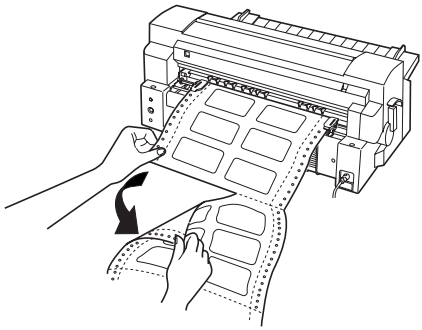
2. Load labels as described in "Loading continuous paper with the tractor" on page 3-13.

To tear off and eject labels

Always tear off and eject labels as described below.

Caution:
Never feed labels backward using the Load/Eject *button,* Tear Off *button, or knob on the right side of the printer. Labels can easily peel off their backing and jam the printer.*

1. At the back of your printer, tear off the last label form that has entered the printer, but *do not* press the Tear Off button. See the illustration below.



2. Press the LF/FF button to eject the last label form forward.

Caution:
Do not leave labels loaded in the printer between print jobs; they tend to curl and may come off their backing sheet and jam the printer when you resume printing.

Envelopes

You can print on a variety of envelopes by loading them the same way you load single sheets—from a paper guide or with the optional cut-sheet feeder.

Caution:
Use envelopes only under normal operating conditions.

Loading envelopes

1. Make sure that your software settings keep the printing entirely within the printable area. For information about the printable area, see the paper specifications on page A-10.

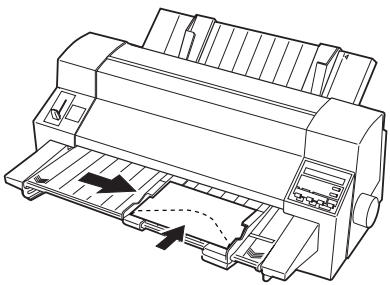
   Caution:
   Printing on the edge of an envelope can damage the print head.

2. Select Envelopes mode using SelecType 2.

3. Follow the instructions in "Using Single Sheets" on page 3-7 or "Loading paper from the cut-sheet feeder" on page 6-5 and load envelopes as shown below. Be sure to fold the flap and be careful of the flap's orientation.

4. Make sure that the right edge guide is aligned with the arrow on the paper guide, and position the left edge guide to match the width of your envelopes.

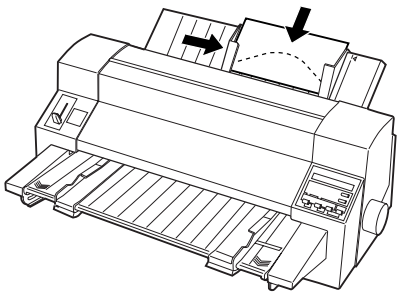
from the front paper guide



bottom edge first and
flap side down

from the rear paper guide

*Insert envelopes with this orientation when loading from the cut-sheet feeder.



top edge first and
flap side down

Postcards

You can print on a variety of postcards by loading them the same way you load single sheets—from a rear paper guide or with the optional cut-sheet feeder. Follow the procedure below.

Caution:
Use postcards only under normal operating conditions.

Loading postcards

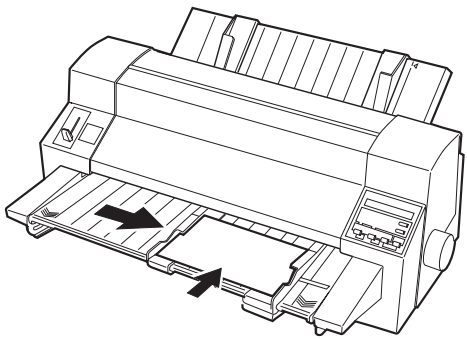
1. Make sure that your software settings keep the printing entirely within the printable area. For information about the printable area, see the paper specifications on page A-10.

   Caution:
   Printing on the edge of a postcard can damage the print head.

2. Select Cards mode using SelecType 2.

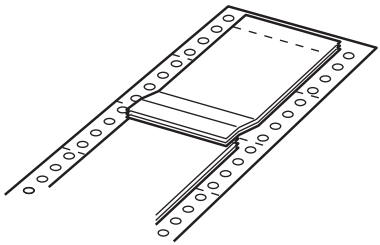
3. Follow the instructions in "Loading single sheets from the front" on page 3-7, "Loading single sheets from the rear" or "Loading paper from the cut-sheet feeder" on page 6-5.

4. Make sure that the right edge guide is aligned with the arrow on the paper guide, and position the left edge guide to match the width of your postcard.



Overlapping multi-part forms

This kind of continuous paper provides you with multi-part forms. The page length of the multi-part forms is longer than that of the backing continuous paper. So when extended, one page's multi-part forms overlap the next page's multi-part forms as shown below. The thickness of this overlapping area is thicker than the printable area.



Caution:
Use overlapping multi-part forms only under normal operating conditions.

Loading overlapping multi-part forms

1. Make sure of the following:

   - ❑ Your software settings keep the printing entirely within the printable area. For information about the printable area, see the paper specifications on page A-12 and A-13.
   - ❑ The paper release lever is set to the tractor position.
   - ❑ The setting in Page Tractor in SelecType 1 matches the page length of the form you use.

   Note:
   In Overlapping Form *and* NO.a *modes, the printer automatically activates the* AUTO *paper thickness function even though the paper thickness lever may be set to another position.*

2. Select Overlapping Form mode using SelecType 2.

Caution:

- ❑ *Printing on the edge of overlapping multi-part forms can damage the print head.*
- ❑ *Be sure to select* Overlapping Form *mode when using this type of paper; otherwise your printer may be damaged.*

3. Follow the instructions in "Loading continuous paper with the tractor" on page 3-14.

To tear off and eject overlapping multi-part forms

Always tear off and eject overlapping multi-part forms according to the procedure below.

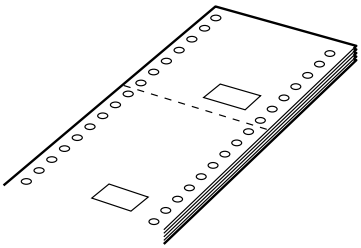
Note:
In Overlapping Form *mode, the* Tear Off *button is disabled and the* Load/Eject *button only feeds forms forward.*

1. At the back of your printer, tear off the last overlapping multi-part form that has entered the printer.

2. Press the LF/FF button to eject the last overlapping multi-part forms forward.

Continuous forms with labels

This kind of continuous paper has one label on each page. This is different from label paper, which consists entirely of labels. When priting on continuous forms with labels, the printer must adjust the height of the print head for the extra thickness of the labels. Before printing on this kind of paper, measure the label thickness using the EPSON Label Form Utility. Read the on-screen instructions on this utility. See page 2-23 for instructions on accessing the utility.



Caution:
Use continuous forms with labels only under normal operating conditions.

Loading continuous forms with labels

1. Make sure of the following:

   - ❑ Your software settings keep the printing entirely within the printable area. For information about the printable area, see the paper specifications on page A-10 and A-11.

   - ❑ The paper release lever is set to the tractor position.

   Note:
   In Overlapping Form *and* NO.3 *modes, the printer automatically activates the* AUTO *paper thickness function even though the paper thickness lever may be set to another position.*

2. Press the Paper Select button to select NO.a and make sure the Ready: #a message appears on the control panel display.

3. Follow the instructions in "Loading continuous paper with the tractor" on page 3-14.

Caution:

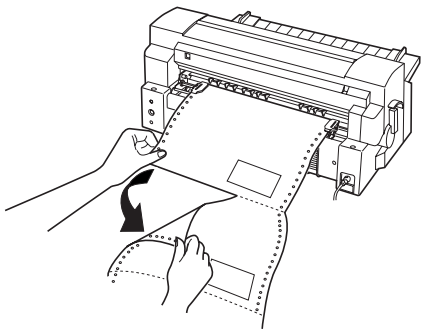
- *Printing on the edge of continuous forms with labels can damage the print head.*
- *When loading continuous forms with labels, make sure the left edge of the form is no further than 3 cm to the left of the arrow mark (when facing the back of the printer).*

To tear off and eject continuous forms with labels

Always tear off and eject continuous forms with labels by following the procedure below.

Note:
In NO.a mode, the Tear Off button is disabled and the Load /Eject button only feeds forms forward.

1. At the back of your printer, tear off the last label form that has entered the printer.



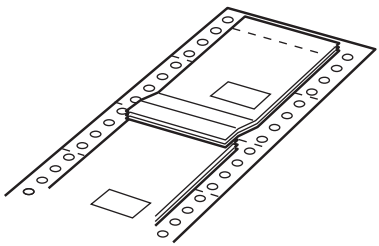
2. Press the LF/FF button to eject the last label form forward.

3. To print on another type of paper, press the Paper Select button to select NO.0 and make sure the Ready: #0 message appears on the control panel display.

Caution:
Do not leave continuous forms with labels loaded in the printer between print jobs; they tend to curl and may come off their backing sheet and jam the printer when you resume printing.

Overlapping multi-part forms with labels

This kind of continuous paper is a combination of the two types of forms described above. Be sure to follow any special instructions intended for either type. For this paper, make the thickness settings using the EPSON Label Form Utility. Read the on-screen instructions on this utility. See page 2-23 for instructions on accessing the utility.



Caution:
Use overlapping multi-part forms with labels only under normal operating conditions because labels are especially sensitive to temperature and humidity.

Loading overlapping multi-part forms with labels

1. Make sure of the following:

   - ❑ Your software settings keep the printing entirely within the printable area. For information about the printable area, see the paper specifications on page A-13 and A-14.

   - ❑ The paper release lever is set to tractor position.

   - ❑ The setting in Page Tractor in SelecType 1 matches the page length of the form you use.

   Note:
   In Overlapping Form *and* NO.a *modes, the printer automatically activates the* AUTO *paper thickness function even though the paper thickness lever may be set to another position.*

2. Press the Paper Select button to select NO.a and make sure the Ready: #a message appears on the control panel display.

3. Follow the instructions in "Loading continuous paper with the tractor" on page 3-14.

Caution:

- ❑ *Printing on the edge of overlapping multi-part forms with labels can damage the print head.*

- ❑ *When loading overlapping multi-part forms with labels, make sure the left edge of the form is no further than 3 cm to the left of the arrow mark (when facing the back of the printer).*

To tear off and eject overlapping multi-part forms with labels

Always tear off and eject overlapping multi-part forms with labels by following the procedure below.

Note:
In NO.a *mode, the* Tear Off *button is disabled and the* Load/Eject *button only feeds forms forward.*

1. At the back of your printer, tear off the last overlapping multi-part form that has entered the printer.

2. Press the LF/FF button to eject the last overlapping multi-part forms with labels forward.

3. To print on another type of paper, press the Paper Select button to select NO.0 and make sure the Ready: #0 message appears on the control panel display.

Caution:
Do not leave overlapping multi-part forms with labels loaded in the printer between print jobs; they tend to curl and may come off their backing sheet and jam the printer when you resume printing.

Switching Between Continuous Paper and Single Sheets

When using the tractor, you can easily switch between continuous paper and single sheets (including envelopes or postcards) without removing the continuous paper from the tractor.

Switching to single sheets

To switch from continuous paper to single sheets, follow the steps below.

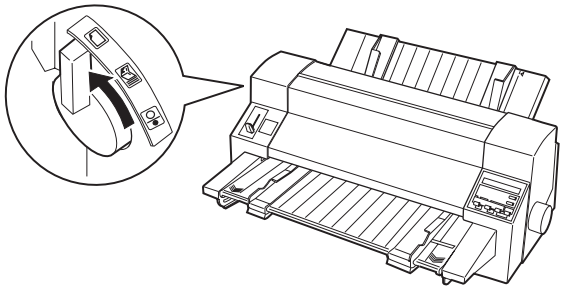
1. When you have finished printing on continuous paper, press the Tear Off button to advance the paper to the tear-off position. (If you selected auto tear-off in the SelecType mode or the EPSON Remote! utility, the printer advances the paper perforation to the tear-off position automatically.)

2. Tear off the printed pages.

   Caution:
   - *Always tear off paper before feeding it backwards; feeding too many sheets backwards can cause a paper jam.*
   - *Never feed labels backward using the* Load/Eject *button,* Tear Off *button, or knob on the right side of the printer. Labels can easily peel off their backing and jam the printer. For information on removing labels from the paper path, see page 3-26.*

3. Press the Load/Eject button to feed the continuous paper back to the standby position. The paper is still attached to the tractor, but is no longer in the paper path.

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



Now you can load single sheets from the front or rear paper guide. For details, see “Using Single Sheets” on page 3-7.

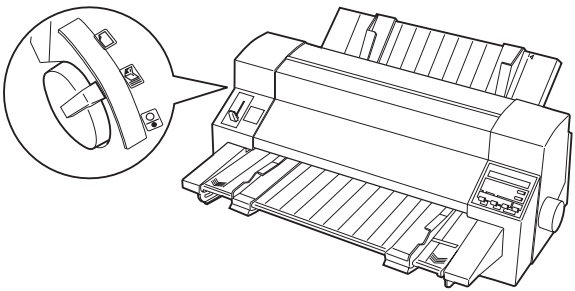
Switching to continuous paper

To switch from single sheets to continuous paper, follow the steps below.

1. If necessary, press the Load/Eject button to eject the last printed single sheet.

2. Make sure continuous paper is loaded in the printer as described under “Loading continuous paper with the tractor” on page 3-14.

3. Move the paper release lever to the tractor position.



The printer automatically advances the continuous paper from the standby position to the loading position when it receives data.

Using the Micro-Feed Feature

The micro-feed feature allows you to move paper forward or backward in 1/180-inch increments, so you can finely adjust the printing and tear-off positions.

Adjusting the printing position

The printing position is the position on the page where the print head actually prints during a print job. You can change the current vertical printing position temporarily by using the micro-feed feature as described in the steps below.

Note:
Your printing position setting is in effect only until the next time you load paper or turn off the printer.

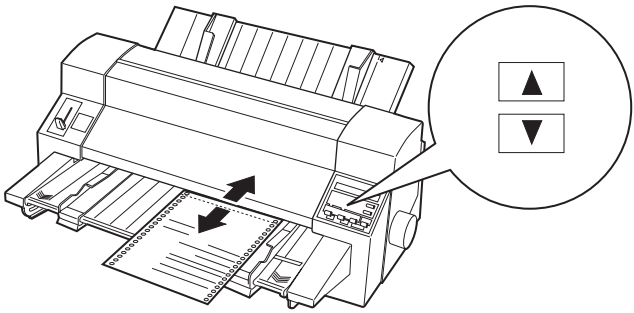
1. Make sure the printer is turned on.
2. Press the Pause button to stop printing. The Pause light comes on.
3. Press the ▼ button to feed paper forward or the ▲ button to feed paper backward.
4. When your paper is positioned correctly, press the Pause button to resume printing.

Adjusting the tear-off position

If your paper 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 as follows:

1. Press the Pause button if the printer is printing. Press the Tear Off button. The Tear Off light comes on.

2. Press the ▼ button to feed paper forward, or press the ▲ button to feed paper backward, until the paper perforation is aligned with the tear-off edge.



Note:
The printer has a minimum and a maximum tear-off position. If you try to adjust the tear-off position beyond these limits, the printer beeps and stops moving the paper.

3. Tear off the printed pages.

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

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

Chapter 4

Controlling the Printer

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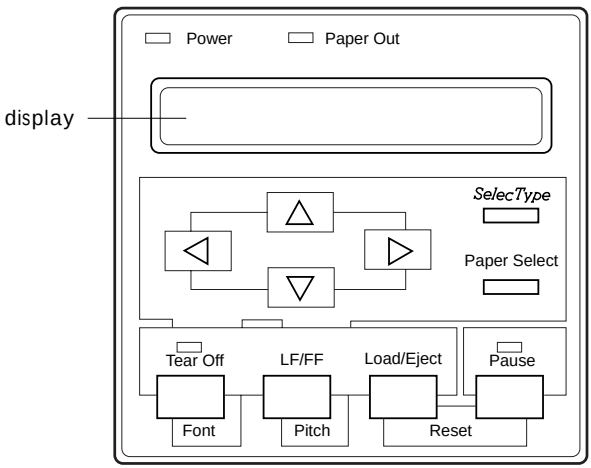
This chapter explains how you can use the control panel to control the basic operation of the printer and to perform more advanced operations, such as making changes to default settings.

Control Panel

The indicator lights on the control panel let you monitor the current status of the printer. The buttons let you control many printer operations.The control panel display provides you with current status messages, the SelecType features, and error messages.



Display

The display shows the following:

- ❑ Status messages that indicate the printer's current status, as shown in the following table:

Display message	Status
Ready:# 0	The printer is ready to receive data from the computer.
Printing:# 0	The printer is printing normally.
Paused:# 0	Printing is paused.
Data in Buffer	Data is in the buffer but printing is paused.
Cut the Paper	The printer is in tear-off mode and has advanced paper to the tear-off position.
Test Printing	The printer is printing the self test.
Setting Printing	The printer is printing the current default settings.
Hex Dump	The printer is in hex dump mode.
SelecType 1	The printer is in SelecType Level 1.
SelecType 2	The printer is in SelecType Level 2.
Bi-d adjustment	The printer is in Bi-d adjustment mode.

- ❑ Error messages, such as Paper Out, which identify maintenance procedures you must perform or error conditions you need to correct. See pages 8-3 and 8-4 for more information.

- ❑ SelecType features and options such as Character Table, which give you a greater degree of control over printer functions. See page 4-8 for more information.

Lights

Power (green)

On when the power switch is on and power is supplied to the printer.

Paper Out (red)

On when the printer runs out of paper.

Pause (orange)

On when the printer is not ready to print data, paper is out or jammed, or you press the Pause button to pause printing.

Note:
Even if the printer is paused, the printer interface does not stop recieving data until the input buffer becomes full and the head carriage moves to its home position.

Tear Off (orange)

On when the printer is in the tear-off mode. The printer stores any change you make to the tear-off position when this light is on.

Buttons

Pause

Press this button to temporarily stop printing, and press it again to resume printing.

SelecType

Press this button to enter, scroll through, or exit SelecType mode where you make the default settings. For more information, see page 4-8.

Paper Select

Press this button to select No.1 on the control panel display before you use and load continuous forms with labels or overlapping multi-part forms with labels. After using this paper, be sure to press this button to select No.0 on the display before you use and load another type of paper. Only press this button when no paper is loaded in the printer.

Load/Eject

Press this button to advance single-sheet or continuous paper to the loading position. (The printer normally loads paper automatically.) If a single sheet is already in the loading position, press this button to eject it. If continuous paper is in the loading or tear-off position, press this button to feed it backward to the standby position.

LF/FF (line feed / form feed)

Press this button briefly to feed the paper forward one line. Hold it down for a few seconds to eject a single sheet or advance continuous paper to the top of the next page. You can also use this button to load a single sheet of paper from the optional cut-sheet feeder or to feed continuous paper from the standby position to the loading position.

Font

Press this button to select from among the built-in fonts after you enter SelecType 1 or SelecType 2. For more information, see " SelecType" on page 4-8. Be aware that the font setting in your software overrides this setting.

Printing with the Draft font requires fewer dots per character, which significantly increases the printing speed. However, printing with this font also reduces print quality. When you need letter-quality printing, select a font other than Draft.

Tear Off

Press this button to feed continuous paper to the tear-off position. Press it again to feed the paper backward to the loading position.

Note:
You can turn on the auto tear-off feature using SelecType. For more information, see "SelecType" on page 4-8.

▲ and ▼

Press these buttons briefly to advance and reverse the loaded paper in 1/180-inch increments, and continuously to move the paper further. You can also use these micro-feed buttons to adjust the tear-off and printing positions. When you are in the SelecType mode, use these buttons to select the next or previous feature or option in the mode. For more information, see "SelecType" on page 4-8.

◄ and ►

Press these buttons in SelecType mode to enter and exit the feature and option menus. For more information, see page 4-8.

Pitch

Press this button in SelecType mode to select character pitch. For more information, see "SelecType" on page 4-8. Be aware that the pitch in your software overrides this setting.

Reset

Press the Pause and Load/Eject buttons simultaneously to reset or initialize the printer.

Other control panel features

To use a few of the more advanced functions of this printer, you must hold down the appropriate button while turning on the printer as described below.

Letter-quality self test = LF/FF

Performs a letter-quality self test, which helps you determine the source of some printing problems. See “Printing a Self Test” on page 8-5 for details.

Draft self test = Load/Eject

Performs a draft self test, which helps you determine the source of some printing problems. See “Printing a Self Test” on page 8-5 for details.

Bidirectional adjustment = Pause

Turns on the bidirectional adjustment mode, which allows you to correct printing alignment problems. See “Using Bidirectional Adjustment” on 8-25 for details.

Hex dump = Load/Eject + LF/FF

Prints the data sent to the printer in hexadecimal code, which helps experienced users determine the source of some printing problems. See “Using Hex Dump Mode” on 8-6 for details.

Setting Printing = SelecType

Hold down the SelecType button while you turn on the printer to print the current default settings or current label settings, depending on the Paper Select mode. When the Paper Select is set to #0, the printer prints the current SelecType (default) settings. When the Paper Select is set to #a, the printer prints the label size and position settings that are currently registered in the EPSON Label Form Utility.

SelecType

This section describes how to use the SelecType mode to make the printer's default settings.

SelecType overview

When you press the SelecType button, you enter the SelecType mode, where you can make the default settings for most of the printer's functions, such as character tables, margins, printer mode, serial communication, and other settings.

In many cases, you do not need to change the SelecType settings because they are set to the factory (default) settings, which meet the needs of most users.

Note:
You can print out a list of the current default settings by holding down the SelecType *button while you turn on the printer. The list is printed in the language selected in SelecType.*

Your software program sends printer commands that usually override the SelecType settings. If you do not get the results you expect, check your software settings first.

SelecType has two levels: Level 1 contains printing functions, such as character table, page length, and margins; Level 2 contains printer configuration functions that you change less frequently, such as auto tear-off, interface selection, and serial communication settings.

Using SelecType

This section describes basic operations in SelecType. Follow these steps to change the default settings:

1. Turn on the printer.

2. Press SelecType to enter the SelecType mode.

   - ❑ Pressing the button once allows you to enter SelecType Level 1. The display shows:

   - ❑ Pressing the button twice allows you to enter SelecType Level 2. The display shows:

   Note:
   Pressing SelecType *three times consecutively exits SelecType and returns the printer to a standby state.*

3. Press the ▶ button to enter the setting menu of the selected level. The display shows the first setting as follows:

   - ❑ When you enter Level 1, the display shows:

   - ❑ When you enter Level 2, the display shows:

Note:
To exit the setting menu (to return to the previous level), press the ◀ button once.

4. Press the ▼ button or the ▲ button to scroll through the menu until the display shows the setting you want to change.

Level 1 settings	Level 2 settings
T-Margin Tractor	Language
T-Margn Manual R	Paper Type
T-Margn Manual F	Overlapping Form
T-Margin CSF	Intensity Mode
Character Table	Software
Page Tractor	Auto CR (IBM)
Page CSF	A.G.M. (IBM)
B-Margin Tractor	Interface
Line Spacing	I/F Timeout
Left-Margin	Input Buffer
Right-Margin	Baud Rate
Print Direction	Parity
	Auto Tear-off
	Auto LF
	0 slash
	Buzzer
	Standard Setting

Note:
For details of Level 1 settings, see page 4-12, for Level 2 settings, see page 4-15.

5. Press the ▶ button to enter the option menu of the selected settings; the display shows the current option with an asterisk.

   Note:
   To return to the setting menu, press the ◀ button once.

6. Press the ▼ button or the ▲ button to scroll through the menu until the display shows the option you want to set. Press the ▶ button to select the desired option.

7. Repeat the steps above until you have made all necessary changes.

8. When you are satisfied with the SelecType options, press SelecType to store your changes in the printer's memory and exit SelecType mode. The printer is now ready to accept data and print. These settings remain in effect until you change them again.

Note:

- ❑ *If you press an unrelated button in SelecType, the printer beeps once to indicate it is an incorrect operation.*

- ❑ *To return to the previous menu, press the ◀ button. Pressing the ◀ button several times causes the printer to exit SelecType and return to a standby state.*

Level 1 options

This section lists all the settings and options that are available when you are in SelecType Level 1. The options printed in bold in the following tables are the standard factory settings.

Settings	Options
T-Margin Tractor	4.2, …, **8.5**, …, 33.9 mm, in 1/180-inch increments
T-Margn Manual R	0, …, **8.5**, …, 33.9 mm, in 1/180-inch increments
T-Margn Manual F	0, …, **8.5**, …, 33.9 mm, in 1/180-inch increments
T-Margin CSF	0, …, **8.5**, …, 33.9 mm, in 1/180-inch increments
Character Table	Standard model: **PC 437**, PC 850, PC 860, PC 863, PC 865, PC 861, BRASCII, Abicomp, ISO Latin 1, Roman 8, U.S.A, France, Germany, U.K., Denmark 1, Sweden, Italy, Spain 1, Japan, Norway, Denmark 2, Spain 2, Latin America, Korea All other models: **PC 437**, PC850, PC 437 Greek, PC 852, PC 853, PC 855, PC 857, PC 864, PC 866, PC 869, ISO Latin 1T, ISO 8859-7, MAZOWIA, Code MJK, Bulgaria, Estonia, PC774, ISO 8859-2, PC 866 LAT, PCAPTEC, PC708, PC720, PCAR864, PC860, PC865, PC861, U.S.A, France, Germany, U.K., Denmark 1, Sweden, Italy, Spain 1, Japan, Norway, Denmark 2, Spain 2, Latin America, Korea
Page Tractor	**11 inch**, 12 inch, 8.5 inch, 70/6 inch (A4), or Other Other: 24 to 132 lines
Page CSF	A4, Letter, or Other Other: 24 to **132 lines**
B-Margin Tractor	**0.00** to 1inch, in 1/180-inch increments
Line Spacing	**1/6** or 1/8 inch
Left-Margin	**0** to 80 columns
Right-Margin	1 to **136** columns
Print Direction	**Bi-directional** or Uni-directional or Auto

T-margin tractor, manual (rear and forward), and CSF

You can set different top margins for paper loaded with the push tractor, by manual feed, and with the optional cut-sheet feeder.

Note:
When loading from the cut-sheet feeder in Cards *and* Envelopes *modes, the SelecType "T-Margin CSF" setting value should be automatically set to 4.2 mm or more.*

Character table

Character tables contain characters and symbols used in different languages. Your printer has the following character tables. See Appendix B for specific characters in each table.

The character tables you can choose depend on the current printer mode set in the Software setting in SelecType Level 2. The display shows character tables available only in the current printer mode.

Page tractor

You can set the page length of continuous paper loaded in the push tractor.

If you select Other, you enter a submenu in which you can set the page length in 1/6-inch line increments. Press the ▼ button or the ▲ button until the display shows your desired line setting. Then press the ▶ button to make this the new setting.

Page CSF

You can set the page length of single sheets loaded in the optional cut-sheet feeder (CSF).

If you select Other, you enter a submenu in which you can set the page length in 1/6-inch line increments. Press the ▼ button or the ▲ button until the display shows your desired line setting. Then press the ▶ button to make this the new setting.

B-margin tractor

You can set the bottom margin of continuous paper when loading paper in the push tractor.

Line spacing

The printer feeds paper line by line at the selected line spacing.

Left-margin

You can set the left margin of the paper.

Right-margin

You can set the right margin of the paper. The value is the margin position as measured from column 0.

Print direction

You can select auto print direction, bidirectional printing, or unidirectional printing. Printing is normally bidirectional; however, unidirectional printing allows for precise vertical printing alignment.

Setting printing direction to uni-directional overrides print direction commands sent by your software.

Level 2 options

This section lists all the settings and options that are available when you are in SelecType Level 2. The options printed in bold in the following tables are the standard factory settings.

Settings	Options
Language	**English**, French, German, Italian, Spanish, or Portuguese
Paper Type	**Normal,** Cards, or Envelopes
Overlapping Form	**Off** or On
Intensity Mode	**Normal** or Dark
Software	**ESC/P 2** or IBM 2391 Plus
Auto CR (IBM)	**Off** or On
A.G.M. (IBM)	**Off** or On
Interface	**Auto Selection**, Parallel, RS-232C, or Optional Slot
I/F Time-out	1, ... , **10**, ... , 255 seconds
Input Buffer	**On** or Off
Baud Rate	**19200**, 300, 600, 1200, 2400, 4800, or 9600 bps
Parity	**None**, Even, or Odd
Auto Tear-off	**Off** or On
Auto LF	**Off** or On
0 slash	**Off** or On
Buzzer	Off or **On**
Standard Setting	**Ready?** (to restore default settings)

Language

Select the language used for display messages and the printed list of default settings.

Paper type

Select Cards (for postcards), Envelopes, or Normal depending on the type of paper you use.

Overlapping form

Select On when printing on overlapping multi-part forms.

Intensity mode

Select Dark, if you need to print characters clearer and darker on multi-part forms; otherwise leave this set to Normal.

Note:
Continued use of the Dark option may shorten the life of the print head and ribbon cartridge. If you are satisfied with the quality of normal printouts, select Normal.

Software

Select the kind of printer commands your printer uses.

If you select ESC/P 2, the printer operates as an EPSON ESC/P 2 printer. If you select IBM 2391 Plus, the printer operates as an IBM Proprinter 2391 Plus. If possible, choose an EPSON ESC/P 2 printer in your software programs. This will allow you to use the most advanced font and graphics handling available.

Auto CR (IBM)

Turn on this settings to cause the printer to add a carriage return (CR) command to every line feed command such as LF and ESC J sent by the application program software. If you turn it off, carriage returns occur only when the software sends carriage return commands to the printer.

Auto carriage return is available only in IBM 2391 Plus emulation mode.

A.G.M. (IBM)

Turn on the alternate graphic mode (A.G.M.) to make the ESC 3, ESC A, ESC J, ESC K, ESC L, ESC Y, ESC Z, and ESC * commands in IBM 2391 Plus emulation mode work the same way as in ESC/P 2 mode.

The A.G.M. feature is available only in IBM 2391 Plus emulation mode.

Interface

If necessary, select the interface that your printer uses to communicate with your computer.

This printer has both a parallel and serial interface built-in. If you install an optional interface card in the interface slot of the printer, you can use all three.

If you select Auto Selection, the printer automatically selects the interface that is receiving data, and uses that interface until the end of the print job. (A print job ends when no data is received from the selected interface for the amount of time specified in the I/F time-out setting described below.) This auto interface selection allows you to share the printer among multiple computers without making changes.

If you connect one computer to the printer, you can select the parallel, RS-232C serial, or optional interface according to the interface your computer requires.

If you don't know what type of interface your computer requires, check your computer manual.

I/F timeout

Set the interface time-out if you select Auto Selection in the Interface setting described above.

The printer does not accept data from another interface unless it receives no data from the current interface for the period set in I/F time-out. After the timeout limit is reached without receiving further data, the printer switches to the interface that receives data next.

Input buffer

Turn on this setting to enable the input buffer which provides additional memory to free up the computer more quickly when you print large amounts of text or graphics. To disable the buffer, turn it off.

Baud rate

When you use the serial interface, you need to set the baud rate or serial data transfer speed in bits per second (bps). The printer communicates with your computer at the specified rate.

Check your computer manual or application program for the correct baud rate setting. Your computer and printer should always be set to the same rate.

Parity

Set the parity (a method of error detection) for serial data transfer if you use the serial interface.

Check your computer manual or application program for the correct parity setting. Your computer and printer should always be set to the same parity setting.

Auto tear-off

Turn on the auto tear-off feature if you use continuous paper to easily tear off the printed pages. The printer automatically feeds the paper to the printer's tear-off edge after printing when Auto tear-off is on. Make sure this feature is off when you use labels.

Note:
The auto tear-off feature works only after the printer receives a full page of data or a form-feed command and it receives no more data for a few seconds.

Auto LF

Turn on the auto line feed feature to cause the printer to add a line feed (LF) command to every carriage return (CR) command sent by the application program software. If you turn it off, line feeds occur only when the software sends line feed commands to the printer.

Because most computers and application programs automatically add line feeds to carriage returns, you should use this feature only if your printer prints only on one line.

0 slash

Select the zero character with a slash (Ø) (this feature is on) or without a slash (0) (this feature is off). The slash allows you to easily distinguish between an uppercase letter "O" and a zero.

Buzzer

Turn this feature on to cause the printer to produce two types of noises when an error occurs. See page on 8-4 for more information.

Standard setting

You can restore all settings to the factory standard defaults printed in bold in the previous tables. Make this setting and when Ready? appears on your control panel display, press the ▶ button to reset the printer.

After you select the factory default settings, the display returns to the settings menu. Press SelecType to exit.

Type Styles

The printer can provide a wide range of type styles combining different character fonts, widths, and other enhancements. You can select type styles using your software or the SelecType mode. Your software settings override SelecType settings, so it is recommended you make font settings with your software whenever possible.

This section explains the Font and Pitch buttons you use in SelecType. The font and pitch settings you set in SelecType remain in effect even after the printer is turned off, reset, or initialized.

Character fonts

Your printer has draft and high-speed draft fonts, nine letter-quality fonts, and four scalable fonts.

To select a font with the Font button, follow these steps:

1. Make sure that the printer is turned on.
2. Press SelecType. You can use the Font button in either SelecType Level 1 or Level 2.
3. Press Font; the display first shows the current font with an asterisk.
4. Press the ▼ button or the ▲ button until the display shows the font name you want to use. See the font samples later on page 4-22.
5. Press the ▶ button to select the desired font.
6. Press SelecType again; the printer is ready to accept data and print.

The draft and high-speed draft fonts use fewer dots per character for fast printing. They are ideal for rough drafts and editing work.

Letter quality (LQ) fonts produce complete characters for presentation-quality documents.

The ESC / P 2 printer control language allows you to use scalable fonts in various sizes ranging from 8 to 32 points in 2-point increments.

Note:
Roman T is similar to the Times™ and Sans Serif H is similar to Helvetica™

The samples below are the scalable fonts:

- ❑ Roman
- ❑ Roman T
- ❑ Sans Serif
- ❑ Sans Serif H

The following shows sample characters for the draft and LQ fonts:

Fonts	Sample
High-speed draft	
Draft	
Epson Roman	
Epson Sans Serif	
Epson Courier	
Epson Prestige	
Epson Script	
Epson Script C	
OCR-B	
Epson Orator	
Epson Orator-S	

Character spacing

Character spacings of 10, 12, 15, 17, 20 cpi (characters per inch) and proportional are available.

To select a character spacing or pitch with the Pitch button, follow these steps:

1. Make sure that the printer is turned on.
2. Press SelecType. You can use the Pitch button in either SelecType Level 1 or Level 2.
3. Press the Pitch button; the display first shows the current pitch with an asterisk next to it.

4. Press the ▼ button or the ▲ button until the display shows your desired pitch.

5. Press the ▶ button to select the desired pitch.

6. Press SelecType again; the printer is ready to receive data and print.

The available pitches depend on the currently selected font. See page A-3 for the pitches available for each font.

Printing in Color

When you install a color ribbon cartridge, the printer can print in color if you select a printer driver capable of printing in color. See Chapter 2, "Setting Up Your Software," for details on the printer driver. See your software manual for details on color printing.

Note:
IBM emulation mode does not support color printing.

Barcode Printing

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 page B-3 for more information about the Barcode Print command.

Chapter 5

Using EPSON Status Monitor 2

Opening and Using EPSON Status Monitor 2 5-2
Understanding the EPSON Status Monitor 2 window . . . 5-2
Getting detailed printer status information 5-6

Using the Background Monitoring Feature 5-8
Setting monitoring preferences 5-8
Using the background monitoring icon 5-10

5

EPSON Status Monitor 2 is a utility program for use with 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, open online help included with this utility.

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

Opening and Using EPSON Status Monitor 2

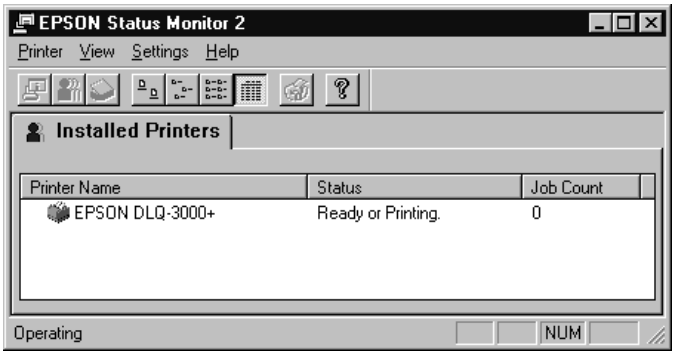
This section describes how to access and use EPSON Status Monitor 2 to get general and detailed printer status information.

If you have not installed the Status Monitor yet, see "Installing EPSON Status Monitor 2" on page 2-8 for instructions.

Understanding the EPSON Status Monitor 2 window

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 taskbar at the bottom of your computer screen.

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



Read the following for a brief overview of the EPSON Status Monitor 2 features. For more information on using this utility, see “Help menu” on the next page.

Menus

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. Click Printer Status for detailed information on the selected printer’s status, or click Job Status to get details on jobs waiting to print. Click Close to close the EPSON Status Monitor 2 window.

For more information on using the Printer Status window, see page 5-6.

View menu

This menu lets you control the appearance and content of the EPSON Status Monitor 2 window and the Installed Printers list. You can choose to show or hide the toolbar and status bar, and you can choose whether large or small icons will appear next to the printers in the Installed Printers list. Clicking List on this menu displays only the printer name and icon in the Installed Printers list. Clicking Details displays the printer name, status, and job count. Click Refresh to update the status information shown in the Installed Printers list.

Settings menu

The Settings menu gives you control over the Status Monitor's background monitoring feature, and allows you add and delete printers from the Installed Printers list. Select a printer from the Installed Printers list and click Monitoring Preferences to turn background monitoring on or off and to adjust the monitoring preferences for the selected printer. Click Background Monitoring to turn the Status Monitor's overall background monitoring feature on or off. Clicking Select background monitoring icon allows you to specify the type of printer icon that is displayed on the taskbar when background monitoring is turned on.

For more information on using the background monitoring feature, see page 5-8.

Help menu

Choose Help Topics from this menu to get online help about the Status Monitor. Click About to view the Status Monitor's version number and copyright information.

Toolbar

Many of the commands available on the EPSON Status Monitor 2 window menus can be accessed directly by clicking the buttons on this toolbar. If 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. When List is selected on the View menu, this list diplays only the printer names and icons. When Details is selected, the list displays the following information.

Printer Name

When you install the Status Monitor, the names and icons of EPSON printers connected directly to your computer are automatically added 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. (Doing so does not remove the printer driver from your computer.)

The icons that appear beside the printer names change color to reflect changes in printer status. Green indicates a ready status, yellow indicates the need for routine maintenance, red indicates a printer error that makes printing impossible, and a dimmed icon indicates a communication problem between the Status Monitor and the printer. See online help for more information.

Status

Displays brief messages describing the current status of the printer. For a detailed description of printer status, double-click the printer to open the Printer Status window, and for information on using this window shown, see the next section.

Job Count

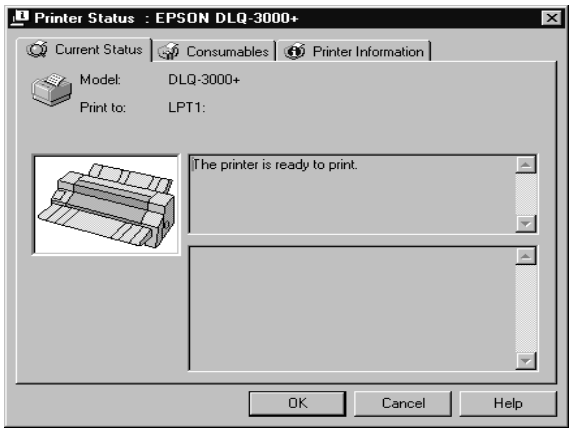
Displays the number of jobs waiting to print.

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

Getting detailed printer status information

You can open the Printer Status window shown below to get more information on the status of a selected printer.

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



The Printer Status window features three menus containing detailed printer information as explained below. Click the tabs along the top of the Printer Status window to open these menus.

Printer Status menus

Current Status menu

The Current Status menu gives you detailed printer status through a graphic display and a status message box. The appearance of the printer illustration in the graphic display changes to reflect the current status of the printer, as described in the adjacent message box. If a printer error occurs, troubleshooting tips appear in the message box at the bottom of this menu.

Consumables menu

This menu gives you information on the amount of paper remaining in the optional cut-sheet feeder.

Printer Information menu

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

Using the Background Monitoring Feature

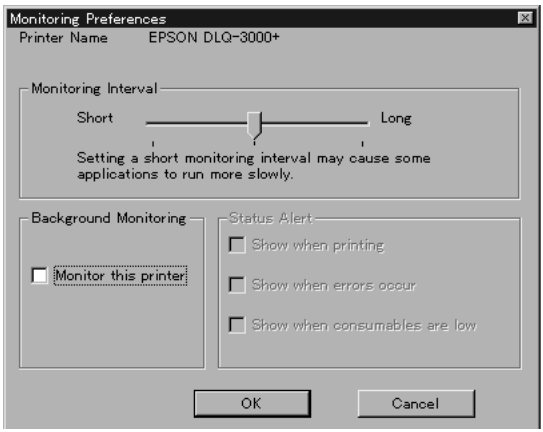
The Status Monitor's background monitoring feature lets you monitor your printer more conveniently and efficiently by automatically checking a selected printer's status "in the background" whenever you are using your computer. Turning on background monitoring for your printer is a two-step process. First you must make sure the basic background monitoring feature is enabled (it is enabled if a printer-shaped icon appears on the taskbar at the bottom of your screen), then you must select a printer in the Installed Printers list and open the Monitoring Preferences dialog box to turn on background monitoring for that printer. See the next section for details on using the Monitoring Preferences dialog box to turn on background monitoring and change monitoring preferences for your printer.

Setting monitoring preferences

Follow these steps to turn on 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 on. It is on if a printer-shaped background monitoring icon appears on the taskbar at the bottom of your computer screen. If this feature is not on, open the EPSON Status Monitor 2 window from Start, as described on page 5-2. Then point to Background Monitoring on the Settings menu and click Monitor from restart or Monitor now to turn this feature on.

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



3. Use the slider to adjust the monitoring interval, if necessary. Please note that setting a short monitoring interval may cause some applications to run more slowly.

4. Click Monitor this printer to turn background monitoring on for the selected printer. Clicking this option makes the Status Alert options available.

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

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 to have the Status Alert displayed in front of other windows on the desktop. This pop-up menu also allows you to turn off the background monitoring feature.

If you turn off background monitoring, the background monitoring icon disappears from the taskbar. To turn background monitoring back on, open the Settings menu in the EPSON Status Monitor 2 window, point to Background Monitoring and select Monitor from restart or Monitor now.

Note:
The background monitoring feature must be turned on before you can set monitoring preferences for printers in the Installed Printers list.

Chapter 6

Using Printer Options

Cut-Sheet Feeder 6-2
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Loading paper with the cut-sheet feeder 6-5
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Interface Cards 6-11
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This chapter describes how to use optional equipment with your printer, including the cut-sheet feeder and interface cards.

Cut-Sheet Feeder

The optional cut-sheet feeder C80683* gives you easier and more efficient handling of single-sheet paper, single-sheet multi-part forms, envelopes, and postcards. You can use the cut-sheet feeder without removing continuous paper.

See page A-19 for information on the types and quantity of paper that can be loaded with the cut-sheet feeder.

Installing the cut-sheet feeder

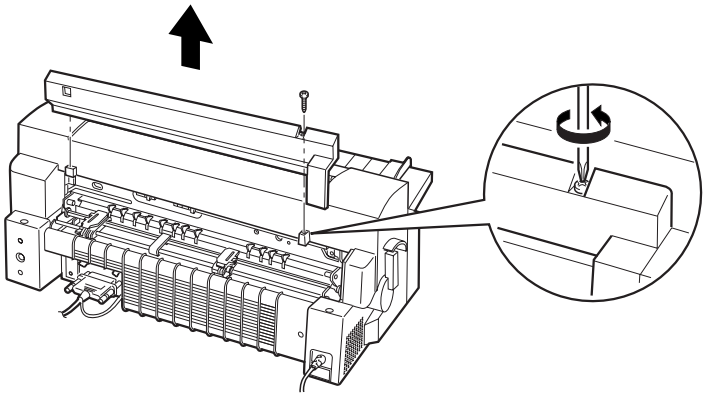
Install the cut-sheet feeder as follows:

1. Make sure the printer is turned off.
2. Assemble the cut-sheet feeder by following the instructions provided in the documentation that comes with the feeder.
3. Remove the rear paper guide if attached.

   Note:
   Store the rear paper guide in a safe place; you will need it if you remove the cut-sheet feeder.

4. Using the enclosed cross-head screwdriver, remove the screw that secures the rear cover to the back of the printer. Then lift the cover straight up from the printer, being careful to remove the tab at the left side of the cover from the slot on the printer.

   Note:
   Store the rear cover and screw in a safe place; you will need them if you remove the cut-sheet feeder.

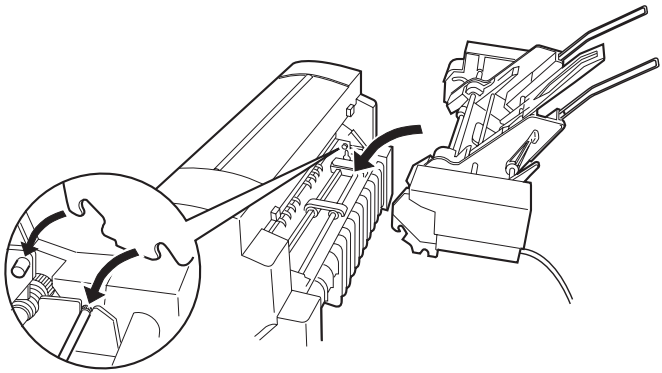


5. Close the sprocket covers if they are open, and lock the sprocket units by pushing down the lock levers if necessary.

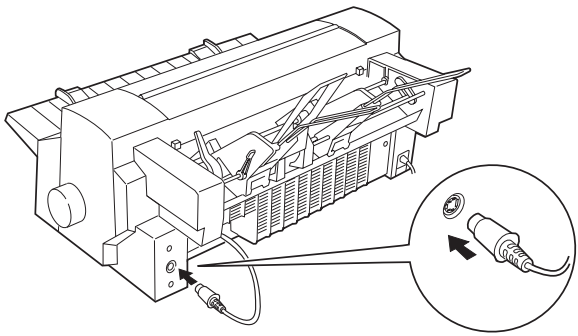
   Note:
   You do not need to remove your continuous paper from the tractor to use the cut-sheet feeder. For information on switching between the cut-sheet feeder and continuous paper, see page 6-10.

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

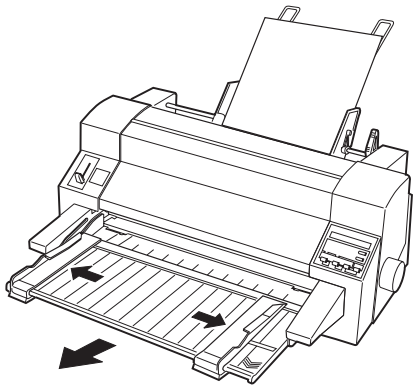
7. Hold the cut-sheet feeder horizontally with both hands. Fit the notches on each side of the feeder over the mounting posts on the printer. Lower the cut-sheet feeder until it rests on the printer.



8. Plug the cable connector of the cut-sheet feeder in the printer.



9. Pull out the front paper guide extension completely. Then slide both right and left edge guides all the way to each side.



10. Turn on the printer and adjust the page size in your software, if necessary.

You are now ready to load paper with your cut-sheet feeder as described in the next section. To remove the cut-sheet feeder, reverse the steps above.

Loading paper with the cut-sheet feeder

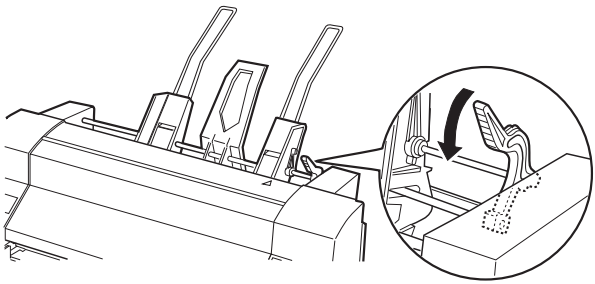
This section describes how to load paper in the cut-sheet feeders.

For single-sheet multi-part forms, use only the type that are glued at the top of the forms.

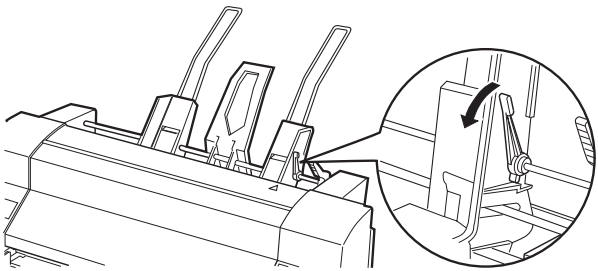
To avoid paper jams, do not allow too many printed sheets to be stacked on the front paper guide at one time. Remove the stack when it is half as thick as the paper loading limit marked on the cut-sheet feeder.

Load paper in the cut-sheet feeder as follows:

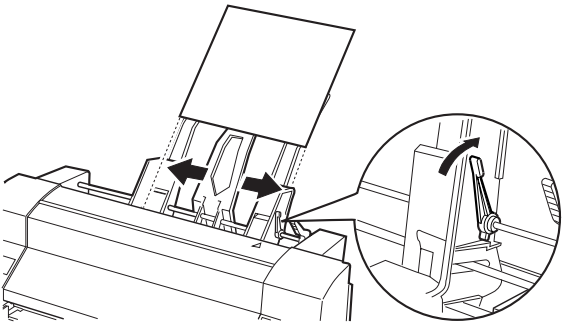
1. Pull paper set lever forward until the paper guides retract to allow paper loading.



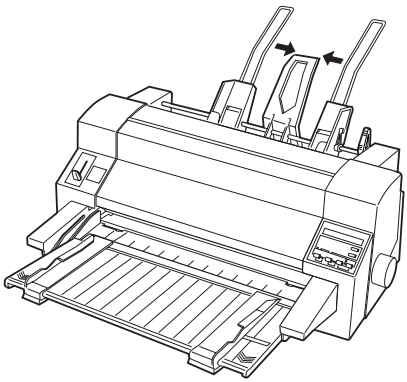
2. Release the paper guide lock levers by pulling them forward.



3. Slide the right paper guide so that its edge is even with the guide mark on the cut-sheet feeder and push back the lever to lock the paper guide in place. Next, slide the left paper guide to roughly match the width of your paper.



4. Slide the center support midway between the paper guides.

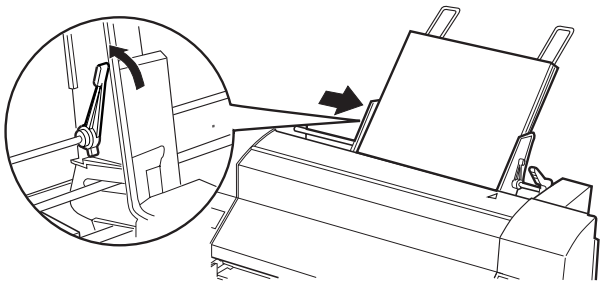


5. Fan a stack of paper then tap the sides and bottom of the stack on a flat surface to even it up. See page A-19 for information on the types and quantity of paper that can be loaded with the cut-sheet feeder.

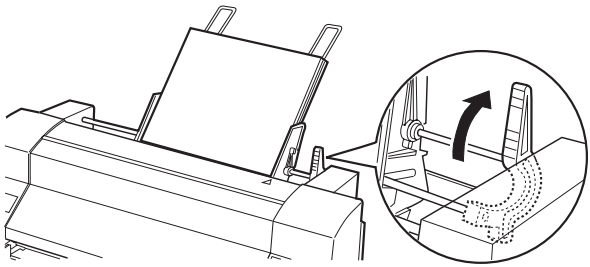
Caution:
Do not use labels in the cut-sheet feeder.

6. Insert the paper along the right paper guide and adjust the position of the left 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. Then lock the left guide in place.

   Note:
   Load paper with the printable side up. If you are using pre-printed forms, load the forms top-down.



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



8. Before printing, make sure the paper release lever is set to the single-sheet position. Also set the paper thickness lever to the appropriate position for the paper loaded in the cut-sheet feeder, as described on page 3-6. In your printer driver software, select your paper size from the Paper Size list.

   The cut-sheet feeder loads paper when you send data to the printer. You can also load paper by pressing the Load/Eject button.

Note:

- ❑ *If the platen turns without loading the paper, completely remove the paper and then insert it all the way into the printer again.*
- ❑ *If you need to adjust the position of the paper after it is loaded, see "Adjusting the printing position" on page 3-38. To move and save the loading position of the paper, use the SelecType "T-Margin CSF" setting. For more information on SelecType settings, see page 4-8.*
- ❑ *When loading from the cut-sheet feeder in* Cards *and* Envelopes *modes, SelecType "T-Margin CSF" setting value should be automatically set to 4.2 mm or more.*

Loading paper manually from the front paper guide

The cut-sheet feeder's single-sheet loading feature allows you to switch to a different type or size of paper without replacing the paper already in the cut-sheet feeder or removing the feeder. Follow these steps:

1. Make sure that the paper release lever is in the single-sheet position.
2. Push the front paper guide extension all the way in.
3. Slide the right edge guide until it is aligned with the guide mark on the front paper guide.

4. While adjusting the left edge guide to match the width of your paper, insert a sheet of paper between the edge guides until it meets resistance. Be sure to load your paper printable side up. After a few seconds, the printer automatically advances the paper to the loading position. The printer is ready to accept data from your computer and print.

After printing a page of your document, the printer ejects it onto the front paper guide and the Paper Out and Pause lights come on. If you are printing a multiple-page document, remove the printed sheet and insert a new sheet into the front paper guide. The printer automatically advances the paper and resumes printing.

Switching between the tractor and the cut-sheet feeder

You can easily switch between continuous paper loaded from the tractor and single sheets loaded from the cut-sheet feeder without removing your continuous paper as described below.

Switching to continuous paper

Follow the steps below to switch to continuous paper loaded from the tractor.

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

2. Move the paper release lever to the tractor position.

Switching to single sheets

To switch back to single sheets loaded from the cut-sheet feeder, follow these steps (See also pages 3-26, 3-30, 3-32, and 3-35.):

1. If any continuous paper remains in the printer, press the Tear Off button to advance the paper to the tear-off position.

2. Tear off the printed pages.

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

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

Note:
If you load another type of continuous paper, you need to remove the cut-sheet feeder.

Interface Cards

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
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
C82346✻	Ethernet interface

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

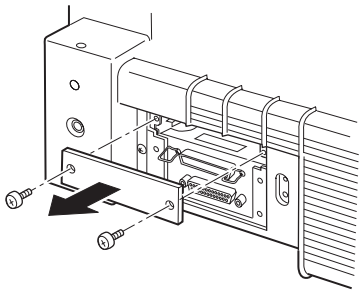
If you are not sure whether you need an optional interface or would like to know more about interfaces, contact your dealer.

Installing an interface card

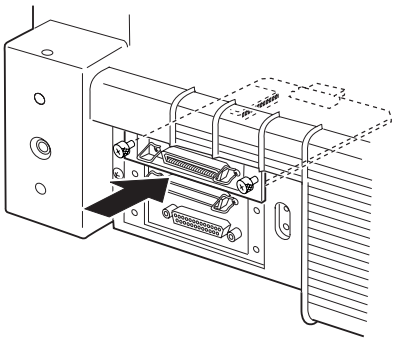
Follow the steps below to install an optional interface card.

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

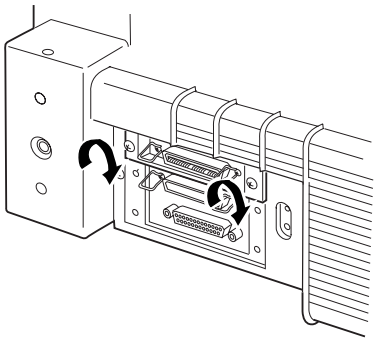
2. Remove the screws securing the shield plate to the back of the printer and remove the plate.



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 reinsert 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.

To remove the interface card, reverse the steps above.

Chapter 7

Maintenance and Transportation

Replacing the Ribbon Cartridge 7-2

Cleaning the Printer 7-5

Transporting the Printer 7-6

Replacing the Ribbon Cartridge

If your printing becomes faint, you may need to replace the ribbon cartridge. (See Chapter 8, "Troubleshooting," for more information.) If you do need to replace the ribbon, EPSON recommends the use of the EPSON Ribbon Cartridge (S015066 for black, S015067 for color) for best results. Genuine EPSON ribbon cartridges are designed for your EPSON printer; their high quality ensures the proper operation and long life of the print head and other printer parts. Other products not manufactured by EPSON may cause damage to your printer not covered by EPSON's warranties.

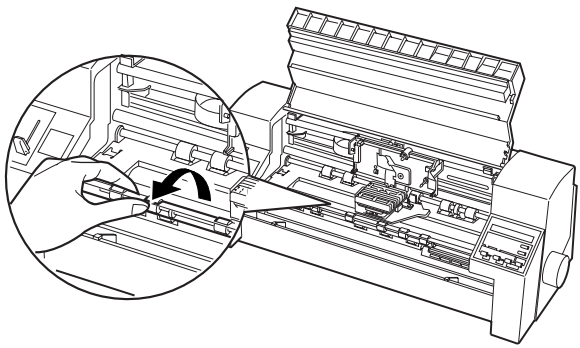
To replace the ribbon cartridge, follow these steps:

1. Turn on the printer.

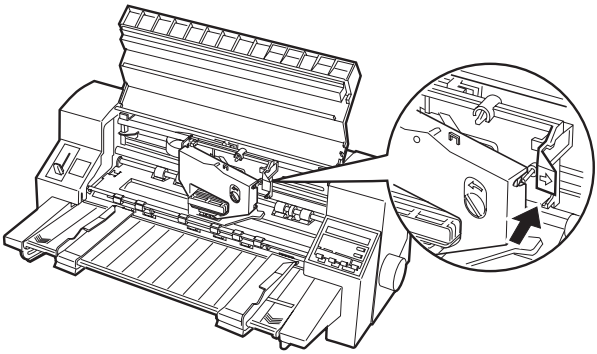
2. Press the Pause button; the print head moves to the middle and stops.

3. Turn off the printer. Then open the printer cover and the paper bail.

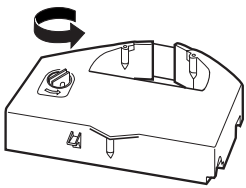
Warning:
If the printer has been used recently, the print head may be hot. Let it cool before attempting to replace the ribbon cartridge.



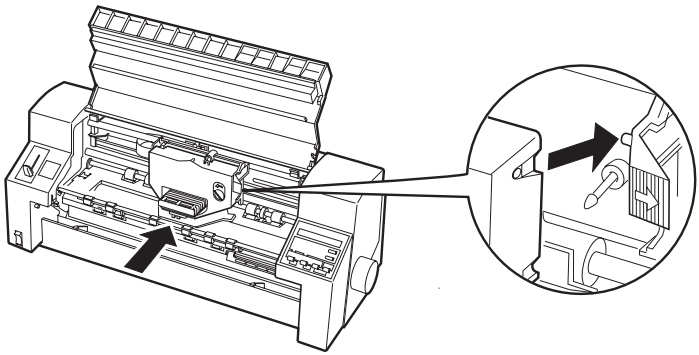
4. Press the tab at the upper right of the cartridge holder and pull the cartridge out of the printer.



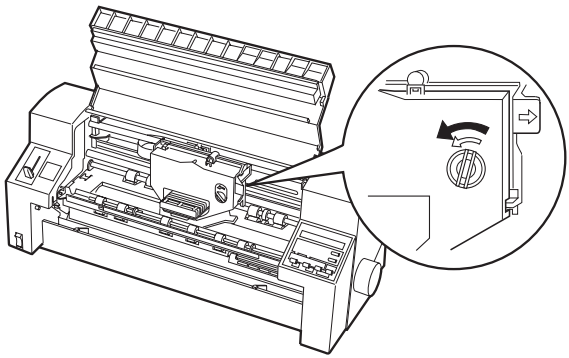
5. Remove the new ribbon cartridge from its package and turn the ribbon-tightening knob in the direction of the arrow to remove any slack in the ribbon.



6. Hold the ribbon cartridge with the exposed ribbon down and the ribbon-tightening knob facing you, and guide the ribbon under the print head. Then snap the cartridge into place so that the tabs on both sides of the cartridge fit into the notches in the cartridge holder.



7. Turn the ribbon-tightening knob again to remove any slack in the ribbon and to make sure the ribbon moves freely.



8. Close the paper bail and the printer cover.

Cleaning the Printer

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

1. Turn off the printer and remove any paper as well as the paper guide. If an optional cut-sheet feeder is installed, remove it.

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

3. 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 closed to prevent water from getting inside the printer.

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. Turn off the printer and remove any paper loaded in 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.

   Warning:
   If the printer has been used recently, the print head may be hot. Let it cool before attempting to remove the ribbon cartridge.

3. Remove the paper guide. Remove the ribbon cartridge as described in steps 3 through 4 of "Replacing the Ribbon Cartridge" on page 7-2. Then close the printer cover.

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

Chapter 8
Troubleshooting

Using the Error Indicators 8-3

Printing a Self Test 8-5

Using the Hex Dump Mode 8-6

Problems and Solutions 8-7
- Power supply 8-8
- Paper handling 8-9
- Operation 8-17
- Printout 8-19

Clearing a Paper Jam 8-24

Using Bidirectional Adjustment Mode 8-25

This chapter describes what you can do if you are having problems printing. It is divided into these sections:

- Using the error indicators. This section describes how to use the lights and error messages on the control panel and buzzer as error indicators so you can diagnose and fix printer problems.

- Printing a self test. This section explains how to run the printer's self test to determine whether the problem lies with the printer or the computer.

- Using hex dump mode. This section describes the printer's hex dump mode. Experienced users may want to use this mode to pinpoint communication problems.

- Problems and solutions. This section describes how to solve problems with the power supply, paper handling, printer operation, and the quality of the printout.

- Clearing a paper jam. This section shows you how to clear a paper jam.

- Using bidirectional adjustment mode. This section explains how to use the bidirectional adjustment feature to ensure that vertical lines are properly aligned in your printout.

Use the information in this chapter to pinpoint the source of your printer problem, and then try the recommended solutions. If none of these solutions fix your problem, see Appendix C, "Contacting Customer Support."

Using the Error Indicators

If a printer error occurs, you can use the error notification methods, a pattern of beep sounds and messages that appear on the display on the control panel, to help determine the cause of the problem and the solution. Use the following table to diagnose and fix the problem.

State of panel light	Beep pattern	Display message	Problem Solution
☐ Paper Out ☐ Pause		Paper Out	**No paper loaded in the selected paper source.**
			Load paper in the selected feed path; the Paper Out and Pause lights go off and the printer resumes printing.
			Paper is not loaded correctly.
			Remove and reload your paper correctly, then press the Pause button. See Chapter 3 for instructions on how to load the type of paper you want to use.
☐ Pause	•••	Wrong Paper Size	**The paper type loaded in your printer differs from that registered with the EPSON Label Form Utility.**
			Load the same type of label paper you previously registered with the EPSON Label Form Utility or use the utility to register the new type of paper. Then press the Pause button.
		Wrong Paper path	**Your operation does not meet the settings in the Paper Select.**
			Remove the paper in the printer and reload the paper you use referring to page 3-31 to 3-35. Then press the Pause button.

State of panel light	Beep pattern	Display message	Problem Solution
☐̈ Paper out ☐ Pause	●●●	Pull Paper Out	**Single-sheet paper is not fully ejected.** Remove the paper by hand and press the Pause button. Never use the knob on the right side of the printer.
	●●●●●●	Put Lever Back	**The paper release lever is set to the wrong position.** Set the paper release lever to match the paper source where paper is loaded. Then press the Pause button.
		Paper Jam	**Paper is jammed in the printer.** Turn off your printer and remove the jamed paper using the knob on the right side of the printer.
☐̈ Pause	–	Please Wait	**The print head is overheated.** Wait a few minutes; the printer resumes printing automatically once the print head cools.
☐̈ Paper Out ☐̈ Pause	●●●●●	Please Turn Off	**An unknown printer error has occurred.** Turn off the printer and leave it off for several minutes; then turn it on again. If the error recurs, contact your dealer.
☐ Paper Out ☐ Pause	–	Cover Open	**The printer cover is open.**
☐ Pause			Close the printer cover and press the Pause button.

☐ = on, ☐̈ = flashing
●●● = short interval, ● ● ● = long interval

Printing a Self Test

Running the printer's self test helps you determine whether the problem comes from the printer or the computer:

- ❑ If the self test results are satisfactory, the printer is working properly and the problem is probably caused by 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 on either single sheets or continuous paper. This section describes how to print the test with single sheet paper. See Chapter 3 for information on loading and using single sheet paper.

To perform a self test, follow these steps:

1. Make sure paper is loaded in the paper guide, and the paper release lever is set to the correct position for your paper. Then turn off the printer.

   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 print the test using the Draft font, turn on the printer while holding down the Load/Eject button. To test the test using the printer's letter-quality fonts, turn on the printer while holding down the LF/FF button. Either self test can help you determine the source of your printing problem; however, the draft self test prints faster than the letter-quality test. See pages 4-20 to 4-22 for more information on using fonts.

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

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

Using the Hex Dump Mode

If you are an experienced user or a programmer, 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.

To print a hex dump, follow the steps below.

1. Make sure that A4 (210 × 297 mm, 8.3 × 11.7 inches) or wider paper (such as letter size paper) is loaded in the printer.

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

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 being received by the printer. 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 exit the hex dump mode and continue printing normally, press the Pause button and eject any paper with the Load/Eject button if necessary, or turn off the printer.

Problems and Solutions

This section divides printer problems into four categories:

Power supply . . . . page 8-8
Paper handling . . . page 8-9
Operation . . . . . page 8-17
Printout . . . . . page 8-19

See the section for the type of problem you have and look for the description of your problem. The most likely causes and solutions are listed first, so try the solutions in the order in which they appear.

Power supply

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

Cause	What to do
The printer's voltage rating does not match the voltage of your electrical outlet.	Check the printer and the outlet voltage ratings. If the voltages do not match, unplug the printer immediately and contact your dealer. ***Warning:*** *Do not reconnect the power cord to an electrical outlet with the wrong voltage for your printer.*

The printer does not work and the control panel lights are off.

Cause	What to do
The printer is turned off.	Turn on the printer. The Power light comes on.
The power cord is not properly plugged into the electrical outlet; or if your power cord is not permanently attached to your printer, the power cord is not properly plugged into the printer.	Turn off the printer and make sure the power cord is firmly plugged into the electrical outlet and the printer, if necessary. Then turn on the power switch.
The electrical outlet is controlled by an outside switch or automatic timer.	Use a different outlet.

The electrical outlet is out of order.	Plug another electrical device, such as a lamp, into the outlet to check if the outlet is working properly. If it is not, use a different outlet.

Paper handling

Single sheets loaded from the paper guide

The printer does not load single-sheets of paper.

Cause	What to do
Continuous paper is in the paper path.	Press the Load /Eject button to remove the continuous paper. Set the paper release lever to the single-sheet position and insert a new sheet. (See page 3-23 for information on removing continuous paper.)
The paper release lever is set to the tractor position.	Set the paper release lever to the single-sheet position. (See “Setting the paper release lever” on page 3-4.)

The platen does not rotate and the printer does not feed the paper.

Cause	What to do
The paper on the paper guide is positioned too far to the left or right for the paper sensor to detect it.	Move the paper a little to the left or right.

The platen rotates but the printer does not feed the paper.	
Cause	**What to do**
The edge guides are pressed too tightly against the paper.	Reinsert the paper all the way into the printer. Make sure that the edge guides are not too tight and abstructing the paper.
The paper release lever is set to the tractor position.	Set the paper release lever to the single-sheet position. See "Setting the paper release lever" on page 3-4.

Paper feeding is crooked or the paper jams.	
Cause	**What to do**
The paper guide is not properly installed.	Remove the paper guide and install it as described in "Attaching the paper guide" on page 1-8.
The edge guides are not positioned correctly.	Move the edge guides so that they match the width of your paper.
You may not be using the right type of paper for the printer.	Be sure you're using the right type of paper. See the paper specifications on page A-4.
The paper is old or creased.	Use only new, clean sheets of paper. ***Note:*** *If paper is jammed in the paper path, see "Clearing a Paper Jam" on page 8-24.*

The printer does not fully eject the paper.	
Cause	**What to do**
You may not be able to fully eject your paper using the LF/FF button.	Use the Load/Eject button to eject the paper.

Your paper may be too long.	Make sure the page length of your paper is within the specified range. See the single-sheet paper specifications on page A-4. Also check and adjust the paper size setting in your application or the printer driver.

When the printer ejects the paper, the Paper Out flashes and the Pause light comes on.

Cause	What to do
The printer has not fully ejected your paper.	Remove the paper by hand; the Paper Out light goes out. If you are printing a multiple-page document, insert a new sheet of paper into the paper guide. The Pause light goes out and the printer automatically loads the paper and resumes printing.

Continuous paper

The printer does not load continuous paper.

Cause	What to do
The paper release lever is set to the single-sheet position.	Set the paper release lever to the tractor position. See "Setting the paper release lever" on page 3-4.
The paper has come off the tractor.	Reattach the paper to the tractor as described in "Loading continuous paper with the tractor" on page 3-14.

When you send data or press the Load/Eject button, the platen rotates but the printer does not feed the paper.

Cause	What to do
The paper release lever is set to the single-sheet position.	Move the paper release lever to the tractor position.
The paper has come off the tractor.	Reattach the paper to the tractor as described in "Loading continuous paper with the tractor" on page 3-14.
The paper has been fed back to the standby position.	Press the Load/Eject button to load the paper.

Paper feeding is crooked or the paper jams.

Cause	What to do
The paper supply is obstructed.	Make sure the paper supply is not obstructed by a cable or some other object.
The paper supply is not aligned with the printer.	Make sure you align your paper supply with the paper loaded in the tractor so the paper feeds smoothly into the printer. See "Positioning your continuous paper supply" on page 3-13.
The paper supply is too far away from the printer.	Make sure that your paper supply is within 1 meter (3 feet) of the printer.
The holes on the sides of the paper are misaligned.	Check that the holes on the sides of the paper are aligned with each other. Also make sure the sprocket units are locked and their covers are closed.
The paper thickness lever is set incorrectly.	Set the paper thickness lever to match the thickness of your paper. See "Adjusting the paper thickness lever" on page 3-5.

Your paper may be the wrong size or thickness for the printer.	Make sure that the paper size and thickness are within the specified ranges. See the continuous paper specifications on page A-5.
The sprocket units are positioned incorrectly for the width of paper you are using.	Adjust the position of the sprockets to remove any slack along the width of the paper. ***Note:*** *If paper is jammed in the paper path, see "Clearing a Paper Jam" on page 8-24.*

The top-of-form position of your continuous paper varies when you print several pages.

Cause	What to do
The paper size setting in your application or the printer driver may not match the size of the paper you are using.	Check the paper size setting in your application or the printer driver.
The printer's page length setting may not match the size of the paper you are using.	Check the "Page Tractor" setting using the SelecType mode or the EPSON Remote! utility. See "SelecType" on page 4-8, or "Using the printer utilities" on page 2-22.
Your paper may be too heavy.	Make sure that the weight of your paper is within the specified range. See the continuous paper specifications on page A-5.

The printer prints on (or too far away from) the perforation of your continuous paper.

Cause	What to do
The tear-off position is set incorrectly.	Adjust the tear-off position using the ▼ or ▲ button. See "Adjusting the tear-off position" on page 3-39.
The paper size setting in your application or the printer driver may not match the size of the paper you are using.	Check the paper size setting in your application or the printer driver.
The printer's page length setting may not match the size of the paper you are using.	Check the "Page Tractor" setting using SelecType or the EPSON Remote! utility. See "SelecType" on page 4-8, or "Using the printer utilities" on page 2-22.

The printer does not eject your continuous paper properly.

Cause	What to do
You may be trying to feed too much paper backward.	If you are using normal continuous paper, tear off the last printed page and press the Load/Eject button to feed the paper backward. If you are using labels, tear off the paper entering the printer, and then press the LF/FF button to feed the labels forward.
Your paper may be too long or too short.	Make sure the page length of your paper is within the specified range. See the continuous paper specifications on page A-5.
The paper size setting in your application or the printer driver may not match the size of the paper you are using.	Check the paper size setting in your application or the printer driver.

The printer's page length setting may not match the size of the paper you are using.	Check the "Page Tractor" setting using SelecType or the EPSON Remote! utility. See "SelecType" on page 4-8, or "Using the printer utilities" on page 2-22.
Paper is jammed inside the printer.	Clear the paper jam as described on page 8-24.

Single sheets loaded from the optional cut-sheet feeder

The platen rotates but the cut-sheet feeder does not feed the paper.

Cause	What to do
The cut-sheet feeder is installed incorrectly.	Reinstall it correctly. See "Installing the cut-sheet feeder" on page 6-2.
The paper release lever is set to the tractor position.	Set the paper release lever to the single-sheet position. (See "Setting the paper release lever" on page 3-4.)
The right and left paper guides are too close to the paper stack, preventing the paper from feeding smoothly.	Adjust the paper guides to match the width of your paper.
Paper is jammed inside the printer.	Clear the paper jam as described on page 8-24.
There are only a few sheets of paper left in the bin.	Add more paper.
You may have loaded too many sheets in the bin.	Remove some sheets. See page A-19 for information on the types and quantity of paper that can be loaded with the cut-sheet feeder.

The cut-sheet feeder feeds more than one sheet at a time.

Cause	What to do
You may have loaded too many sheets in the bin.	Remove some sheets. See page A-19 for information on the types and quantity of paper that can be loaded with the cut-sheet feeder.
Sheets of paper are stuck together.	Remove the paper stack, fan it, and then reload it.

Paper feeding is crooked.

Cause	What to do
The right and left paper guides are too far apart.	Position the paper guides to match the width of your paper.
The paper is old or creased.	Use only new, clean sheets of paper.
You may not be using the right type of paper for the cut-sheet feeder. For example, your paper may be too heavy or too light.	Make sure your paper meets the requirements of your printer and cut-sheet feeder. See the paper specifications and the optional cut-sheet feeder specifications on page A-19.

When the printer ejects the paper, the Paper Out flashes and the Pause light comes on.

Cause	What to do
The printer has not fully ejected your paper.	Remove the paper by hand; the Paper Out light goes out. Press the Pause button to resume printing.

When you try to load single-sheet paper manually, the printer loads the paper from the cut-sheet feeder.

Cause	What to do
The paper was not properly loaded in the front paper guide.	Load the paper in the front paper guide as described on page 3-7.

One page of your document is printed on two pages.

Cause	What to do
The paper size setting in your application software does not match the size of the paper loaded in the printer.	Adjust the paper size setting in your application or the printer driver.

The printer does not load the paper you want when you switch between the cut-sheet feeder and the tractor.

Cause	What to do
The paper release lever is set incorrectly.	Set the paper release lever correctly. for tractor feeding, for single-sheet feeding and for clearing a paper jam.

Operation

The Pause light is off but the printer does not print.

Cause	What to do
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 on page 8-5.

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 1-10 and your computer documentation.
Your software is not properly set up for your printer.	Make sure that your printer is properly selected in your application software. If necessary, install or reinstall the printer driver software as described in Chapter 2.

The Paper Out and Pause lights are on and the printer does not print.

Cause	What to do
The printer is out of paper for the selected paper source.	Make sure the paper release lever is in the correct position, and load paper in the current paper source. Press the Pause button to resume printing.
Paper on the front or rear paper guide is positioned too far to the left, right or inside for the paper sensor to detect it.	Move the paper a little to the right, left or inside. When it is positioned properly, the Paper Out and Pause lights go off.

The printer sounds like it is printing, but nothing prints.

Cause	What to do
The ribbon cartridge is not installed properly.	Install the ribbon cartridge as described on page 1-5.
The ribbon is worn out.	Replace the ribbon cartridge as described on page 7-2.
The paper thickness lever is set incorrectly.	Set the paper thickness lever to match the thickness of your paper. See "Adjusting the paper thickness lever" on page 3-5.

The printer makes a strange noise and stops abruptly.

Cause	What to do
The paper is jammed.	Clear the paper jam as described on page 8-24.
The ribbon is jammed because it has too much slack or it is worn out.	Remove any slack from the ribbon by turning the ribbon-tightening knob, or replace the ribbon cartridge as described on page 7-2.

The printer stops printing and the Pause light flashes.

Cause	What to do
The print head is overheated.	Wait a few minutes; the printer resumes printing automatically once the print head cools.

Printout

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

Cause	What to do
The ribbon cartridge is not installed properly.	Reinstall the ribbon cartridge as described on page 1-5.
There is too much slack in the ribbon or the ribbon has come loose.	Remove any slack in the ribbon by turning the ribbon-tightening knob, or replace the ribbon cartridge as described on page 7-2.

Lines of dots are missing in the printout as shown below.

Cause	What to do
The ribbon cartridge is not installed correctly, and the ribbon is twisting or slackening.	Stop printing and reinstall it as described "Installing the ribbon cartridge" on page 1-5.
The print head is damaged.	Stop printing and contact your dealer to have the print head replaced. ***Warning:*** *Never try to replace the print head yourself because other parts of the printer must be checked at the same time.*

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Incorrect characters are printed.

Cause	What to do
Your printer and the computer may not be communicating correctly.	Make sure that you use the correct interface cable and that the communications protocol is correct. See page 1-10 and your computer documentation. If you installed the optional serial interface card, also see page 6-11.
The wrong character table is selected in your software.	Select the correct character table in your software or using the SelecType mode or the EPSON Remote! utility. Note that the character table setting in your software overrides the settings made in the SelecType mode or EPSON Remote!.

The typestyles or characters set in your application software cannot be printed.

Cause	What to do
Your application software is not correctly configured for your printer.	Make sure that your application software is correctly configured for your printer. See your application documentation.

The printer does not print the font you selected using the SelecType mode or the EPSON Remote! utility.

Cause	What to do
Software settings override settings you make in the SelecType mode or EPSON Remote!.	Use your software to select the font.

Printing starts too high or too low on the page.

Cause	What to do
The paper size settings in your application software do not match the size of the paper loaded in the printer.	Change the paper size settings in your application software or printer driver to match the size of the paper you are using.
The top margin or loading position setting is incorrect.	Check and adjust the top margin and loading position settings in your software or SelecType. See the printable area specifications in Appendix A. However, settings made in Windows applications override settings made in SelecType mode.

Top margin and loading position settings made in your Windows applications override settings you make in the SelecType mode.	Use your application software to make these settings. ***Note:*** *If you want to eliminate the top margin and print at the very top of the page, adjust the top margin in your Windows application little by little until text is printed at the very top of the page.*

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 option in the SelecType mode or the EPSON Remote! utility so that the printer automatically adds a line feed code to each carriage return. See “SelecType” on page 4-8, or “Using the printer utilities” on page 2-22.

The printout has extra blank lines between lines of text.

Cause	What to do
Two line feed commands are being sent at the end of each line of text.	Turn off the auto line feed option in the SelecType mode or the EPSON Remote! utility. See “SelecType” on page 4-8, or “Using the printer utilities” on page 2-22.
The line space setting in your application software is incorrect.	Adjust the line space setting in your application software.

The length of the printing on the page does not match your paper length.

Cause	What to do
The paper size setting in your application or the printer driver may not match the size of the paper you are using.	Check the paper size setting in your application or the printer driver.
The printer's page length setting may not match the size of the paper you are using.	Check the "Page Tractor" setting using the SelectType mode or the EPSON Remote! utility. See "SelecType" on page 4-8, or "Using the printer utilities" on page 2-22.

Printing starts lower on the page than you expect, or the bottom of a page is printed at the top of the next page.

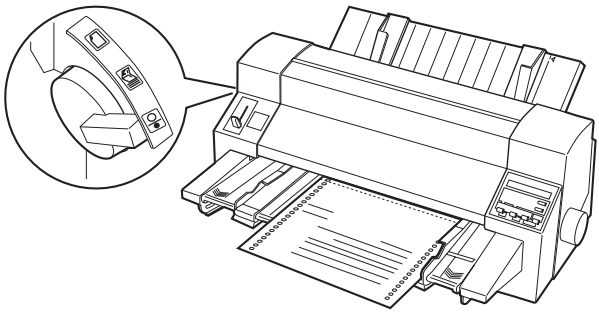
Cause	What to do
The lines-per-page, top and bottom margin, or form length setting is incorrect.	Adjust these settings in your application software, as follows: If your application software has a lines-per-page setting, set it to 66 for letter size paper or 70 for A4 size paper. If your software does not have a lines-per-page setting, try decreasing the top margin or increasing the bottom margin, or both, until you get the results you want. Adjust the form length setting if your software has this option.

Vertical printed lines are not aligned.	
Cause	**What to do**
Bidirectional printing, which is the printer's standard printing mode, may be out of alignment.	Use the printer's bidirectional adjustment mode to correct this problem. See "Using Bidirectional Adjustment" on page 8-25

Clearing a Paper Jam

To clear a paper jam, follow these steps:

1. Turn off the printer.
2. Set the paper release lever to the release position.



3. Open the printer cover.
4. If continuous paper is jammed in the printer, tear off the fresh supply at the back of the printer.

5. Turn the knob on the right side of the printer to remove the paper. Remove any remaining pieces.

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

7. Close the printer cover and turn on the printer. Make sure the Paper Out and Pause lights are off.

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

Using Bidirectional Adjustment Mode

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, Draft, Bit Image, and LQ. As described below, you select the best alignment pattern from each sheet.

Follow the steps below to perform bidirectional adjustment.

Note:

- *To print the instruction sheet and alignment patterns, you need four sheets of A3 size single-sheet paper or 15-inch (recommended) continuous paper. (See Chapter 3, "Paper Handling," for instructions on loading single-sheet or continuous paper.)*

- *If you use single-sheet paper, be sure to load a new sheet of paper each time the printer ejects a printed sheet. Otherwise, you cannot proceed to the next step.*

1. Make sure paper is loaded, then turn off the printer. While holding down the Pause button, turn on the printer. The printer enters the bidirectional adjustment mode and then prints the instruction sheet and the first set of alignment patterns.

2. As described on the instruction sheet, compare the alignment patterns and select the pattern with the best alignment. Use the ▼ and ▲ buttons to specify the pattern number you want in the control panel display.

3. Press the ▶ button to save your selection and print the next set of alignment patterns. Then repeat step 2 to select the best alignment pattern.

4. Press the ▶ button again to save your selection and print the final set of alignment patterns.

5. Select the best pattern in the final set of alignment patterns as described in step 2 and then press the ▶ button to save your selection.

6. Turn off the printer and exit the bidirectional adjustment mode.

Appendix A

Specifications

Technical Specifications A-2
- Printing A-2
- Paper A-4
- Mechanical A-15
- Electrical A-16
- Environmental A-16
- Safety approvals A-17
- CE marking A-17

Parallel Interface Specifications A-18
- Forward channel A-18
- Reverse channel A-18

Serial Interface Specifications A-19

Optional Cut-Sheet Feeder Specifications A-19

A

Technical Specifications

Printing

Printing method: 24-pin impact dot matrix

maximum print speed:

Characters per inch	Quality	Characters/second/line
10 cpi	High speed draft	444
10 cpi	Normal draft	360
10 cpi	Letter quality	120
12 cpi	Draft	432
12 cpi	Letter quality	144

* The paper thickness lever position or an overheated print head may affect the print speed.

Print 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, 1/8-inch or programmable in 1/360-inch increments

Paper feed speed:

Continuous 6 inches/second
Intermittent 42 ms/line at 1/6-inch line spacing

Printable columns:

Characters per inch	Maximum printed characters per column
10 cpi	136
12 cpi	163
15 cpi	204
17 cpi	233
20 cpi	272

Buffer: 128KB or 1KB (selectable in the SelecType mode or the EPSON Remote! utility)

Bitmap fonts:

Font	Characters per inch available
EPSON Draft	10, 12, 15
EPSON Roman	10, 12, 15, proportional
EPSON Sans Serif	10, 12, 15, proportional
EPSON Courier	10, 12, 15
EPSON Prestige	10, 12
EPSON Script	10
EPSON Script C	proportional
EPSON Orator	10
EPSON Orator S	10
EPSON OCR-B	10

Scalable fonts:

Font	Available sizes
EPSON Roman	10.5, 8 to 32 points, in 2-point increments
EPSON Sans Serif	10.5, 8 to 32 points, in 2-point increments
EPSON Roman T	10.5, 8 to 32 points, in 2-point increments
ESPON Sans Serif H	10.5, 8 to 32 points, in 2-point increments

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 graphics character tables. (There are 19 graphics character tables available in certain areas.)

Character sets: 14 international character sets and one legal character set

Paper

Note:
Use recycled paper, labels, envelopes, postcards, overlapping forms, and continuous forms with labels only under normal temperature and humidity conditions as follows:

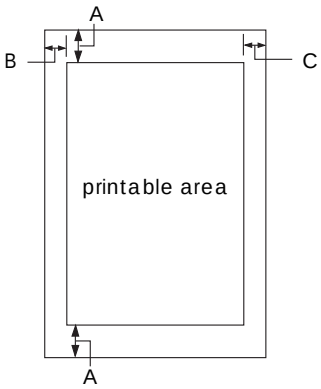
Temperature	*15° to 25°C (59° to 77°F)*
Humidity	*20% to 60% RH*

Single sheets (including single-sheet multi-part forms)

See also "Multi-part forms" on page A-7.

Width	92 to 420 mm (3.6 to 16.5 inches) 100 to 420 mm (3.9 to 16.5 inches)* *When loading single sheets and single-sheet multi-part forms that are glued at the top of the form from the cut-sheet feeder
Length	92 to 420 mm (3.6 to 16.5 inches) 92 to 364 mm (3.6 to 14.3 inches)* *When loading single sheets and single-sheet multi-part forms that are glued at the top of the form from the cut-sheet feeder
Thickness	
single sheets	0.065 to 0.12 mm (0.0025 to 0.0047 inch)
multi-part forms	0.12 to 0.53 mm (0.0047 to 0.021 inch)
Weight	
single sheets	52 to 105 g/m^2 (14 to 27lb)
multi-part forms	40 to 58 g/m^2 (11 to 15 lb) (weight/part)
Quality	Plain paper, bond paper, and recycled paper
multi-part forms	Carbonless multi-part forms with a line of glue at the top or the side of the form
Copies	1 original + 6 copies (when Dark is selected in SelecType 2.)

Printable area



A 0 mm (0 inch) or more

B 3.0 mm (0.118 inch) or more
31 mm (1.22 inches) or more for A3-size landscape paper.

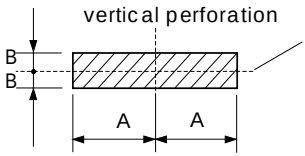
C 3.0 mm (0.118 inch) or more
20 mm (0.787 inch) or more for A3-size landscape paper.

The maximum printable width is 346 mm (13.6 inches).

Continuous paper (including continuous multi-part forms)

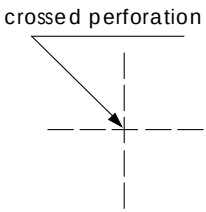
See also "Multi-part forms" on page A-7.

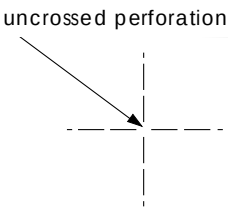
- ❑ The sprocket hole must be a circle or notched circle.
- ❑ The holes must be cleanly cut.
- ❑ If the horizontal and vertical perforations are crossed, the shaded area below should not be printed on. Uncrossed perforations do not have this restricted area.



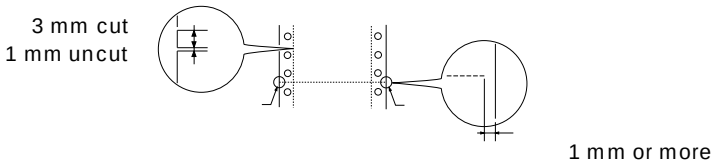
A 28 mm (1.1 inches)

B 3 mm (0.12 inch)

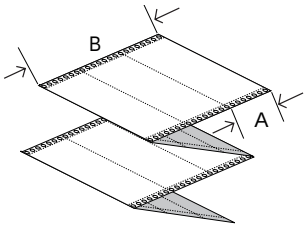




- ❑ The ratio of the cut / uncut length at the perforation should be between 3:1 and 5:1. And expansion at the perforation (when the paper is kept flat) should be less than 1mm (0.04 inch) as following.



- ❑ If you use continuous paper whose page length (A in the next illustration) is under 101.6 mm (4.0 inches), make sure that the length between folds (B) is over 101.6 mm (4.0 inches.)

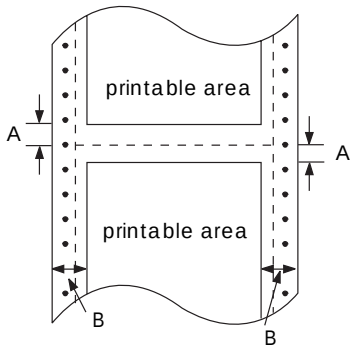


Width	101.6 to 406.4 mm (4.0 to 16.0 inches)
Length / page	101.6 to 559 mm (4.0 to 22.0 inches)
Copies	1 original + 6 copies (when Dark is selected in SelecType 2.)
Total thickness	
single sheets	0.065 to 0.12 mm (0.0025 to 0.0047 inch)
multi-part forms	0.12 to 0.53 mm (0.0047 to 0.021 inch)
Weight	
single sheets	52.3 to 105 g / m^2 (14 to 27 lb)
multi-part forms	40 to 58g / m^2 (11 to 15 lb) (weight / part)
Quality	Plain paper, recycled paper, and carbonless
multi-part forms	multi-part forms with spot gluing or paper stapling on both sides

Printable area

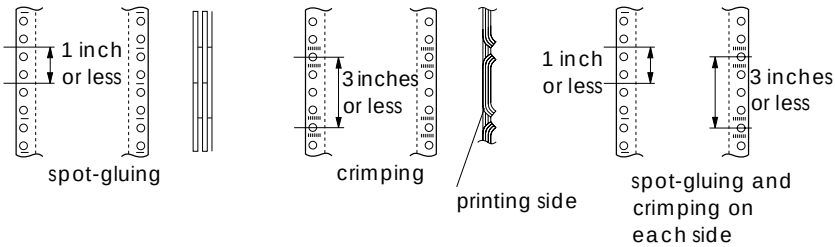
A The minimum top and bottom margins (above and below the perforation) are 4.2 mm (0.165 inch).

B The minimum left or right margin is 9 mm (0.354 inch).
18mm for the paper whose page width is 406.4 mm (16 inches.)



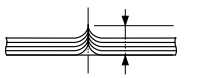
Multi-part forms

- ❑ The form sheets of continuous multi-part forms should be securely joined together along the left and right edges by crimping or, spot-gluing. For the best printing quality, use multi-part forms joined with spot-gluing.



- ❑ Never use continuous multi-part forms that are joined with metal staples or bar-gluing.

- ❑ The thickness of folding part when extended should be 2 mm or less.

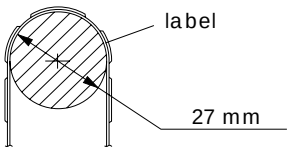


- ❑ The binding area should be flat and have no creases.
- ❑ The sprocket holes of all sheets in the form should be aligned properly.
- ❑ The binding position should be outside the printable area.

Dimensions and Printable area	See page A-4–5 for single-sheet multi-part forms See page A-6–7 for continuous multi-part forms

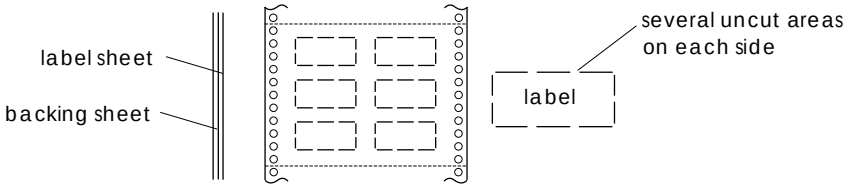
Labels

- ❑ Labels should be securely attached to the backing sheet and the label surface must be flat.
- ❑ The labels should not peel off their backing sheet under the conditions below.

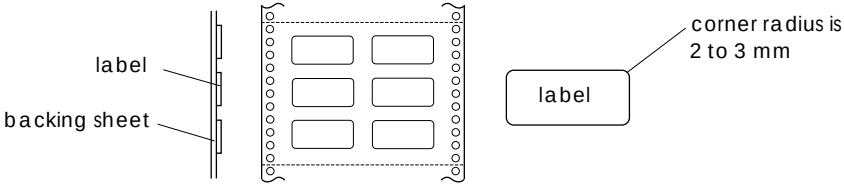


wrapping drum radius	27 mm
wrapping angle	180°
wrapping time	24 hours
ambient temperature	40°C
ambient humidity	30%

- ❑ When using labels whose backing sheet is entirely covered, make sure the cuts around the edges of the labels are perforated.

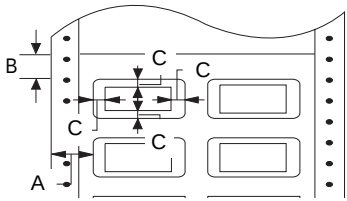


- ❑ When using labels whose backing sheet is not covered with the label material, see the illustration below and do not set the paper thickness lever to the AUTO position, set it manually.



Backing sheet	
Width	101.6 to 406.4 mm (4.0 to 16.0 inches)
Length / page	101.6 to 559 mm (4.0 to 22.0 inches)
Labels	
Width	63.5 mm (2.5 inches), minimum
Height	23.8 mm (0.94 inch), minimum
Corner Radius	2 to 3 mm (0.079 to 0.118 inch)
Weight	64 g / m^2 (17 lb)
Thickness	
Backing sheet	0.07 to 0.09 mm (0.0028 to 0.0035 inch)
Total	0.16 to 0.19 mm (0.0063 to 0.0075 inch)
Quality	Plain paper or the same quality labels with continuous backing sheet

Printable area



A 12 mm (0.47 inch) or more

B 1.2 mm (0.0472 inch) or more

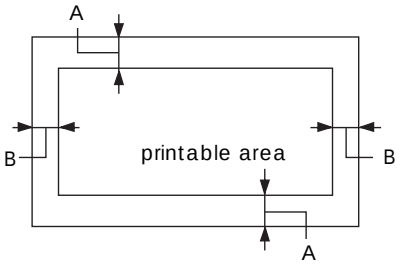
C 3 mm (0.118 inch) or more

A

Envelopes

Size	No. 6 165 × 92 mm (6.5 × 3.6 inches) No. 10 241 × 105 mm (9.5 × 4.1 inches)
Thickness	0.16 to 0.52 mm (0.0063 to 0.021 inch) Any differences in thickness within the printable area must be less than 0.25 mm (0.0098 inch).
Weight	45 to 91 g / m^2 (12 to 24 lb)
Quality	Bond envelopes, plain envelopes, and airmail envelopes not glued on the flap

Printable area



A 0 mm (0 inch) or more
The minimum top marging for feeding from the cut-sheet feeder is 4.2 mm (0.165 inch.)

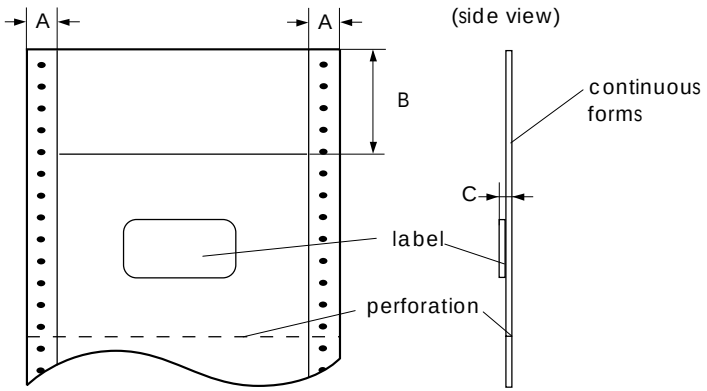
B 3 mm (0.118 inch) or more

Postcards

Width	105 to 148 mm (4.13 to 5.83 inches)
Length	147 to 148 mm (5.8 to 5.83 inches)
Thickness	0.22 mm (0.0087 inch)
Weight	192 g/m^2 (51 lb)
Quality	Plain paper and recycled paper
Printable area	Same as envelopes

Continuous forms with labels

Same as labels except for the following:



The label on your form should be placed within the shaded area above, but not on the vertical or horizontal perforation.

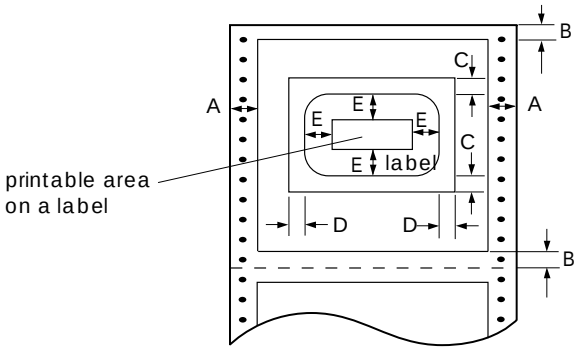
Area measurements

A 12 mm (0.47 inch)

B 44.2 mm (1.74 inches)

C total thickness : 0.53 mm (0.021 inch) or less

Printable area



Area measurements

A 9 mm (0.354 inch) or more

B 4.2 mm (0.165 inch) or more

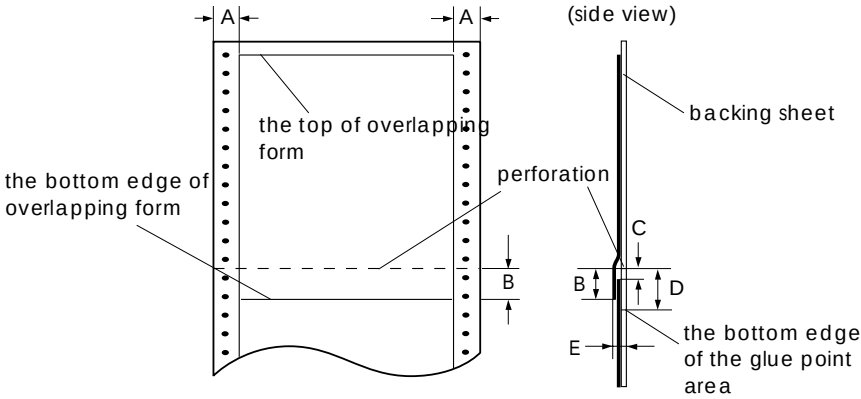
C 25 mm (0.984 inch) or more

D 45 mm (1.77 inches) or more

E 3 mm (0.118 inch) or more

Overlapping multi-part forms

Same as continuous paper (multi-part) except for the following:



Area measurements

A 13 ± 3 mm (0.51 ± 0.12 inch)

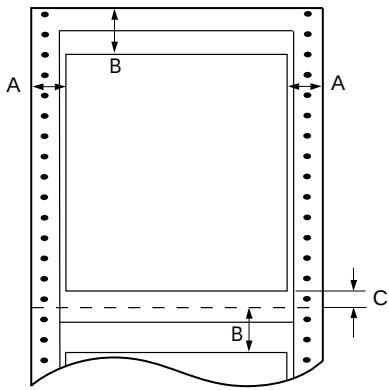
B 13.3 mm (0.52 inch) or less

C from perforation to the top of the next overlapping form:
3.3 mm (0.13 inch) or more

D from perforation to the bottom edge of the glue point area:
17 mm (0.67 inch) or less

E total thickness including glue point dilation:
0.65 mm (0.026 inch) or less

Printable area



Area measurements

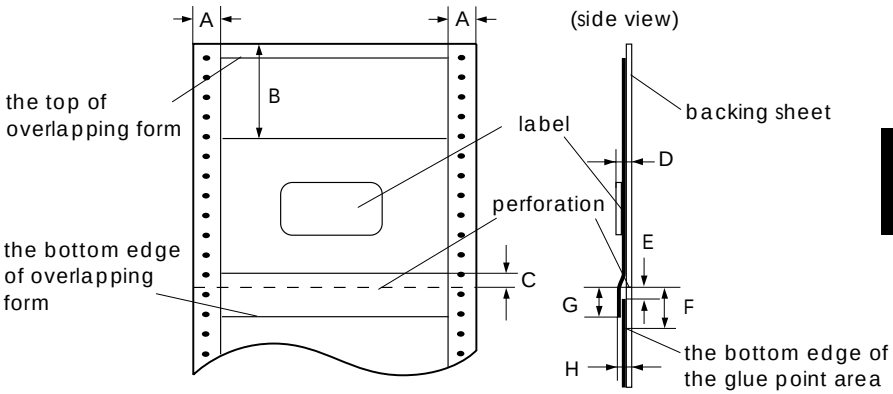
A 19 mm (0.748 inch) or more

B 21.2 mm (0.835 inch) or more

C 4.2 mm (0.165 inch) or more

Overlapping multi-part forms with labels

Same as labels except for the following:



The label on your form should be placed within the shaded area above, but not on the vertical or horizontal perforation.

Area measurements

A 13 ± 3 mm (0.51 ± 0.12 inch)

B 62.5 mm (2.46 inches)

C 4.2 mm (0.165 inch)

D thickness of area where label is attached:
0.53 mm (0.02 inch) or less

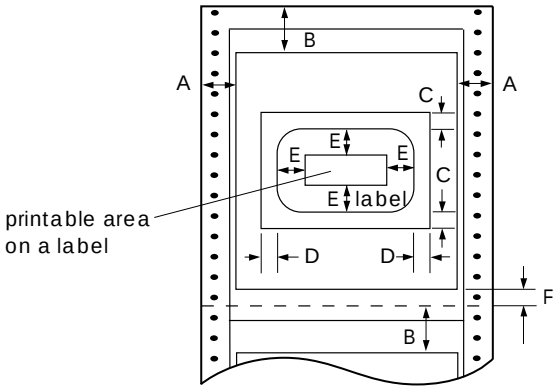
E from perforation to the top of the next overlapping form:
3.3 mm (0.13 inch) or more

F from perforation to the bottom edge of the glue point area:
17 mm (0.67 inch) or less

G from perforation to the bottom edge of the previous overlapping form: 13.3 mm (0.52 inch) or less

H total thickness including glue point dilation:
0.65 mm (0.026 inch) or less

Printable area



Area measurements

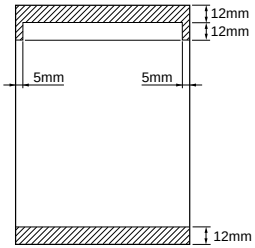
A	19 mm (0.748 inch) or more
B	21.2 mm (0.83 inch) or more
C	25 mm (0.984 inch) or more
D	45 mm (1.77 inches) or more
E	3 mm (0.118 inch) or more
F	4.2 mm (0.165 inch) or more

Pre-printed Paper

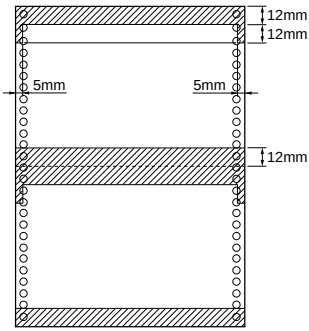
Pre-printed paper is paper with white space in the middle and ruled lines, letters, or figures printed in the top and bottom margins. The margins are printed the first time the paper is loaded in the printer, and a document is printed in the white space the second time the paper is loaded in the printer. The margin areas are often used for letterheads, borders, and so on. You can make your own pre-printed paper or you can purchase it.

You cannot preprint in the area with the diagonal shading in the illustrations below, and can preprint only with colors whose reflectivity is under 60% (for instance black). Avoid punching holes in the restricted area below because punctures are also recognized as colors whose reflectivity is under 60%.

Before printing on pre-printed sheets, verify that the area your document will print on does not overlap with the pre-printed area by printing separate sample sheets and comparing their printed areas.



single sheet



continuous paper

A

Mechanical

Paper feed methods:	Friction feed from front and rear Built-in push tractor Cut-sheet feeder (optional)
Ribbon:	black ribbon cartridge (S015066) color ribbon cartridge (S015067)

Ribbon life (at 10 cpi in letter-quality mode with 48 dots / character):

black ribbon	6 million characters
color ribbon	
Black	1.5 million characters
Magenta	1.1 million characters
Cyan	1.1 million characters
Yellow	0.8 million characters

Total print amount: 9 million lines (except print head)

Print head life:

monochrome:	200 million strokes / wire
color:	100 million strokes / wire

Dimensions and weight (with front and rear paper guides):

Height:	285 mm (11.2 inches)
Width:	678 mm (26.7 inches)
Depth:	509 mm (20.0 inches)
Weight:	Approx. 16.1 kg (35.5 lb)

Electrical

120 V model:

Rated voltage	AC 120 V
Input voltage range	AC 103.5 to 132 V
Rated frequency range	50 to 60 Hz
Input frequency range	49.5 to 60.5 Hz
Rated current	7 A
Power consumption	Approx. 60 W (ISO/IEC 10561 Letter pattern)

220-240 V model:

Rated voltage	AC 220 to 240 V
Input voltage range	AC 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
Power consumption	Approx. 60 W (ISO/IEC 10561 Letter pattern)

This product is also designed for IT power system with Phase to Phase voltage 220-240V.

Environmental

Temperature:

Operation (without condensation)	5° to 35°C (41° to 95°F) 15° to 25°C (59° to 77°F)*

*For recycled paper, envelopes, postcards, labels, overlapping multi-part forms, continuous forms with labels, and overlapping multi-part forms with labels

Storage	-30° to 65°C (–22° to 149°F)

Humidity (without condensation):

Operation	10% to 80% RH 20% to 60% RH*

*For recycled paper, envelopes, postcards, labels, overlapping multi-part forms, continuous forms with labels, and overlapping multi-part forms with labels

Storage	5% to 85% RH

Safety approvals

120 V model:

Safety standards	UL1950 with D3 CSA C22.2 No.950 with D3
EMI	FCC part 15 subpart B class B CSA C108.8 class B

220-240 V model:

Safety standards	EN 60950 (TUV, NEMKO)
EMI	EN 55022 (CISPR Pub.22) class B AS / NZS 3548 class B
Acoustic noise:	Approx. 55 dB (A) (ISO 7779 pattern)

A

CE marking

220-240 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

Parallel Interface Specifications

The printer comes with a bidirectional, 8-bit, parallel interface; a serial interface; and an optional interface slot.

Forward channel

Transmission mode:	8-bit parallel, IEEE-1284 compatibility mode
Adaptable connector:	57-30360 (Amphenol) or equivalent
Synchronization:	$\overline{\text{STROBE}}$ pulse
Handshaking:	BUSY and $\overline{\text{ACKNLG}}$ signals
Signal level:	TTL compatible (IEEE-1284 level 1 device)

Reverse channel

Transmission mode:	IEEE-1284 Nibble Mode
Adaptable connector:	57-30360 (Amphenol) or equivalent
Synchronization:	Refer to the IEEE-1284 specification
Handshaking:	Refer to the IEEE-1284 specification
Signal level:	IEEE-1284 Level 1 device
Data transmission timing:	Refer to the IEEE-1284 specification
Extensibility request:	The printer responds to the extensibility request in the affirmative when the request is 00H or 04H, which means: 00H: Request nibble mode of reverse channel transfer 04H: Request device ID in nibble mode of reverse channel transfer

Serial Interface Specifications

Synchronization:	Asynchronous
Handshaking:	Handshaking by DTR signal or XON / XOFF.
Signal level:	EIA-232D Mark logical "1" (–3 V to –25 V) Space logical "0" (+3 V to +25 V)
Handshaking:	Handshaking by DTR signal and XON / XOFF.
Baud rate:	300, 600, 1200, 2400, 4800, 9600, or 19200 bps
Connector plug:	EIA 25-pin sub-miniature D-shell connector (female)
Data format:	1 start bit Data word length: 8 bits Odd, even, or no parity 1 stop bit

A

Optional Cut-Sheet Feeder Specifications

The specifications below apply to the optional cut-sheet feeder (C80683✻).

Note:
You can load the same types of single sheets, single-sheet multi-part forms, envelopes, and postcards in the cut-sheet feeder as you can load in the front or rear paper guide. For paper specifications, see page A-4.

Capacity:

Single sheets	
A3 size paper	Up to 130 sheets of 82 g / m^2 (22 lb) paper Up to 170 sheets of 64 g / m^2 (17 lb) paper
Other paper	Up to 200 sheets of 82 g / m^2 (22 lb) paper Up to 250 sheets of 64 g / m^2 (17 lb) paper
Single-sheet multi-part forms	Up to 40 sheets of 47 g / m2 (12.5 lb) paper
Envelopes	Up to 20 plain or bond envelopes Up to 30 airmail envelopes
Postcards	Up to 50 plain paper cards

Environmental:

Temperature	Operation:	5° to 35°C (41° to 95°F) 15° to 25°C (59° to 77°F)*
	Storage:	–30° to 60°C (–22° to 140°F)
Humidity (without condensation)	Operation:	15% to 80% RH 30% to 60% RH*
	Storage:	0% to 85% RH
Dimensions and weight (including the printer):	Height:	417 mm (16.4 inches)
	Width:	678 mm (26.7 inches)
	Depth:	673 mm (26.5 inches)
	Weight:	18.1 kg (39.9 lb)

* For recycled paper, single sheet multi-part forms, envelopes, postcards.

Appendix B

Command Lists and Character Tables

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IBM 2391 Plus Emulation Control Codes B-6

Character Tables in EPSON ESC/P 2 Mode B-7

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EPSON ESC/P 2 Control Codes

Selecting EPSON ESC/P 2 printer in your software allows you to use the most advanced font and graphics handling available. 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 +, CR

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

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

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

Font enhancement:
ESC W, DC 4, SO, DC2, SI, ESC w, ESC G, ESC H, ESC T, ESC S, ESC -, ESC (-, ESC q

Spacing:
ESC Space, ESC c, ESC (U

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

Bit image:
ESC *

Graphics:
ESC (G, ESC .

Bar code:
ESC (B

Barcode command

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 n*1 *n*2 *k m s v*1 *v*2 *c* data
$n = (n1 + (256 \times n2))$

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

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

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

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

- ❑ 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.

B

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

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

The following conditions are required for barcode printing:

- ❑ Barcode printing is always performed unidirectionally. However, when it is mixed with raster bit image data, neither barcode nor raster bit image data is printed.
- ❑ A barcode is not printed when part of the barcode extends beyond the right margin.
- ❑ When barcode data and text data are mixed in a data sequence, barcode and text are printed in the same place.
- ❑ The start and stop (*) characters of Code 39 are added to human readable characters.
- ❑ The initial data of Code 128 (Set A, B, or C) is identified as the first data of Code 128, and must be hexadecimal (41, 42, and 43, respectively).
- ❑ When Code 128 Set C and Interleaved 2 of 5 are selected, barcode data requires an even-number data string. However, if an odd-number string is sent, a 0 is automatically added, making it an even number data string.
- ❑ The barcode print start position (except for POSTNET) is always 40/360 inch above the baseline.

IBM 2391 Plus Emulation Control Codes

This printer emulates the IBM Proprinter with the following commands. For detailed information, see the IBM 2391 Plus reference manual.

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

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

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

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

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

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

Spacing:
BS, SP, ESC [¥

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

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

Barcode:

ESC [f, ESC [p

* Alternate Graphics Mode

Character Tables in EPSON ESC/P 2 Mode

When the printer is in EPSON ESC/P 2 mode, the character tables below can be selected using software commands.

All character tables except the italic table are the same as the PC437 table for hex codes 00 through 7F, so only the PC437 and italic tables are shown completely. The rest of the character tables show only the characters for hex codes 80 through FF.

The tables with an asterisk (*) after the table name are available only in certain areas.

PC 437 (USA)

PC 850 (Multilingual) ***PC 860 (Portuguese)***

PC 863 (Canadian-French) ***PC 865 (Norwegian)***

PC 861 (Icelandic) ***BRASCII (Brazilian Portuguese)***

B

Abicomp (Brazilian Portuguese) ***ISO Latin 1***

Roman 8

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

ISO 8859-7 (Latin/Greek)*

PC 853 (Turkish)*

B

PC 857 (Turkish)*

ISO Latin 1T (Turkish)*

PC 855 (Cyrillic)*

PC 866 (Russian)*

PC 852 (East Europe)*

MAZOWIA (Poland)*

Code MJK (CSFR)*

Bulgaria (Bulgaria)*

B

PC 864 (Arabic)*

Estonia (Estonia)*

PC 774 (LST 1283:1993)*

ISO 8859-2*

PC 866 LAT. (Latvian)*

PC APTEC (Arabic)*

PC 708 (Arabic)*

PC 720 (Arabic)*

PC AR864 (Arabic)*

Italic

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

Characters available with the ESC (^ command

To print the characters in the tables below, use the ESC (^ command. The characters in the right table are available with PC864 (Arabic), PCAR864 (Arabic), and PCAPTEC (Arabic).

International character sets

You can select one of the following international character sets by sending 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.

The following eight international character sets can be selected with the default-setting mode or with the ESC R command.

The following seven additional sets can be selected only with the ESC R command.

Appendix C

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C

If your printer is not operating properly and you cannot solve the problem using the troubleshooting information in this guide, contact customer support services for assistance.

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

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

Printer model:

Brand and model of your computer:

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

Windows version (for example, 95 or 3.1) you are using:

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

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 and 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 on 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. Supported protocols 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.

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 on to 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 feature is selected 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.

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.

continuous forms with labels
A kind of continuous paper that has one label on each page. This is different from label paper, which consists entirely of labels. When printing on continuous forms with labels, the printer must adjust the height of the print heads for the extra thickness of the labels. Before printing on this kind of paper, measure the label thickness using the EPSON Label Form Utility.

control code
A special code used to control a printer function such as performing 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.

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 as the font. The Draft font uses less dots per character for faster printing. See also *high-speed draft* and *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.

ESC/P 2
The enhanced version of the ESC/P printer command language. Commands in this language produce laser-like results, such as scalable fonts and enhanced graphics.

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.

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 mode of draft printing you can select using the SelecType 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 *letter quality*.

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

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

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

loading position
The position to which the paper is automatically loaded.

overlapping multi-part forms
A kind of continuous paper that provides you with multi-part forms. The page length of the multi-part forms is longer than that of the backing continuous paper. So when extended, one page's multi-part forms overlap the next page's multi-part forms. The thickness of this overlapping area is thicker than the printable area.

overlapping multi-part forms with labels
This kind of continuous paper is a combination of overlapping multi-part forms and continuous forms with labels. Be sure to follow any special instructions intended for either type. For this paper, make the thickness settings using the EPSON Label Form Utility.

platen
The black roller that provides a backing for the paper during printing.

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 sends commands from the computer for using the functions of a particular printer.

reset
To return a printer to its defaults settings.

resolution
A measure of the amount of detail that can be represented. Resolution of printed images is measured in number of dots per inch (dpi).

SelecType
A setting mode used to control various printer functions or set the default status of the printer when it is turned on or initialized.

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
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 the printer feeds the paper to when you press the Tear Off button or when auto tear-off mode is on. 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 in the printer's SelecType mode or the EPSON Remote! utility. See also *bidirectional printing*.

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