

EPSON® EPL-N1200

Laser Printer

U s e r ' s G u i d e

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8/96



Printed on recycled paper with at least 10% post-consumer content

**FCC COMPLIANCE STATEMENT
FOR AMERICAN USERS**

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

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

WARNING

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

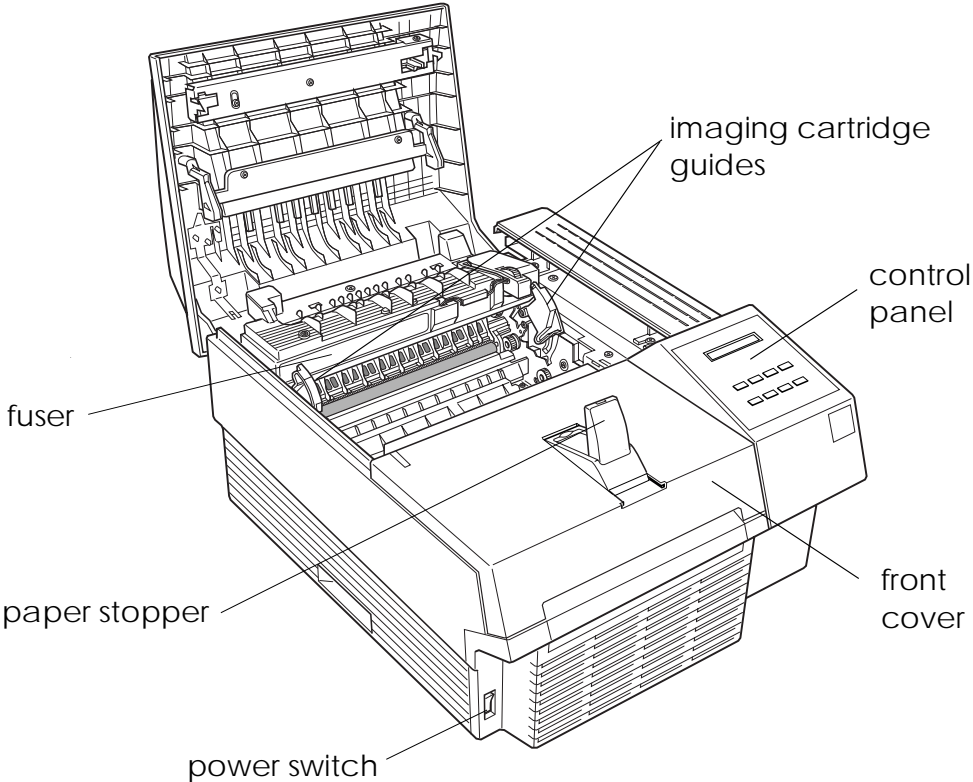
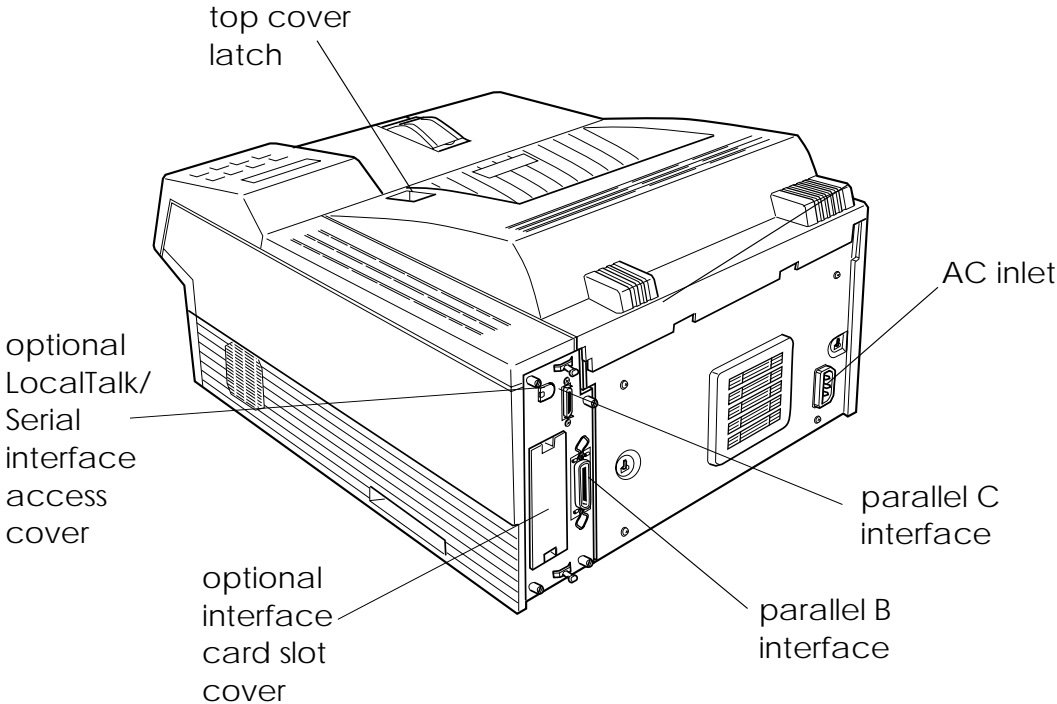
Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

FOR CANADIAN USERS

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Printer Parts



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Introduction

Your EPSON® EPL-N1200 is a PostScript®-compatible, 600-dpi laser printer that uses EPSON's latest quality-enhancement and energy-efficiency technologies to print crisp, clean output at up to 12 pages per minute. The built-in EPSONScript™ Level 2 interface lets you print any document formatted for PostScript output, including professional graphics formats and special effects.

Your printer offers a variety of interface options that allow you to connect up to four different computers or network interfaces simultaneously. In addition, you can change the printer's emulation mode from the standard PostScript to Hewlett-Packard® LaserJet 4™ Plus (PCL5e) or four other modes to give you maximum flexibility.

The parallel C interface lets you connect the printer to an ECP port on your computer, for even faster printing under Microsoft® Windows® 95.

Easy-to-use software for Windows (3.1, 95, or NT 3.51) or MS-DOS® makes it easy to adjust printer settings, even when you're controlling the printer from a remote location on a network. And if the printer is right at your desk, you can change additional settings using the printer's control panel.

You can also install a variety of optional equipment in your printer to enhance its operation, such as extra paper cassettes, additional printer memory, and serial and network interfaces.

PostScript Fonts

Your printer includes the standard 35 PostScript fonts. When you install the EPSONScript software, the screen fonts that match the printer fonts are also installed, ensuring that the screen display matches the final printed output.

You select fonts from the Font menu of your software application. In most cases, a screen font has the same name as the corresponding printer font. In other cases, the name of the font you select is different from the name of the font that prints, even though the appearance is almost the same.

The following table lists the standard font names, available styles, and the corresponding printer font names (if different):

PostScript fonts

Font name	Scalable styles	Printer font
Times® Roman	Roman, Bold, Italic, Bold Italic	Dutch 801 Roman
Courier	Medium, Bold, Italic, Bold Italic	
Helvetica®	Medium, Bold, Oblique, Bold Oblique	Swiss 721
Helvetica Narrow®	Medium, Bold, Oblique, Bold Oblique	Swiss 721 Narrow
Palatino® Roman	Roman, Bold, Italic, Bold Italic	Zapf Calligraphic 801
ITC Avant Garde Book	Book, Demi, Oblique, Demi Oblique	
ITC Bookman Light	Light, Demi, Light Italic, Demi Italic	
New Century Schoolbook Roman	Roman, Bold, Italic, Bold Italic	Century 702 Schoolbook Roman
ITC Zapf Chancery Medium Italic		
ITC Zapf Dingbats		
SymbolSet		

LJ4 Plus or GL2 (PCL5e) Mode Fonts

The EPL-N1200 includes a number of resident fonts that you can use in the LJ4 Plus or GL2 (PCL5e) emulations, as listed below. When you select these fonts in your application, choose the font name listed in the “HP equivalent name” column.

PCL5e Fonts

Resident font name	Scalable styles	HP equivalent name
Dutch™ 801 SWC	Roman, Bold, Italic, Bold Italic	CG Times®
Zapf Humanist 601 SWC	Demi, Bold, Demi Italic, Bold Italic	CG Omega®
Ribbon 131 SWC	—	Coronet™
Clarendon Condensed SWC	—	Clarendon Condensed
Swiss™ 742 SWC	Medium, Bold, Italic, Bold Italic, Condensed, Bold Condensed, Condensed Italic, Bold Condensed Italic	Univers®
Incised 901 SWC	Medium, Black Italic	Antique Olive™
Original Garamond SWC	Medium, Bold, Italic, Bold Italic	Garamond
Andrey Two SWC	—	Marigold
Flareserif 821 SWC	Medium, Extra Bold	Albertus™
Swiss 721 SWM	Roman, Bold, Oblique, Bold Oblique	Arial®
Dutch 801 SWM	Roman, Bold, Italic, Bold Italic	Times New
Symbol Set SWA	—	Symbol
More Wingbats SWM	—	Wingdings
Courier SWC	Medium, Bold, Italic, Bold Italic	Courier
Letter Gothic SWC	Roman, Bold, Italic	Letter Gothic
Line Printer	—	Line Printer

For information about the resident fonts available for other emulation modes, see the *Technical Information* manual.

How to Use Your Manuals

For instructions on setting up your printer, connecting it to your computer, and installing your printer software, see the *Quick Setup* card. This *User's Guide* contains the information you need to use your printer and control it with the Windows printer driver or the printer's control panel.

If you'll be using advanced features of your printer or controlling it from DOS or from a remote location on a network, you'll find the additional information you need in the *Technical Information* manual.

Chapter 1, "Paper Handling," tells you how to select the right paper or other media, load it in your printer, and handle special print jobs.

Chapter 2, "Printing With the Windows Printer Driver," explains how to access the printer driver and gives guidelines for selecting printer driver settings.

Chapter 3, "Using the Control Panel," explains how to use the printer's control panel to manage printer operations.

Chapter 4, "Installing Options," tells you about the options available for your printer, such as additional interfaces and paper cassettes, and how to install them.

Chapter 5, "Maintenance," gives instructions for replacing the imaging cartridge and for cleaning and transporting the printer.

Chapter 6, "Troubleshooting," contains guidelines for solving any print quality or printer operation problems you may have.

Appendix A, “Specifications,” provides technical details on the EPL-N1200 printer.

An **Index** is included at the end of the book.

Warnings, Cautions, and Notes

You’ll find this information throughout your manual set:

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

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

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

Where to Get Help

EPSON provides customer support and service through a network of authorized EPSON Customer Care Centers. Dial **(800) 922-8911** for the nearest location or the following services:

- Fax-on-Demand access to EPSON’s technical information library
- Literature on current and new products
- The location of your nearest Authorized EPSON Reseller or Customer Care Center
- Technical information on the installation, configuration, and operation of EPSON products
- Customer relations.

For answers to commonly asked questions about EPSON products 24 hours a day, 7 days a week, call EPSON Sound Advice at **(800) 442-2110**.

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

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

Electronic Support Services

You can access helpful tips, specifications, drivers, FAQs, sample files, application notes, and EPSON product bulletins 24 hours a day, seven days a week, using a modem and one of the online services below.

World Wide Web

From the Internet, you can reach EPSON's Home Page at **<http://www.epson.com>**

EPSON Internet FTP Site

If you have Internet FTP capability, you can download drivers, FAQs, and sample files from EPSON's FTP site. Use your Web browser (or other software for FTP downloading) to log onto **<ftp.epson.com>** with the user name anonymous and your e-mail address as the password.

EPSON Download Service

You can call the EPSON Download Service BBS at **(800) 442-2007**. Set your communications software to 8 data bits, 1 stop bit, and no parity. Modem speed can be up to 28.8 Kbps.

EPSON Fax-on-Demand service

You can access EPSON's technical information library by calling **(800) 442-2110** or **(800) 922-8911** and selecting the appropriate phone option. You must provide a return fax number to use Fax-on-Demand.

EPSON Forum on CompuServe

Members of CompuServe® can type GO EPSON at the menu prompt to reach CompuServe's Epson America Forum.

As an owner of an EPSON product, you are eligible for a free introductory CompuServe membership, which entitles you to an introductory credit and your own user ID and password. To take advantage of this offer in the U.S. and Canada, call **(800) 848-8199** and ask for representative #529.

Energy Star Compliance



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

The EPA estimates that if all desktop computers, printers, and other peripheral devices met Energy Star standards, energy cost savings would exceed \$1 billion annually and carbon dioxide emissions would be reduced by 20 million tons.

Energy-saving Tips

Here are a few tips you can use to be even more energy-wise:

- If your monitor isn't Energy Star compliant, turn it off when you're not using it.

- ❑ Turn off your computer, printer, and monitor each day when you are done using them.
- ❑ Use the print preview option in your software so you can catch errors before you print something.
- ❑ If you have an electronic mail system available to you, send e-mail rather than distributing memos. Not only is this faster, but you'll save paper and storage space too.
- ❑ Use the printer's low power consumption standby mode to save energy when you're not using your printer for a while; see Chapter 2 for details.

Important Safety Instructions

Before using your printer, read the following safety instructions to make sure you use the printer safely and effectively.

- ❑ Turn off and unplug the printer before cleaning. Clean with a damp cloth only. Do not spill liquid on the printer.
- ❑ Do not place the printer on an unstable surface or near a radiator or heating vent.
- ❑ Locate the printer near an outlet where you can easily unplug the power cord. Do not block access to the wall outlet.

Placez l'imprimante près d'une prise de contact où la fiche peut être débranchée facilement.

- ❑ Do not block or cover the openings in the printer's cabinet or 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 let the power cord become damaged or frayed.
- ❑ If you use an extension cord with the printer, make sure the total ampere rating of the devices plugged into the extension cord does not exceed the cord's ampere rating. Also, make sure the total of all devices plugged into the wall outlet does not exceed 15 amperes.
- ❑ Except as specifically explained in this *User's 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.

Laser Safety Information

This printer is certified as a Class 1 laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. This means that the printer does not produce hazardous laser radiation.

Since radiation emitted by the laser is completely confined within protective housings and external covers, the laser beam cannot escape from the machine during any phase of user operation.

CDRH regulations

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 2, 1976. Compliance is mandatory for products marketed in the United States. The label shown below indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.

This laser product conforms to the applicable requirement of 21 CFR Chapter I, subchapter J.

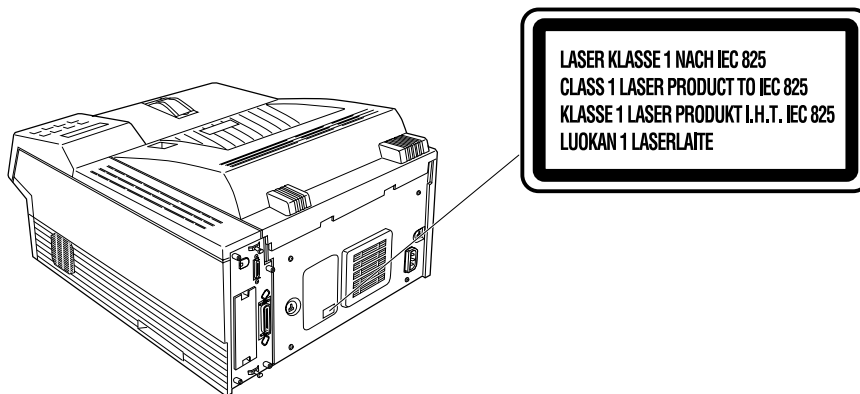
SEIKO EPSON CORP.
Hirooka Office
80 Hirooka, Shiojiri-shi, Nagano-ken,
Japan

MANUFACTURED:

Laser safety labels

W **Warning:**
Use of controls or adjustments, or performance of procedures other than those specified in this User's Guide may result in hazardous radiation exposure.

Your printer is a Class 1 laser product as defined in IEC 825 specifications. The label shown below is attached in countries where required.



Internal laser radiation

This is a Class IIIb Laser Diode Assembly that has an invisible laser beam. The printer head unit is NOT A FIELD SERVICE ITEM. Therefore, the printer head unit should not be opened under any circumstances.

Maximum Radiation Power: 5.0×10^{-4} W
Wave Length: 780 ± 20 nm

Ozone safety

Ozone gas is generated by laser printers as a by-product of the printing process; it is produced only during printing. The recommended exposure limit for ozone is 0.1 parts per million (ppm) expressed as an average time-weighted concentration over an eight hour period.

The EPL-N1200 laser printer generates <0.01ppm for 8 hours of continuous printing, assuming a closed room of approximately 1000 cu ft (8' × 10' × 12').

To minimize the risk of exposure to ozone, you should avoid the following conditions:

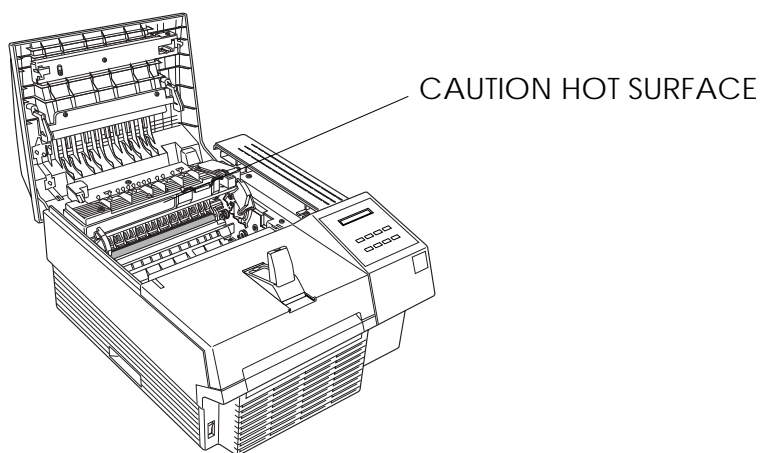
- Use of multiple laser printers in a confined area (see above)
- Operation in conditions of extremely low humidity
- Poor room ventilation
- Long, continuous printing together with any of the above.

The printer should be located so that the exhaust gases and heat generated are not blown directly into the user's face and are vented directly out of the building whenever possible.

Laser precautions

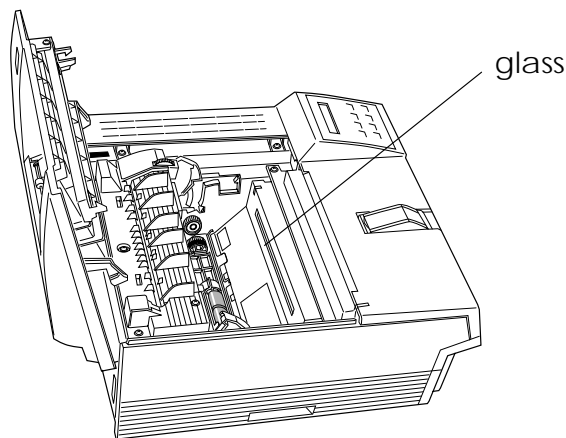
This printer uses laser technology. The following list of precautions applies whenever you open the printer cover. Even if you are familiar with other types of printers, be sure to follow these precautions carefully to ensure safe, efficient operation.

- ❑ Be careful not to touch the fuser, which is marked **CAUTION HOT SURFACE**. If the printer has been in use, the fuser can be very hot.



- ❑ Avoid touching the components inside the printer unless instructed to do so in this *User's Guide*.
- ❑ Never force the printer's components into place; rough handling can damage the printer.
- ❑ When you remove the imaging cartridge from the printer, always set it on a clean, smooth surface. Also, be sure not to scratch the surface of the drum and avoid touching it, since oils from your skin can permanently damage its surface and may affect print quality.
- ❑ Do not turn the cartridge upside down or stand it on its side. Do not attempt to modify or take apart the cartridge; it cannot be refilled.

- ❑ Protect the light-sensitive drum from exposure to light any longer than necessary. Overexposing the drum may cause abnormally dark or light areas to appear on the printed page and reduce the service life of the drum. Also, do not open the drum's protective cover.
- ❑ Try not to touch the toner and avoid contact with your eyes.
- ❑ Do not use a cartridge for at least one hour after moving it from a cool to a warm environment.
- ❑ Avoid touching the glass in front of the laser beam; otherwise, print quality may decline.



To get the best print quality, do not store the imaging cartridge in an area subject to direct sunlight, dust, salty air, or corrosive gasses (such as ammonia). Avoid locations subject to high temperatures or humidity, or abrupt changes in temperature or humidity. Also, be sure to keep the cartridge out of the reach of children.

Paper Handling

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Choosing Paper or Other Media

You can print on many different kinds of paper or other media with your EPL-N1200:

- Plain bond paper (16 to 24 lb weight)
- Card stock (24 to 42 lb weight)
- Envelopes
- Labels
- Transparency film.

You can print on many sizes of paper too. Just be sure the size is within this range:

Width: Between 3.6 and 8.5 inches (92 to 216 mm)

Height: Between 5.8 and 14 inches (148.5 to 356 mm)

For the best quality printing, you must select smooth, high-quality paper. Also be sure to protect your media from moisture by storing it in its original packaging and avoiding a humid environment.

Keep the following in mind to select, load, and print on these media:

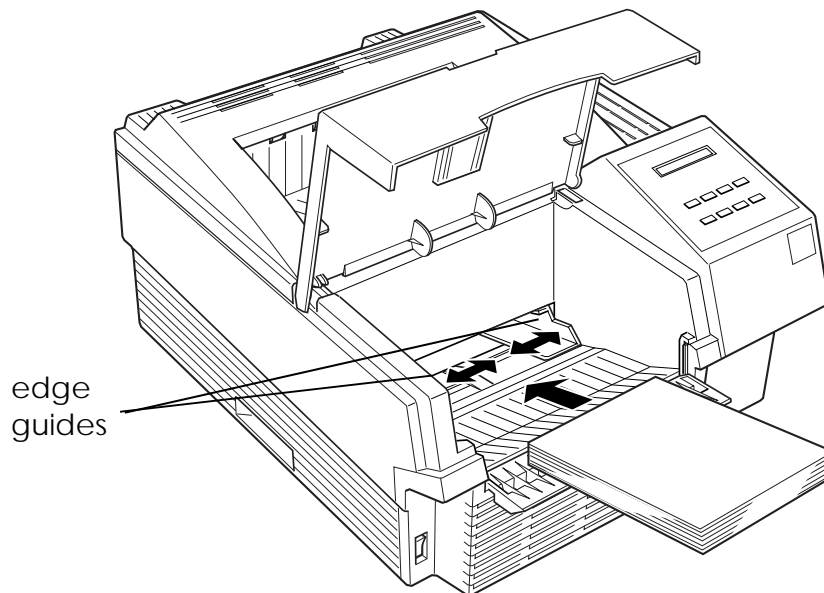
- Envelopes.** Load envelopes face up in the built-in paper tray. If the printing is irregular due to the varying thickness of the envelope paper, adjust the print density setting in the printer driver (see Chapter 2).
- Labels.** Select labels designed specifically for laser printers or plain paper copiers. Make sure all the labels adhere to and completely cover the backing sheet so they don't peel off. To test your labels, press a sheet of plain paper on top of the label sheet and see if any part sticks.

- ❑ **Transparencies.** Choose transparencies made just for laser printers or plain paper copiers, and load them only in the built-in paper tray.
- ❑ **Colored paper.** When selecting colored paper, make sure the paper does not have a clear or colored coating on it.

Loading Paper in the Built-in Paper Tray

Use these instructions to load paper in the paper tray inside your printer. If you've installed an optional paper cassette, follow the steps on page 1-8 to load paper in the cassette.

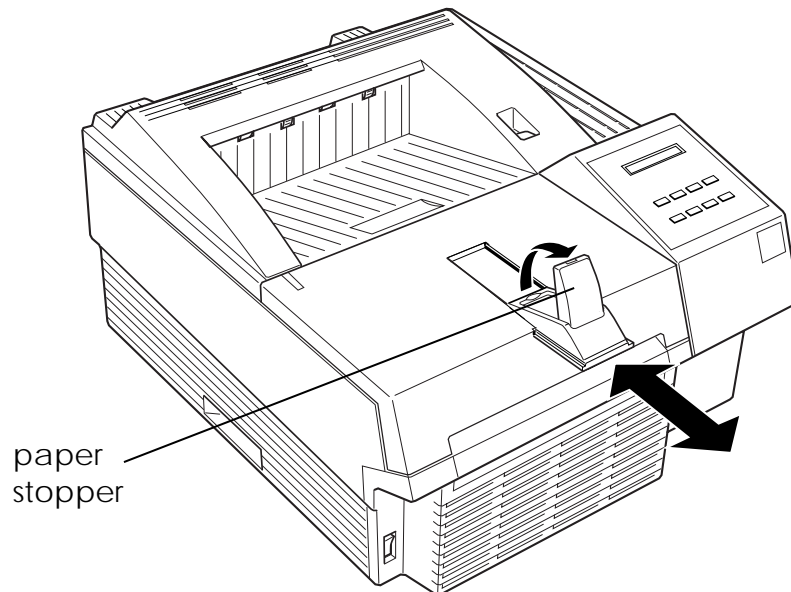
1. Lift up the front cover.
2. Adjust the edge guides to fit your paper size; some are labeled below the guides.



3. Fan a stack of paper (up to 250 sheets) and then tap the edges to even them up.
4. Slide in the paper until it stops. If necessary, adjust the guides so the paper feeds straight without being squeezed.

5. Close the front cover.

If you loaded paper longer than 11 inches (279 mm), flip up the paper stopper and pull it back so the paper will fit in the output tray.

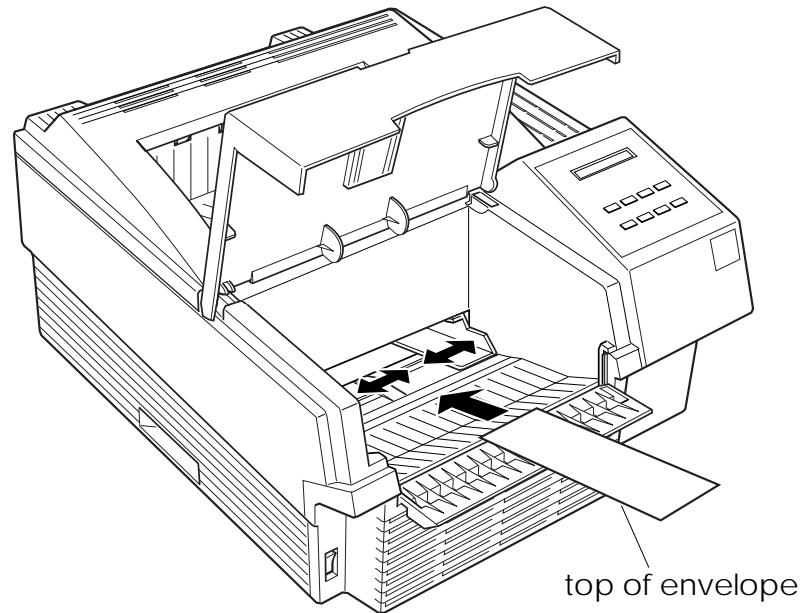


Feeding Envelopes or Paper by Hand

If you want to print one envelope or a special sheet of paper, you can feed it manually. Follow these steps:

1. From your application program, choose Print or Print Setup.
2. For the Paper Source or Paper tray, select Manual Feed.
3. For the Paper Size, select the size you want to use. If you don't see the paper size you want, choose the closest size on the list.
4. Click OK.
5. Open the printer's front cover and remove any paper loaded in the built-in paper tray.

6. Insert the first sheet into the paper tray with the printable surface face up (an envelope, in this example).
7. Adjust the paper guides to fit the paper you loaded, if necessary.



8. Select the Print command in your application program to send the print job. After a moment, the printer's control panel displays Manual Feed and the paper size you selected. The lights flash.
9. Press the On Line button to print the page.
10. Insert the next sheet of paper and press On Line to print the next page.
11. Repeat step 10 for each page.

When you're finished printing on manually fed paper, reload a stack of paper, then change the Paper Source setting in the printer driver back to Auto.

Printing Two-sided Documents

You can print two-sided documents to save paper and make your output look like a professional, bound document. The EPL-N1200 makes it easy by providing a Duplexing option in the non-PostScript printer driver.

Note:

If you're using the printer in the PostScript mode, you may still be able to print two-sided documents. Select odd-numbered pages only in your application's Print dialog box. Remove the printed pages and place them back into the paper tray, with the unprinted side face up and the top of the document leading into the printer. Then select even-numbered pages in your application's Print dialog box.

Follow these steps to print a two-sided document:

1. Set up your multiple-page print job in your application.
2. From your application program, access the printer driver (see Chapter 2 for instructions).
3. Click the Paper tab.
4. Select either Top Binding or Left Binding for the Duplexing setting, depending on whether you plan to bind your document at the top or the left side.
5. Click OK to save your settings and exit the printer driver.
6. Select the Print command in your application program to send the print job.

The printer prints every other page (odd numbers first). When it has finished printing the odd-numbered pages, you see a message telling you to reinsert the pages in the printer.

7. Remove the printed pages and place them back into the paper tray, with the unprinted side face up and the top of the document leading into the printer. Click OK on the screen message box. Then the printer prints all the even-numbered pages on the back.

When you're finished printing your two-sided document, access the printer driver and change the Duplexing setting back to Duplex Off.

Printing on Custom-size Paper

If you need to print on paper that is a different size from those available in the printer driver, you can create a custom paper size. Then you can select it from the Paper Format list and use it to print whenever you want.

Follow these steps to print on custom-size paper with the EPL-N1200 (non-PostScript) driver:

1. Load the custom-size paper in your printer.
2. From your application program, access the printer driver. (See Chapter 2 for instructions.)
3. Click the Paper tab.
4. Highlight an option in the Paper Size box and press Del to remove the name.
5. Type a name for your custom paper size. Do not press Enter after you type it.
6. In the Measurement Unit box, select inch, centimeter (cm), or another measurement unit as necessary for your paper size.

7. In the Width and Height boxes, select the appropriate measurements of your paper. The size can be:

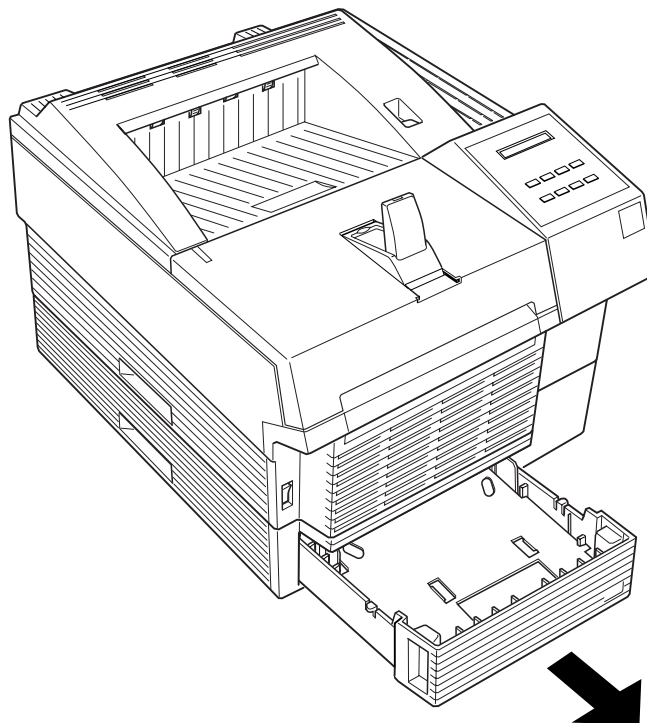
Width: Between 3.6 and 8.5 inches (92 to 216 mm)
Height: Between 5.8 and 14 inches (148.5 to 356 mm)
8. Click OK to save your settings and exit the printer driver.
9. Select the Print command in your application program to send a print job.

When you're finished with your custom-size paper, access the printer driver and select your normal paper size. Your custom paper size is now one of the options available.

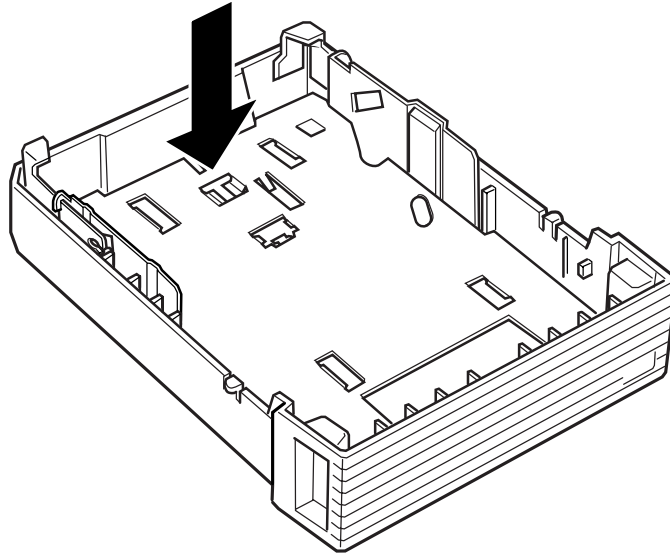
Loading Paper in an Optional Paper Cassette

If you installed one or two optional lower paper cassettes (as described in Chapter 4), follow the steps in this section to load up to 500 sheets of paper into a cassette:

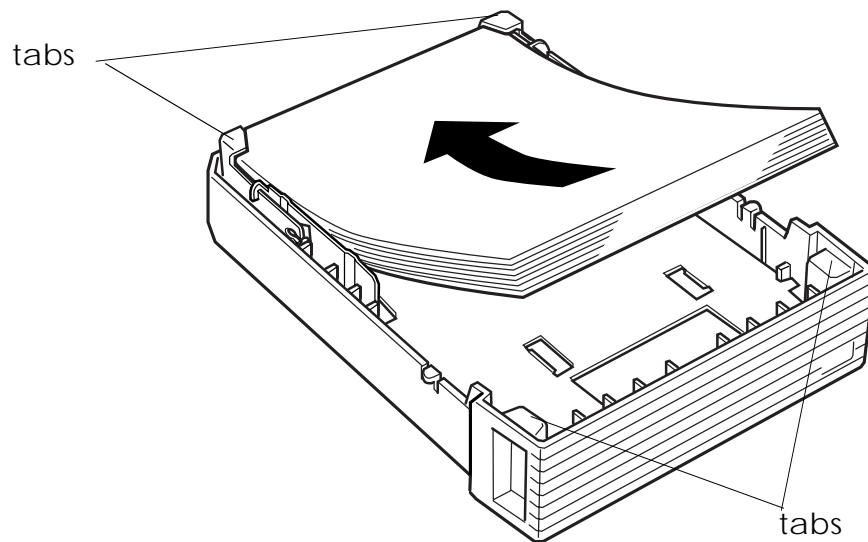
1. Pull the paper tray all the way out of the paper cassette.



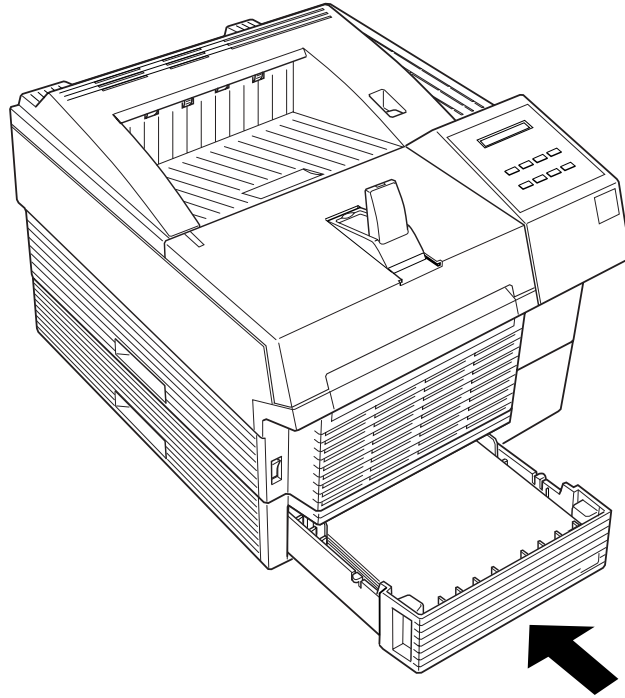
2. Press down the bottom plate until it locks in place.



3. Fan a stack of paper and then tap the edges to even them up.
4. Holding the stack with the printable surface face up, insert the paper into the tray. Press down the edges so they lie beneath all four tabs.



5. Slide the paper tray back into the paper cassette.



Printing With the Windows Printer Drivers

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For instructions on installing the printer software for Windows 3.1 or Windows 95, see the Quick Setup Card. For instructions on installing the Windows NT driver software, see page 2-17.

Then follow the instructions in this chapter to access and use the Windows printer drivers.

You can use either of the following:

- ❑ The EPSO[®]Script driver for printing in the PostScript mode
- ❑ The EPL-N1200 driver for printing in the LJ4 Plus (PCL5e) emulation

Follow the instructions below to access either driver.

Instructions for using the EPSO[®]Script driver start on page 2-4; instructions for using the EPL-N1200 driver start on page 2-7.

Accessing the Printer Driver

You can access the printer driver to check or change your print settings in two ways:

- ❑ From your Windows application program Print or Print Setup option
- ❑ From the Windows 95 Printer Properties utility or the Windows 3.1 or NT Control Panel.

The way you access the driver determines which programs and documents the settings will affect. Follow these guidelines:

- ❑ If you want to change settings for one document only (or for documents printed with one application only), access the driver from the application program. The driver settings return to their defaults after you exit.

- ❑ If you want to change the printer settings for all your documents and application programs, access the driver directly from Printer Properties (95) or Windows Control Panel (3.1 or NT). This changes the printer's default settings.

The driver settings available in the PostScript mode depend on which version of Windows you're using. The settings available for non-PostScript modes are the same for all versions of Windows.

Follow the steps below to access your printer driver software:

From Windows Applications

1. Open the application program's File menu.
 2. Select Print Setup or Print. Then select Setup, Options, Properties, or another option as necessary (see your software program documentation for instructions).
 3. You see the printer driver options.
- ❑ **Note:**
If you're using your printer in the PostScript mode, you do not normally need to change the settings. If you need more information on PostScript printing options, click the Help button or see your Windows documentation.

From Windows 95 Printer Properties

1. Click Start.
2. Point to Settings.
3. Click Printers.

4. Right-click the EPSON EPL-N1200 or EPSON EPL-N1200 EPSONScript icon.
5. Click Properties.
6. Click the Details tab.
7. Click the Setup button.
8. You see the printer driver options.

From Windows 3.1 or Windows NT Control Panel

1. Double-click the Control Panel icon in the Main program group.
2. Double-click Printers.
3. Click EPSON EPL-N1200 or EPSON EPL-N1200 EPSONScript in the Installed Printers list.
4. Click the Setup button.
5. You see the printer driver options. .

Using the EPSONScript Driver in Windows 95

Most of the options available for the EPL-N1200 printer in Windows 95 are standard PostScript settings. The default values for these options, like those in Windows 3.1, are appropriate for most situations. If you need more information, use the online Help system or see your Windows 95 documentation.

Click the Device Options tab to access special settings for your EPL-N1200 EPSONScript printer driver as shown on the following page.



To change Printer features or Installable options, you must first select the option you want to change. Then click the down arrow next to Change setting for to display the list of available settings.

The EPSONScript Device Options in Windows 95 are described in the table below.

EPSONScript Device Options settings

Setting	Options	Description
General		
Available printer memory	varies 1269 default	Specifies the amount of memory in the printer. Increase the number if you add memory to your printer.
Printer features		
Resolution improve	Printer's default Off Light Medium Dark	Adjusts the RIT setting for your print job. See Chapter 3 for details.
Error sheet	Printer's default Off On	Set to ON if you want a printed record of PostScript errors.
Page Protect	Printer's default Off On	Sets the printer to use Page Protect mode for printing complex, memory-intensive documents. Page Protect reallocates printer memory from use for receiving data to use for printing it, making complex jobs take longer to print, but able to print without memory errors.
Protect Level	Printer's default 1, 2, 3, 4, 5	Allows you to increase the amount of memory allocated for page protection. If an overrun error occurs, raise the level from 1 (the default) up to 5. Raising the protect level decreases printing speed.
Toner Save	Printer's default Off On	Sets the amount of toner used in your print job. If you're printing a draft copy, set to ON to use around 50% less toner for a lighter printout.

EPSONScript Device Options settings (continued)

Setting	Options	Description
Toner Density	Printer's default Lightest Light Medium Dark Darkest	Sets the print density to make your printout darker or lighter as necessary.
Installable options (list depends on which options are installed; see Chapter 5 for more information).		
VM option	Minimum PS2 Standard 2.0MB RAM 3.0MB 5.0MB 9.0MB 17.0MB	Choose a higher VM value if more memory is installed and you are printing a document with many fonts or complex graphics.

Using the EPL-N1200 Driver

When you use your printer in the non-EPSONScript mode, you have a special set of driver options to choose from. The driver screen includes four “tabs” that each access a collection of settings, as shown on the following page.



To check or change individual settings, click the tab at the top of the screen. Click the buttons on the bottom of the screen to do the following:

- OK After you're finished, click OK to save your settings and exit the driver. (You can also save a group of settings for later use; see page 2-16.)

- Cancel To delete any changes you made, click Cancel.

- Help If you need help with the driver, click the Help button.

- Fonts Accesses the Font Manager program described in the *Technical Information* manual.

- Overlays Accesses the Overlay Manager and Softtray Manager programs described in the *Technical Information* manual.

The next section describes the basic printer driver settings you should check or change each time you print. The table beginning on page 2-10 lists all the settings and their defaults.

Checking the Basic Settings

The printer driver's default settings are suitable for most types of documents. However, you should check the settings listed below each time you print to make sure they are correct. All these settings are on the Printer Settings tab.

Basic printer driver settings

Setting	Default	Description
Graphics Resolution	600 × 600 dpi	Sets the print resolution in dots per inch; the more dots per inch, the finer the print quality
Paper Format	Letter size	Indicates the paper size loaded in the built-in paper tray
Orientation	Portrait	Sets the direction of printing (short edge or long edge of the paper on top; Portrait is the short edge on top)

You need to change the printer driver settings if you plan to make adjustments like the following:

- Print on a different size paper
- Use an optional paper cassette
- Print in another resolution

To get information while you're using the driver, do this:

- Position the cursor over an object on the screen for a few seconds; a short description appears.
- Click the Help button at the bottom of the screen; then use the Help utility that appears.

Printer Driver Settings Table

Use the table on the following page when you want a quick description of the available printer driver settings. The default settings are in **bold** type. Some of the options listed here may not be available because of options selected for other settings; these cases are explained in the “Description” column.

EPL-N1200 driver settings

Setting	Options	Description
Printer Settings tab		
Graphics Resolution	600 × 600 dpi 300 × 300 dpi 150 × 150 dpi	Sets the print resolution. The available options depend on the current setting for Device Resolution on the Printer SelecType tab; see page 2-13 for details.
Halftone	Screening Dithering Error diffusion	Sets the halftone method for the following: Scanned images, bitmaps, or any images that will be photocopied Normal printing with standard Windows dither patterns Photographic images or equivalent drawings (not available if Graphics Mode is set to EPSON GL/2 on the Printer SelecType tab; see page 2-13 for details)

EPL-N1200 driver settings

Setting	Options	Description
Paper Format	A4 210 × 297 mm A5 148 × 210 mm C5 6.36" × 9.02" Commercial-10 Envelope C6 114 × 162 mm Envelope DL Executive 7.25" × 10.5" F4 Government Legal Government Letter International B5 176 × 250 mm JIS B5 paper Legal 8.5" × 14" Letter 8.5" × 11" Monarch US half	Sets the size of the paper you have loaded in the currently selected Paper Source (described below). You can add or remove sizes to this list and create custom sizes using the Paper Size setting on the Paper tab; see page 2-12 for details.
Paper Source	Multi Purpose Tray Manual feed Auto Lower Cassette 2 Lower Cassette 1 MP/Lower Cassette2 MP/Lower Cassette1	Sets the paper tray that contains the paper you want to print on. Multi Purpose Tray is the built-in paper tray. For instructions on loading paper, see Chapter 1. (The Lower Cassette options appear only when you have installed optional lower paper cassettes and selected a Lower paper cassette option for Feeder on the Printer Options tab. See page 2-15.)
Orientation	Portrait Landscape	Sets the direction in which you want printing to appear; so it reads with the short side on top (Portrait) or with the long side on top (Landscape)

EPL-N1200 driver settings (continued)

Setting	Options	Description
Copies	1 to 999	Set to the number of document copies you want to print. It is best to specify copies using your application's Print dialog box. Never set multiple copies in the driver AND your application.
Paper tab		
Duplexing	<p>Duplex OFF</p> <p>Top Binding</p> <p>Left Binding</p>	<p>Sets up for printing two-sided documents (see Chapter 3 for details). One-sided documents</p> <p>Two-sided printing of documents to be bound at the top</p> <p>Two-sided printing of documents to be bound on the left side</p>
Paper Size	Varies	Sets the options that appear in the Paper Format list on the Printer Settings tab. Use with the Size options (described below) to modify or create new sizes; use the Remove and Restore buttons to delete or restore paper sizes from the list. You cannot restore deleted custom paper sizes. (For instructions on printing custom paper sizes, see Chapter 1.)
Size options	<p>Width (3.62 to 8.5 inches 92 to 216 mm] Height (5.84 to 14 inches 148.5 to 356 mm] Measurement Unit (Inch [default], cm, Pixel, Pica, Point)</p>	Set the width, height, and measurement unit used to modify or create custom options for the Paper Size setting (described above).

EPL-N1200 driver settings (continued)

Setting	Options	Description
Printer SelectType tab *		
Graphics Mode	<p>Raster -internal fonts</p> <p>EPSON GL/2</p> <p>Pure Raster</p>	<p>Sets the graphics printing mode used by the printer. (This setting affects the available Halftone options on the Print Settings tab; see page 2-10 for details.) Use these for:</p> <p>Most printing</p> <p>Faster printing of line art and business graphics</p> <p>Low memory conditions without printer fonts.</p>
Device Resolution	<p>High (600 dpi)</p> <p>Low (300 dpi)</p>	<p>Sets the range of resolutions available in the Graphic Resolution setting on the Print Settings tab; see page 2-10 for details.</p>
RItech	<p>Dark</p> <p>Medium</p> <p>Light</p> <p>Off</p>	<p>Sets the RItech (Resolution Improvement Technology) setting for your print job; see Chapter 5 for details.</p>
Density	<p>Darkest</p> <p>Dark</p> <p>Medium</p> <p>Light</p> <p>Lightest</p>	<p>Sets the print density to make your printout darker or lighter as necessary.</p>
Show all font names	<p>On</p> <p>Off</p>	<p>Sets the driver to add the printer's internal fonts to your application program's font list (On) or not add the fonts (Off).</p>
Bidi Mode	<p>Bidi ON</p> <p>Bidi OFF</p>	<p>Sets the printer's parallel interface for bidirectional communication, allowing printer status messages to appear on your computer. If you receive errors or your system "hangs," turn Bidi Mode OFF.</p>

EPL-N1200 driver settings (continued)

Setting	Options	Description
Time-out	Various settings from 5 to 300 seconds (60 sec. default)	Sets the amount of time the printer waits to receive data before terminating an incomplete print job; after the time-out period, another print job can print.
Toner Save Mode	ON OFF	Sets the amount of toner used in your print job. If you're printing a draft copy, set to ON to use around 50% less toner for a lighter printout.
Low Power Consumption	ON OFF	Sets the printer to enter a power-saving standby mode if it is not used for 30 minutes. (The printer takes about 1 minute to warm up after exiting standby mode.)
Auto Continue	ON OFF	Sets the printer to use Auto continue mode to continue printing 5 seconds after recovering from a print overrun or insufficient memory error. It is best to leave Auto continue OFF so you are alerted to errors; then you must press the Continue button on the control panel to resume. If you'll be away from the printer and are aware of possible errors, you can turn on Auto continue mode.

EPL-N1200 driver settings (continued)

Setting	Options	Description
Printer Options tab		
Memory	2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 14, 18, 19, 20, 22, 26, 34, 35, 36, 38, 42, 50, 64 MB	Specifies the amount of memory installed in the printer. Increase the number if you add memory to your printer.
Page Protect **	Auto ON	Sets the printer to use Page Protect mode for printing complex, memory-intensive documents. It is best to use the default setting (Auto) because Page Protect reallocates printer memory from use for receiving data to use for printing it, making complex jobs take longer to print, but able to print without memory errors.
Image Optimum	Auto ON OFF	Sets the printer to use Image Optimum mode so you can print complex, memory-intensive graphics. It is best to use the default setting (Auto) because Image Optimum reduces graphic quality and data when that data reaches the memory limit.
Feeder	Standard Lower paper cassette 2 Lower paper cassettes	Sets the Paper Source options available on the Print Settings tab to include any optional paper cassettes you may have installed: Standard (no optional cassettes), Lower paper cassette (one cassette installed), 2 lower paper cassettes (two cassettes installed).
Installed Cartridge	—	Not available

EPL-N1200 driver settings (continued)

Setting	Options	Description
Advanced	StatusSheet FontSample	Click this button and select a submenu option to print a status sheet or a list of font samples for the current printer operating mode

- * When you change the default settings on this tab and then select another tab, the driver asks whether you want to send your changes to the printer. Select Yes at the prompt to save your changes and continue. The Printer SelectType settings remain in effect until you change them again with the printer driver or control panel (as described in Chapter 3), even when you turn off your printer.
- ** Do not turn Page Protect ON unless your printouts are incomplete and you have installed additional printer memory (see Chapter 4 for details). When the setting is changed, downloaded fonts are erased from printer memory, so change the setting *before* sending a print job.

Using Groups of Settings

To change all the printer driver settings to their factory defaults, select Driver default in the bottom right corner of the screen. Then click OK and print.

You can also create a group of printer driver settings and save them with a unique group name. Then you need only select the group name for a particular type of document to make all the necessary settings, such as envelopes or landscape documents.

Follow these steps:

1. First change the printer driver settings for your document. The group name in the Default box changes from Driver default to User Defined.
2. Click the Default box.
3. Erase User Defined and type in a name for the group of settings, such as Envelopes.

4. Click OK to save your settings under that name and exit the driver.
5. Print your document.

Whenever you want to print a document with a particular group of settings, select the group name in the Default box; then click OK and print.

If you need to permanently delete a group of settings, select the name in the Default box and click the Delete button. (You cannot delete the Driver default group name.)

Installing and Using the Windows NT 3.51 Drivers

If you're using Windows NT, you can install either the EPSONScript driver for printing in the PostScript mode, or the EPL-N1200 driver for printing in the LJ4 Plus (PCL5e) emulation mode.

Once you install the drivers, you can access them by following the steps on pages 2-2 to 2-4. The EPL-N1200 driver for Windows NT gives you the same options as the other Windows drivers; see page 2-7 for details.

The EPSONScript driver for Windows NT, however, offers a unique set of options for controlling your printer, such as smart underlining, printing thumbnail versions of your pages, and using paper from two different trays in one document.

The special EPSONScript settings are available on the following seven "tabs" in your software:

- Page Setup
- Visual Effects
- Print Job

- Overlays
- Sequencing
- Fonts
- Printer Features

For more information about your EPSONScript NT features, click the Help button at the bottom of the screen.

Installing the EPSONScript Driver for Windows NT

Setting up your EPSONScript driver for Windows NT involves three separate procedures:

- Installing the EPSONScript driver and screen fonts
- Installing the EPSONScript Utility
- Creating the printer driver in the Windows NT Control Panel

Note:

The EPSONScript driver requires Windows NT 3.51, and does not work with some 16-bit applications, for example Lotus 1-2-3.

Installing EPSONScript driver and screen fonts

Before you begin, turn on your printer and then your computer. Make sure Windows NT has loaded. Then follow these steps:

1. Insert EPSONScript driver disk 1.
2. From Program Manager, choose Run from the File menu.
3. Type a:install (or b:install); then click OK. You see a message asking you to choose your operating system.

4. Select your operating system and click OK. You see a message about renaming the WIN.INI file to WIN.BAK.
5. Click OK to rename the file WIN.BAK or type a new name and click OK.
6. Follow the instructions on the screen to insert disk 2. The program installs your driver and tells you to restart Windows.
7. Click OK. Your system restarts, and you can install the EPSONScript Utility as described below.

Installing the EPSONScript Utility

Follow these steps:

1. Reinsert the EPSONScript driver disk 1.
2. Open the File Manager and select drive A (or B).
3. Double-click the SETUP.EXE icon that appears in the windows on the right. You see a message about copying the utility into C:\ESCRPT.
4. Click Continue, or type a new directory name and click Continue.
5. Choose Yes to see the Release Notes. When setup is finished, new icons will be registered in the EPSONScript group.
6. Click Yes to restart Windows and enable the utility.
7. From Program Manager, click the EPSONScript Utility icon in the EPSONScript group, and then click the Create Driver tab.
8. Select EPSON EPL-N1200 EPSONScript (LT) and click the Create button.

9. Click Exit to close the utility. You're now ready to "create" the driver.

Creating the EPSONScript driver in the Control Panel

Follow these steps:

1. Double-click Control Panel in Program Manager.
2. Double-click the Printers icon.
3. Choose Create Printer from the Printer menu.
4. Type a name for your printer in the Printer Name box, select EPSON EPL-N1200 EPSONScript (LT) from the Driver list, and click OK.
5. Make any settings you want. When you're finished, click OK.
6. Choose Yes to make these settings the default for all your applications. When installation is completed, the Print Manager window appears.

Installing the EPL-N1200 Driver for Windows NT

You can use the EPL-N1200 driver for printing in the LJ4 Plus (PCL5e) emulation mode under Windows NT 3.51. Once you install the driver, you can access it by following the steps on pages 2-2 to 2-4. The EPL-N1200 driver for Windows NT gives you the same options as the other Windows drivers; see page 2-7 for details.

Before you begin, turn on your printer and then your computer. Make sure Windows NT has loaded. Then follow these steps to install the driver:

1. Insert the Windows NT EPL-N1200 driver diskette.
2. In the Program Manager, choose Run from the File menu.
3. Type a:\install (or b:\install). Then click OK. After a few minutes, you see a list of printers.
4. Choose EPL-N1200 and click OK. The program installs your driver and tells you when it's done.
5. Click OK.

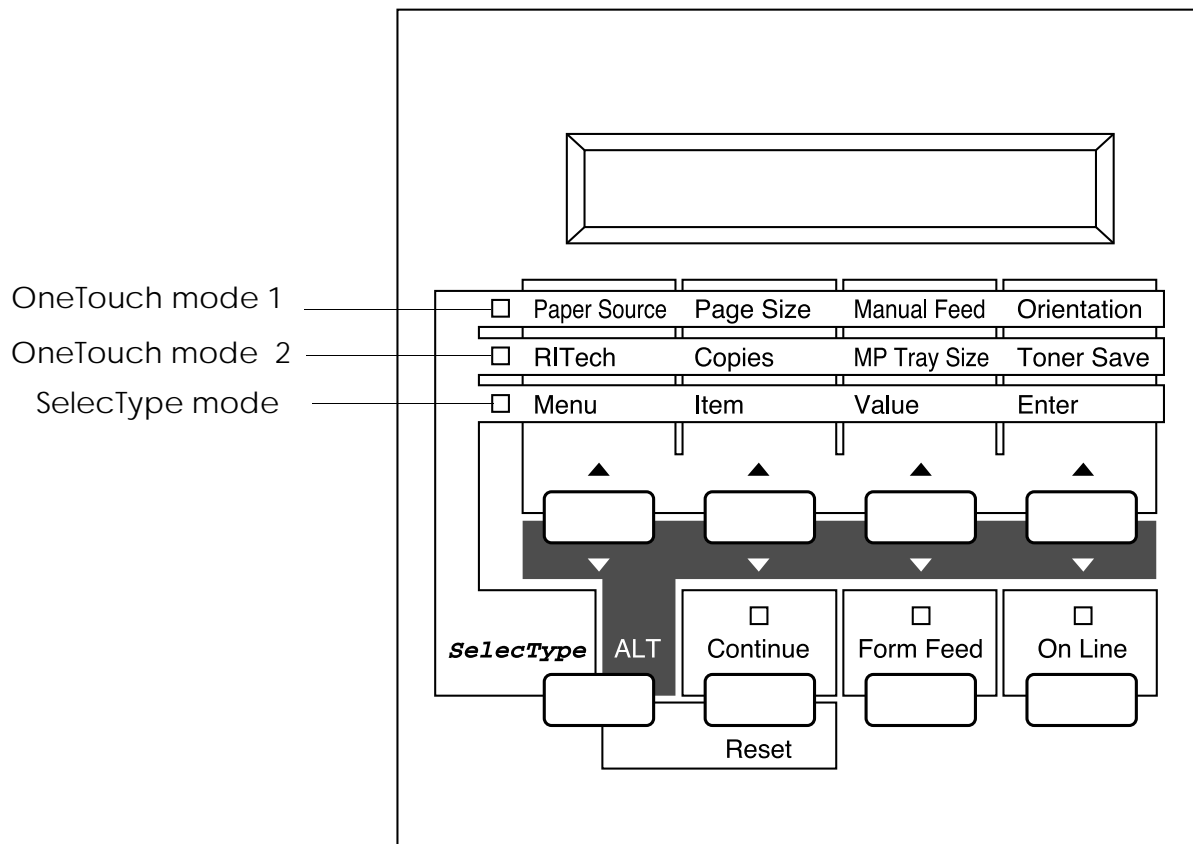
Chapter 3

Using the Control Panel

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The EPL-N1200 control panel consists of a liquid crystal display, indicator lights, and buttons. The display and lights keep you informed about the printer's current status. You can use the buttons to select settings and functions.

Most of the time you control your printer's functions using software. You may, however, need to perform some operations through the printer's control panel as described in this chapter. Note that software settings always override control panel settings.



Reading the Indicator Lights

The control panel has two sets of indicator lights, as shown on the illustration above. The lights on the panel's left side indicate the current mode. When you choose one of these modes, you can use the buttons on the control panel to choose various printer settings, which are defined later in this chapter.

The three indicator lights in the center of the control panel give you the following information:

- Continue** Flashes when the printer detects an error or needs maintenance. A message appears on the display to indicate the problem. See Chapter 6 for information about the messages. After you clear the problem, press the Continue button.
- Form Feed** Comes on when the printer receives data. The light flashes when the printer is processing the data. If the light stays on, press the Form Feed button to print the data and clear the printer's memory.
- On Line** Indicates that the printer is ready or in Standby mode. If the light is not on, press the On Line button.

Using the Control Panel Buttons

The control panel has two sets of buttons. You use the buttons in the top row to choose various OneTouch or SelecType settings, as explained in the following sections. You use the buttons in the bottom row as described below:

- SelecType** Press this button to choose a OneTouch mode or the SelecType mode. Press the button once to choose OneTouch mode 1. Press it again to choose OneTouch mode 2. Press the button once more to choose the SelecType mode. See the following sections for information about these modes.
- ALT**

Continue
Reset Press this button to switch the printer back on line after you have cleared a problem. You can also use the button to reset the printer back to the default settings.

Press the ALT and Reset buttons until Reset appears on the control panel display. This clears all data in the printer's memory.

Press ALT and Reset until Reset All appears on the control panel display. This changes back all default settings for all the printer's emulation modes and interfaces. It has the same effect as turning the printer off and then back on again.

Note:

Resetting clears all pending print jobs, so if you're connected to a network, be careful not to disrupt another person's print job.

Form Feed Press this button when the Form Feed light is flashing. The printer prints any data remaining in its memory.

On Line Press this button to switch the printer between On Line and Off Line status.

Using OneTouch Modes

The OneTouch modes give you a quick and easy way to change the most common settings. There are two OneTouch modes, each with four settings shown on the top two lines of the control panel. The settings are described in the table on page 3-6.

mode 1 settings

Paper Source Page Size Manual Feed Orientation

mode 2 settings

RITech Copies MP Tray Size Toner Save

Follow these steps to change a setting using OneTouch modes:

1. Make sure the printer is turned on and the On Line light is on.
2. To change a mode 1 setting, press the SelecType button until the light next to the Paper Source setting comes on.

To change a mode 2 setting, press SelecType until the light next to the RITech setting comes on.

3. The current values for all four settings appear in the control panel display above the setting labels. Press the button beneath the setting you want to change until the value you want appears in the display. (To move backward through the options, hold down Alt and the button for the setting.)
4. To save your changes and exit the OneTouch mode, press the On Line button.

To save your changes and move to the other OneTouch mode, press the SelecType button; then make your changes and press On Line to exit.

OneTouch Mode Settings

The table below lists the options available for each OneTouch mode setting. Default settings are shown in **bold type**.

OneTouch mode setting options

Setting	Options	Description
Paper Source	Auto MP (built-in tray) LC1 (lower cassette 1) LC2 (lower cassette 2)	Selects the tray to load paper from; Auto loads from the tray containing paper that matches the Page Size setting below
Page Size	A4, A5, B5, LT , HLT, LGL, GLT, GLG, EXE, F4, MON, C10, DL, C5, C6, IB5, CTM *	Selects the page size of the image to be produced
Manual Feed	On Off	Turns manual feed mode on or off for the built-in paper tray; see Chapter 1 for instructions
Orientation	Portrait Landscape	Selects the print direction on the page
RItech	Dark Medium Light Off	Sets the RItech (Resolution Improvement Technology) setting for your print job; see Chapter 5 for details
Copies	1 to 999	Selects the number of copies to print
MP Tray Size	A4, A5, B5, LT , HLT, LGL, GLT, GLG, EXE, F4, MON, C10, DL, C5, C6, IB5, *	Selects the size of paper loaded in the built-in paper tray
Toner Save	On Off	Sets the amount of toner used in your print job; for draft copies, set to On to use approximately 50% less toner for a lighter printout

* See Appendix A for details on paper sizes and specifications.

Using SelecType

The SelecType button accesses a series of menus and options that are shown on the control panel display. Although you can set some of the SelecType options through your driver software, you need to use the printer's control panel to access functions like the following:

- Checking the amount of toner remaining
- Changing the memory buffer size
- Configuring interface channels
- Changing emulation modes

Changing SelecType Settings

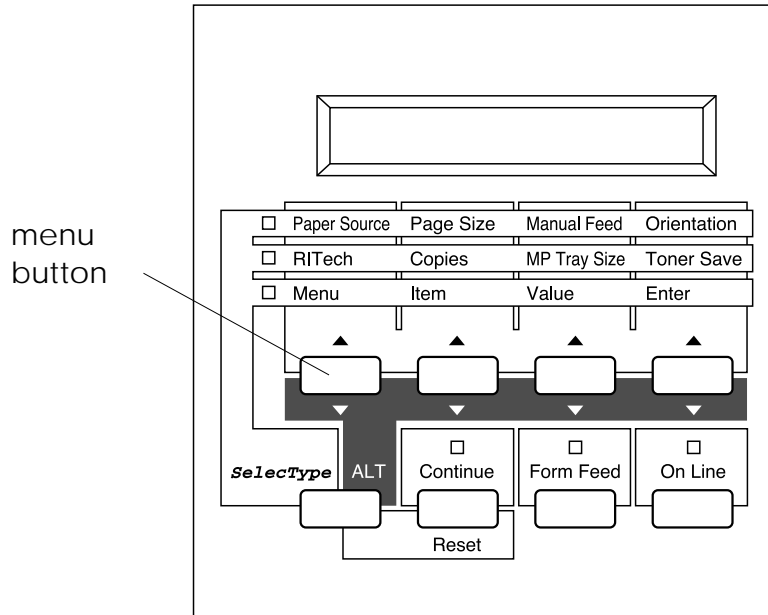
You can look at your current SelecType settings by printing a status sheet. To do this, wait until the printer warms up (Ready appears on the control panel display and the On Line light is on); then press the Enter button twice.

Note:

Some application programs may send commands to your printer that override SelecType settings. If you do not get the results you expect from SelecType, check your application software settings to see if they affect your output.

If you need to change SelecType settings, follow these steps:

1. Make sure the printer is turned on and the On Line light is on.
2. Press the Menu button on the control panel.



You have now entered SelecType mode, which changes the functions of the control panel buttons as described in the table below.

Button	Function
Menu	Selects a new SelecType menu
Item	Selects a new menu item
Value	Changes the setting of an item
Enter	Saves the new setting of an item
Alt	Used with Menu, Item, and Value to scroll through selections in reverse order Used with Continue to reset the printer
On Line or SelecType	Exits SelecType mode

3. Press the Menu button to select the SelecType menu that includes the setting you want to change. Then press the Item and Value buttons as necessary to change the setting.
4. Press Enter to save the new setting.
5. Press On Line or SelecType to exit SelecType mode.

See the next section for tables describing all the SelecType menus and settings.

SelecType Menu Tables

The SelecType menus, menu items, and settings appear in the order given in these tables each time you press the Menu, Item, and Value buttons. If you want to move through the choices in reverse order, press the Alt button and hold it down while you press these buttons.

Note:

*Not all of the menu items or settings listed in these tables may appear when you use SelecType. Some appear only when optional equipment is installed or certain emulation modes are selected. These conditions are noted in the tables. Default settings are shown in **bold** type.*

Test Menu

There are no settings to select on the Test menu. Select a menu item and press Enter to print the desired information.

C **Caution:**
Any user-defined data stored in the printer, such as downloaded fonts, may be erased after printing some of these information sheets.

Test menu items

Menu item	Description
Status Sheet	Prints your current SelecType settings, hardware configuration, error logging information, and a RITech sample
LJ4 Font Sample	Print samples of available fonts for these emulation modes
ESCP2 Font Sample	
FX Font Sample	
1239X Font Sample	
PS Status Sheet	Prints current EPSONScript settings
PS Font Sample	Print samples of available EPSONScript fonts
PS Fact Sheet	Prints a page that illustrates EPSONScript features.

Emulation Menu

This menu allows you to select a different printer emulation mode for each available interface on your printer. The settings for each emulation mode are listed in tables beginning on page 3-17.

Emulation menu items

Menu item	Settings available for all
Parallel B	LJ4 ESCP2 FX 1239X PS GL2 Auto
Parallel C	
Serial	
L/T (LocalTalk)	
AUX (another optional interface)	

Printing Menu

All of the SelecType Printing menu settings can be set using your printer driver software and are overwritten by the software settings. You can set all of them, except Resolution, using OneTouch modes as described on page 3-5.

Printing menu items

Menu item	Description
Paper Source	Selects the tray from which to load paper: Auto (from tray containing paper that matches the Page Size setting below) MP (built-in tray) LC1 (lower cassette 1) LC2 (lower cassette 2)
Page Size	Selects the page size of the image to be produced: A4, A5, B5, LT , HLT, LGL, GLT, GLG, EXE, F4, MON, C10, DL, C5, C6, IB5, CTM **
Orientation	Selects the print direction on the page: Portrait or Landscape
Copies	Selects the number of copies to print: 1 to 999
Manual Feed	Turns manual feed mode on or off for the built-in paper tray; see Chapter 1 for instructions
Resolution	Sets the print resolution to 600 dpi or 300 dpi

* See Appendix A for details on paper sizes and specifications.

Tray Size Menu

You can use the Tray Size menu to set the size of the paper loaded in the built-in paper tray (MP tray) or to check the paper sizes loaded in optional lower paper cassettes.

You can also use OneTouch modes to change the MP Tray Size setting; see page 3-5.

Tray Size menu items

Menu item	Description
MP Tray Size	Selects the size of paper loaded in the built-in paper tray: A4, A5, B5, LT, HLT, LGL, GLT, GLG, EXE, F4, MON, C10, DL, C5, C6, IB5, CTM *
LC1	Displays the size of paper in the indicated lower paper cassette (same possible settings as MP Tray Size)
LC2	

* See Appendix A for details on paper sizes and specifications.

Config Menu

The settings available on the Config menu affect your printer's basic operations. Most of the menu items can be set using the Windows printer driver software and override the SelecType settings; see Chapter 2 for details.

Config menu items

Menu item	Description
RItech *	Sets the RItech (Resolution Improvement Technology) setting for your print job; see Chapter 5 for details: Dark, Medium , Light, Off
Toner Save *	Sets the amount of toner used in your print job. If you're printing a draft copy, set to On (to use around 50% less toner for a lighter printout; default is Off)
Density	Sets the print density to make your printout darker or lighter as necessary: 1, 2, 3 , 4, 5
Top Offset	Makes fine adjustments to the vertical position of printing on the page, in mm: Up or Down with each button press
Left Offset	Makes fine adjustments to the horizontal position of printing on the page, in mm: Left or Right with each button press
Size Ignore	Sets to printer to ignore (On) or stop printing (Off) if a paper size error occurs; if set to On, the image may be printed outside the edge of the paper and cause smudging

Config menu items (continued)

Menu item	Description
Auto Cont	Sets the printer to use Auto Continue mode to continue printing 5 seconds after recovering from a print overrun or insufficient memory error. It is best to leave Auto Continue Off so you are alerted to errors; then you must press the Continue button on the control panel to resume. If you'll be away from the printer and are aware of possible errors, you can turn on Auto Continue mode.
Page Protect **	Sets the printer to use Page Protect mode for printing complex, memory-intensive documents. It is best to use the Auto setting because Page Protect reallocates printer memory from use for receiving data to use for printing it, making complex jobs take longer to print, but able to print without memory errors.
Image Optimum	Sets the printer to use Image Optimum mode so you can print complex, memory-intensive graphics. It is best to use the Auto setting because Image Optimum reduces graphic quality and data when that data reaches the memory limit.

* You can also change these settings using OneTouch modes; see page 3-5.

** Changing the Page Protect setting reconfigures your printer memory and may erase any downloaded fonts.

Setup Menu

The Setup menu items allow you to customize various printer modes, select a control panel language, check the total pages printed to date, and check or reset the toner counter.

Setup menu items

Menu item	Description
Interface	Sets whether the printer can receive data through all available interfaces (Auto) or only one of these: Parallel B, Parallel C, Serial, L/T, AUX
Time Out	Sets the amount of time the printer waits to receive data before terminating an incomplete print job; after the time-out period, it searches for new data on another interface channel: Various settings available between 5 to 300 seconds; default is 60
Standby	Turns standby mode on (or off) to reduce power used by the fixing heater when the printer is not used for 30 minutes; it warms up in about 60 seconds when a print job is received; default is Enabled .
Lang	Selects the language used for control panel display messages and the status sheet: English , French, German, Italian, Spanish, Swedish, Danish, Dutch, Finnish, Portuguese
Toner	Displays the amount of toner left in the imaging cartridge as follows: E****F 75 to 100 % E*** F 50 to 75% E** F 25 to 50% E* F 0 to 25% E F None For instructions on replacing the imaging cartridge, see Chapter 5.
Toner Count Clear	Resets the toner counter; select this menu item and press the Enter button after installing a new imaging cartridge (see Chapter 5 for details)
Page Count	Displays the total number of pages printed by the printer to date
SelecType Init	Resets all the SelecType settings to their factory defaults

Parallel B and Parallel C Menus

These menus control interface options when you use the Parallel B and/or Parallel C interfaces.

Parallel B and Parallel C menu items

Menu item	Description
Speed	Selects the transfer speed through the interface channel based on either the STROBE (Fast) or ACKNLG (Normal) signal delay period
Bi-D *	Enables or disables bidirectional communication across the interface channel
Buffer Size	Sets the memory allocation used for the printer's parallel interfaces: Maximum (more for receiving data), Minimum (more for printing data), or Normal (balanced usage)

* Available only on the Parallel B menu.

Serial Menu

The Serial menu is available only when you have installed the optional LocalTalk/Serial module or the Serial interface card (described in Chapter 4) and have set the Emulation menu to Serial (see page 3-10). You may need to change these settings to match the serial settings used by your computer.

Note:

You can also change these settings using the Remote Control Panel utility as described in the Technical Information manual. To match the computer's baud rate or set a higher one than that supported by your computer, see the Technical Information manual (this may not work with some computers).

Serial menu items

Menu item	Description
Word Length	Selects a 7- or 8-bit word length
Baud Rate	Sets the baud rate (communication speed); 9600 is the default
Parity	Enables or disables parity checking for error detection; None is the default
Stop Bit	Sets the number of stop bits to send at the end of each character sent to the printer; 1 is the default
XOn/XOff	Sets the XOn/XOff protocol to On , Off, or Robust (sends an XOn signal when the printer is ready for data); used with the DTR menu item below
DTR	Turns the DTR (data terminal ready) protocol on or off ; used with the XOn/XOff menu item above
Buffer Size	Sets the memory allocation used for the optional serial interface: Maximum (more for receiving data), Minimum (more for printing data), Normal (balanced usage)

LT and AUX Menus

The LT menu appears only when you have installed the LocalTalk/Serial module (described in Chapter 4) and have set the Emulation menu to LT (see page 3-10). The AUX menu is available only when you have installed a Type B interface.

Both menus have one menu item, Buffer Size, that sets the memory allocation used for the optional interface. You can set it to Maximum (more memory allocated for receiving data), Minimum (more memory allocated for printing data), or Normal (for balanced usage); Normal is the default.

LJ4 Menu

The LJ4 menu settings control the available fonts and symbol sets when you use the LJ4 (PCL5e) emulation mode. You should change the font and symbol sets using your software, not using SelecType, because your software settings override SelecType settings.

LJ4 menu items

Menu item	Description
FontSource	Selects the default font source to Resident , SIMM, or Download
Font Number	Sets the default font number for the selected font source, 0 through 65535
Pitch	Specifies the font pitch if the default font is scalable and fixed-pitch, from 0.44 to 99.99 cpi (characters per inch) in 0.01 cpi increments; 10.00 is the default
Height	Specifies the font height if the default font is scalable and proportional, from 4.0 to 999.75 points in 0.25 point increments
SymSet *	Selects the symbol set to be used by the default font; Roman-8 is the default (see the <i>Technical Information</i> manual for details on the available symbol sets)
Form	Sets the number of lines (5 to 128) for the selected paper size and orientation, causing new line spacing settings to be stored in the printer; changes to the Page Size or Orientation settings in SelecType may change the Form setting you select; 64 lines is the default
Source SymSet **	Selects the symbol set number for an optional font ROM source (from 0 to 3199)
Dest SymSet **	Selects the symbol set number for an optional font ROM destination (from 0 to 3199)

* If the font selected in the FontSource and Font Number settings is not available in the SymSet you choose, the FontSource and Font Number settings return to their default values.

** These menu items are available only when an optional font ROM module is installed.

PS Menu

The PS menu controls two features available in the default PostScript emulation mode. You can also set these features using the Windows 95 printer driver software; see Chapter 2 for details.

Menu item	Description
Err Sheet	Indicates whether the printer prints an EPSONScript error message. If the option is off , the message is displayed on the control panel but not printed.
Protect Level	Allows you to increase the amount of memory allocated for page protection. If the option is off, an overrun error occurs when the printer doesn't have enough memory to print a page. If an error occurs, raise the level from 1 up to 5. Raising the protect level decreases printing speed.

ESCP2 and FX Menus

Use the ESCP2 or FX menu only if you have selected one of these modes as your Emulation mode in SelecType or the Remote Control Panel utility.

ESCP2 and FX menu items

Menu item	Description
Font	Selects a font by typeface; Courier is the default (see the <i>Technical Information</i> manual for details on the available fonts)
Pitch	Sets the pitch in cpi (characters per inch) for the selected Font: 10 , 12, or 15 cpi, or Proportional
Condensed	Turns condensed printing on or off ; 15 cpi pitch characters cannot be condensed
T.Margin	Specifies the margin from the top of the paper to the base of the first printed line: 0.40 to 1.50 inches; 0.50 inch is the default
Text *	Sets the page length by the number of lines (1 to 81) in 1/8-inch increment; 66 lines is the default

ESCP2 and FX menu items

Menu item	Description
CG Table	Selects the graphics or italics character table you want to use; PcUSA is the default (see the <i>Technical Information</i> manual for details on the available character tables)
Country	Selects an international symbol set; USA is the default (see the <i>Technical Information</i> manual for details on the available international symbol sets)
AutoCR	Sets the printer to automatically perform or not perform a carriage-return then line-feed operation when the print position exceeds the right margin; on , off
AutoLF	Sets the printer to automatically add or not add a line-feed after every carriage return; on , off
Bit Image	Sets the density the printer uses to print bit-mapped images to either Dark or Light density; or select BarCode to convert bit-mapped images to barcodes by filling in any gaps between dots for unbroken barcode lines (reduces image size and may distort some bit-mapped graphics)
ZeroChar	Selects either slashed zero (Ø) or unslashed zero (0) to be printed for the zero character

- * If you change the Page Size, Orientation, or T.Margin settings, the Text setting returns to its default value.

1239X Menu

Use the 1239X menu only if you have selected 1239X as your Emulation mode in SelecType or the Remote Control Panel utility.

1239X menu items

Menu item	Description
Font	Selects a font by typeface; Courier is the default (see the <i>Technical Information</i> manual for details on the available fonts)
Pitch	Sets the pitch in cpi (characters per inch) for the selected Font: 10 , 12, 15, 17, 20, or 24 cpi, or Proportional
Code Page	Sets the number of the character table you want to use; 437 is the default (see the <i>Technical Information</i> manual for details on the available character tables)
T.Margin	Specifies the margin from the top of the paper to the base of the first printed line: 0.30 to 1.50 inches; 0.40 inch is the default
Text *	Sets the page length by the number of lines (1 to 81) in 1/6-inch increments; 67 lines is the default
AutoCR	Sets the printer to automatically perform or not perform a carriage-return then line-feed operation when the print position exceeds the right margin; On , Off
AutoLF	Sets the printer to automatically add or not add (default) a line-feed after every carriage-return; On, Off
Alt.Graphics	Turns the alternate graphics option On or Off
Bit Image	Sets the density the printer uses to print bit-mapped images to either Dark or Light density
ZeroChar	Selects either slashed zero (Ø) or unslashed zero (0) to be printed for the zero character
Character Set	Selects the number of the character table to use, 2 or 1 (see the <i>Technical Information</i> manual for details on the available character tables)

* If you change the Page Size, Orientation, or T.Margin settings, the Text setting returns to its default value.

Installing Options

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Available Options

You can add the following optional equipment to your printer:

- ❑ Optional interface cards and modules to connect your printer to a Macintosh,[®] LocalTalk network, IBM[®] mainframe, or other network type; see the next section for more information LaserJet 4[™]
- ❑ Up to two 500-sheet lower paper cassettes to increase print capacity (C81263* for letter-size paper)
- ❑ Optional memory modules to expand your printer's memory capacity

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

To install these options, follow the steps in the sections below and in the manuals that come with the options.

Installing Optional Interfaces

EPSON offers a variety of optional interface cards and modules that you can install to provide network and other connections for your printer. The following table lists the available interfaces, their part numbers, and their uses. (The asterisk [*] in the part number substitutes for the last number, which varies by country.)

Optional EPSON interfaces

Interface name	EPSON part number	Uses
LocalTalk/Serial module	C82334*	Serial port: for connection to computers with RS-232C or current loop serial connections LocalTalk port: for connection to a LocalTalk network or for direct connection to a Macintosh with an optional EpsonScript Level 2 module
32KB Serial interface card	C82307*	For connection to a computer with an RS-232C serial port
32KB Parallel interface card	C82310*	For connection to an additional computer with a standard parallel port
Coax interface card	C82314*	Provides a parallel interface and a coax interface for connection to these IBM mainframes: 3174, 3270, 3276, and 4274
Twinax interface card	C82315*	Provides a parallel interface and a coax interface for connection to these IBM systems: AS-400, System 36, 5251 (model 12), System 34, System 38, and 5294. **
Ethernet™ card	C82331*	For direct connection to an Ethernet network
AppleTalk™ interface card	C82312*	For connection to an AppleTalk network or direct connection to a Macintosh with an optional EpsonScript Level 2 module
GPIB interface card	C82323*	For direct connection to a GPIB network

** When your printer uses an EPSON Twinax interface card, it can be used in place of these IBM system printers: 4210, 5224 (models 1 and 2), 5256 (models 1, 2, and 3), 3218 (non-IDPS), 4214 (model 2), 5225 (models 1, 2, 3, and 4), and 5219 D01 and D02.

If you'll be using the LocalTalk/Serial module, follow the steps on page 4-4 to install the module in the printer.

To install any of the other interface cards listed in the table, see page 4-8 for instructions.

If you will connect your printer to any type of serial interface, you need to obtain the right kind of serial cable. The table below lists the printer's specifications for serial cables.

Use this cable . . .	For this serial connection . . .
RS-232C (9 pin) to C836152 (2.0m) from mini DIN (printer) to D-SUB, 9-pin (computer)	Direct printer-to-computer with 9-pin serial ports
RS-232C (25 pin) to C836151 (2.0m) from mini DIN (printer) to D-SUB, 25-pin (computer)	Direct printer-to-computer with 25-pin serial ports
Current loop C836141 (0.4m) from mini DIN (printer) to D-SUB, 25-pin (interface cable) for both RS-232C and current loop	Cable extension for printer-to-interface connection

Also be sure to read “Using a Serial Interface” on page 4-10 for instructions on configuring your computer and printer to work correctly with a serial connection.

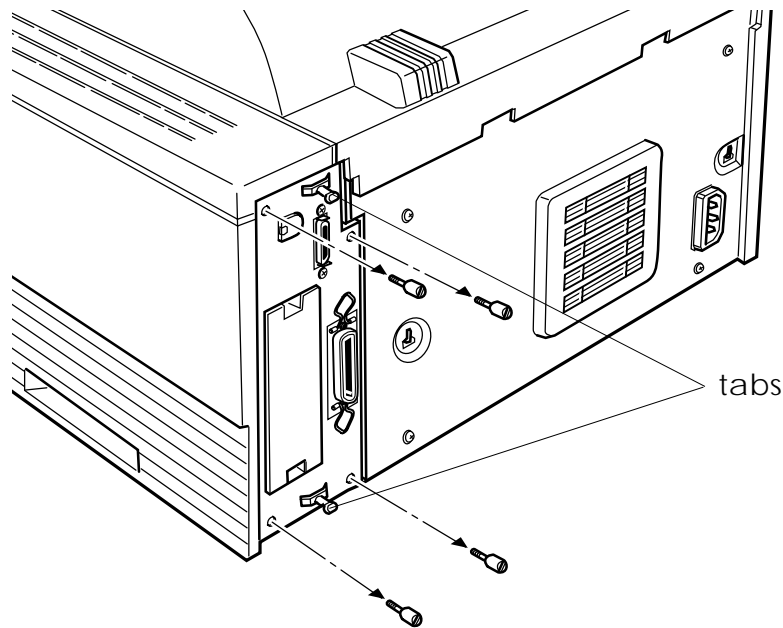
Installing a LocalTalk/Serial Module

Follow these steps to install the EPSON LocalTalk/Serial module in your printer:

1. Turn off the printer and unplug the power cable from the electrical outlet.

W **Warning:**
To avoid electrical shock, do not access the printer's controller board unless the printer is turned off and unplugged from the electrical outlet.

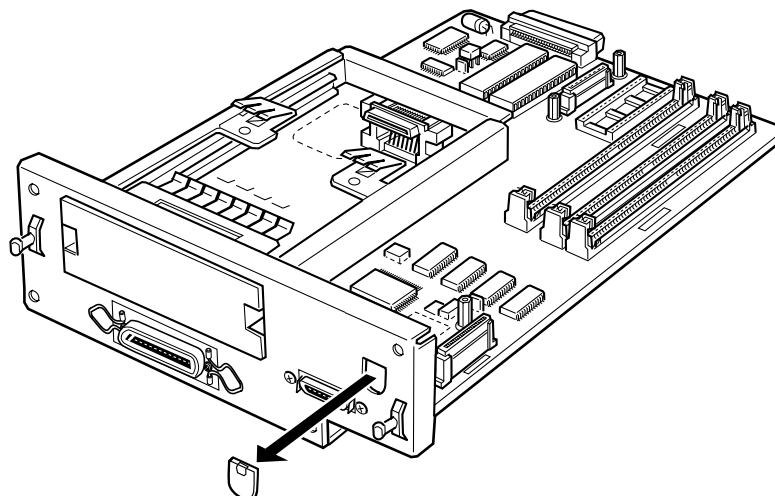
2. Remove the four screws securing the controller board bracket on the printer's back panel.



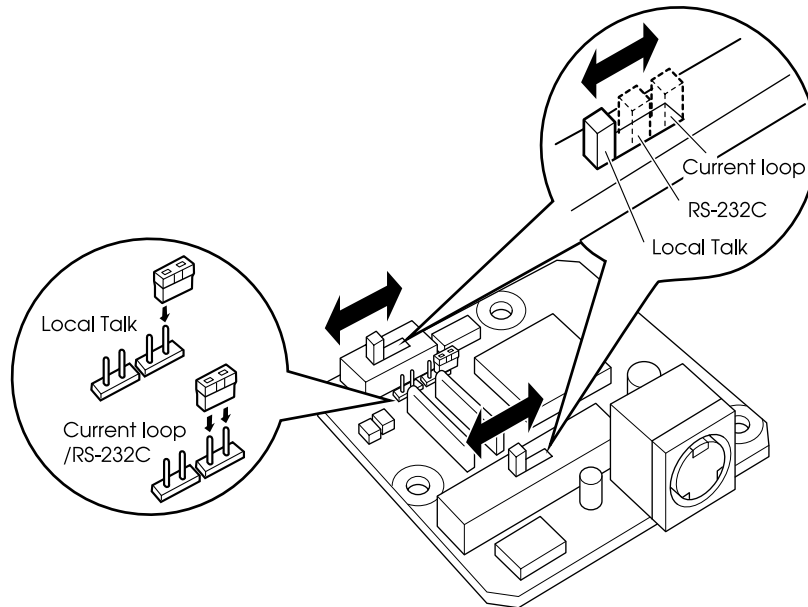
3. Pull on the plastic tabs to remove the controller board and place it on a clean surface.

W **Warning:**
Do not touch the electrical components on the controller board; they may be hot from recent use.

4. Remove the plastic connector cover from the controller board bracket.

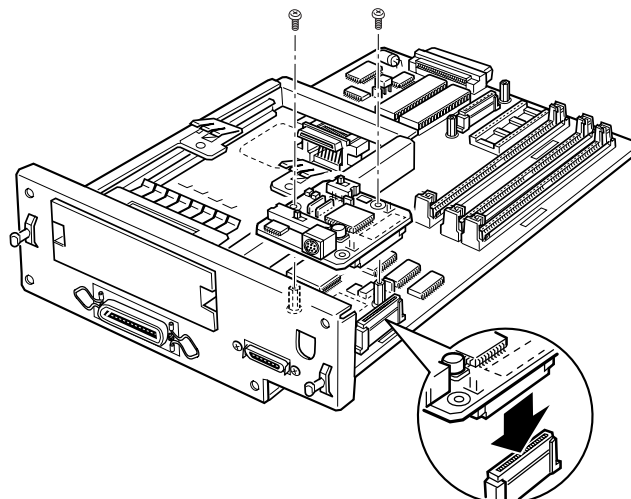


5. Now set the jumper and slide switch settings on the LocalTalk/Serial module for the type of interface you'll be using: RS-232C serial, current loop serial, or LocalTalk (default).

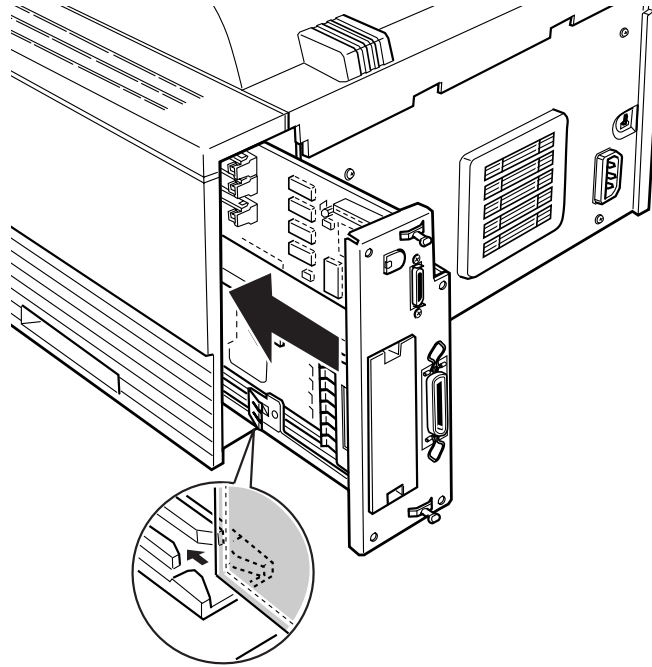


C **Caution:** *Make sure both slide switches are set to the same position or the printer will not operate correctly.*

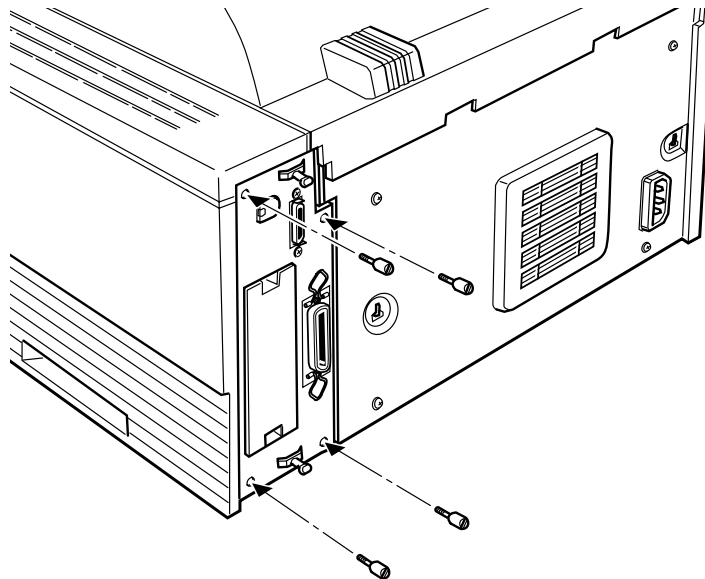
6. Position the module as shown below; then align its connector with connector CN4 on the controller board. Secure the module with the two screws that came with it.



7. Position the controller board so its components face the side panel of the printer and align it with the top and bottom guide rails in the printer. Then slide in the board.



8. Secure the controller board bracket with the four screws you removed earlier.



9. Connect the appropriate cable to the module through the hole you exposed in step 4.

10. Plug the power cord into an electrical outlet; then turn on the printer.

To verify that the interface is working properly, print a status sheet and make sure your interface is listed under “Hardware Configurations.” To do this, wait until the printer warms up (Ready appears on the control panel display and the On Line light is on); then press the Enter button twice.

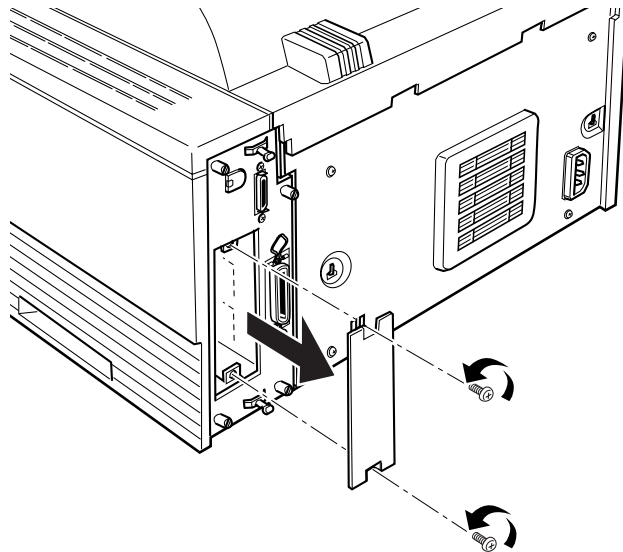
Installing an Interface Card

Follow these steps to install an optional EPSON interface card in your printer:

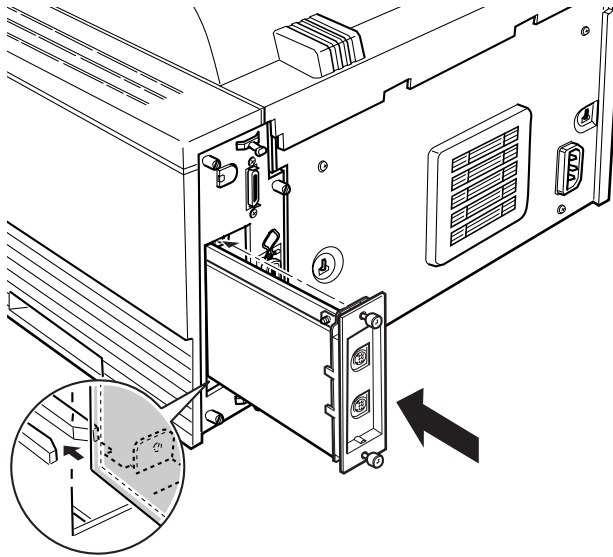
1. Turn off the printer and unplug the power cable from the electrical outlet.

W **Warning:**
To avoid electrical shock, do not remove the interface slot cover unless the printer is turned off and unplugged from the electrical outlet.

2. Remove the two screws securing the interface slot cover; then remove the cover.



3. Position the optional interface card so its components face the center of the back panel. Then align its top and bottom grooves with the guide rails inside the printer and slide in the card, pushing it firmly to lock it in place.



4. Secure the card with the two screws you removed earlier. (Save the interface slot cover in case you need to install it again.)
5. Connect the appropriate cable to the interface card.
6. Plug the power cord into an electrical outlet; then turn on the printer.

To verify that the interface is working properly, print a status sheet and make sure your interface is listed under “Hardware Configurations.” To do this, wait until the printer warms up (Ready appears on the control panel display and the On Line light is on); then press the Enter button twice.

Using a Serial Interface

Before you print with a serial interface, you must match the serial settings used by the printer and your computer. You can change the default settings (listed in the table below) for the serial interface card or the LocalTalk/Serial module, or you can change your computer's serial port settings; see your computer manual for instructions.

Optional serial interface default settings

Setting	Default
Serial type	RS-232C
Word length	8
Baud rate	9600
Parity	None
Stop bit	1
DTR	Off
XON/XOFF	On

You also need to set Windows to use a serial port with your printer, as described in the next sections.

Note:

*You can change your printer's serial interface setting using **SelecType** (see Chapter 3) or by running the **Remote Control Panel** utility (see the Technical Information manual). You can also match the printer's and computer's baud rate or to set the printer to a higher baud rate than that supported by your computer (this may not work with some computer systems). See the Technical Information manual for more information.*

Windows 95 instructions

1. Click Start.
2. Point to Settings.
3. Click Printers.
4. **Right-click the Epson EPL-N1200 EPSONScript (or EPL-N1200) icon.**
5. Select Properties.
6. Click the Details tab.
7. Click the arrow in the Printer Port drop-down list and select a COM (serial) port to use.
8. Click OK to save your settings; then exit Printer Properties.

Windows 3.1 or Windows NT instructions

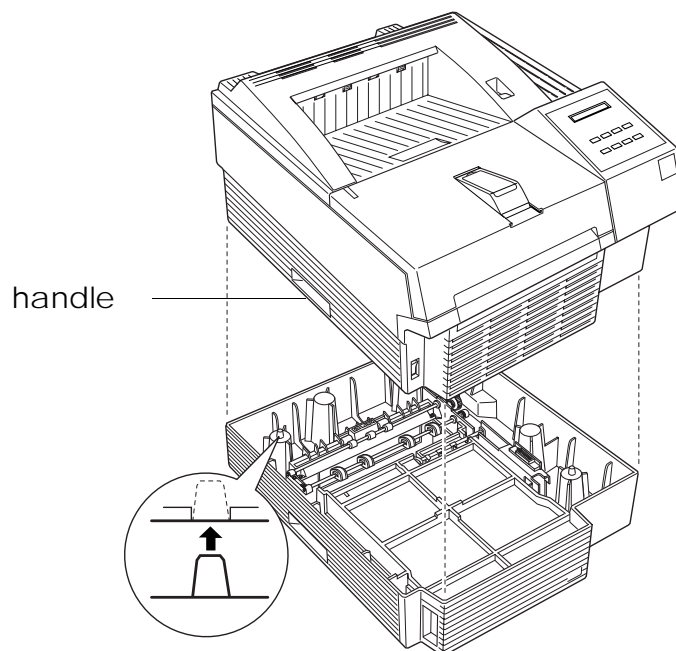
1. In Program Manager, open the Main program group, if necessary.
2. Double-click Control Panel.
3. Double-click Printers.
4. Click Connect.
5. Select a COM (serial) port to use.
6. Click OK to save your settings; then exit the Control Panel.

Installing Lower Paper Cassettes

By installing optional 500-sheet lower paper cassettes you can increase your print capacity from 250 sheets (in the built-in paper tray) to 750 sheets (with one lower paper cassette) or 1,250 sheets (with two lower paper cassettes).

Follow these steps to install the cassettes on your printer. For instructions on loading paper in the cassettes, see Chapter 1.

1. Turn off the printer and unplug the power cord from the electrical outlet.
2. Disconnect any interface cables from the printer.
3. Place each lower paper cassette next to the printer so the ridged front edges face the same way as the ridged front edge of the printer. If you'll be installing two cassettes, place one cassette on top of the other.
4. Grasp the printer by the recessed "handles." Lift it up and then lower it over the cassette(s), aligning the holes in the printer with the pins on the top cassette. Make sure the printer rests on the cassette(s) evenly and securely.



5. Connect the interface cable(s).
6. Make sure the printer's power switch is in the off position; then plug the power cable into an electrical outlet.
7. Turn on the printer.
8. Now run the Windows printer driver to add the optional paper cassette(s) to your available paper source list. See Chapter 2 for instructions.

Note:

If you use the Remote Control Panel utility or SelecType to control your printer, you need to select the optional paper cassette(s) only when you are ready to print. See Chapter 3 or the Technical Information manual for instructions.

Installing Memory Modules

To speed up printing of complex, graphics-intensive documents and downloaded fonts, you can add to your printer's memory capacity. Your printer's controller board includes two slots in which you can install single in-line memory modules (SIMMs) to increase your printer's memory up to 64MB. You can install one or two SIMMs that meet these requirements:

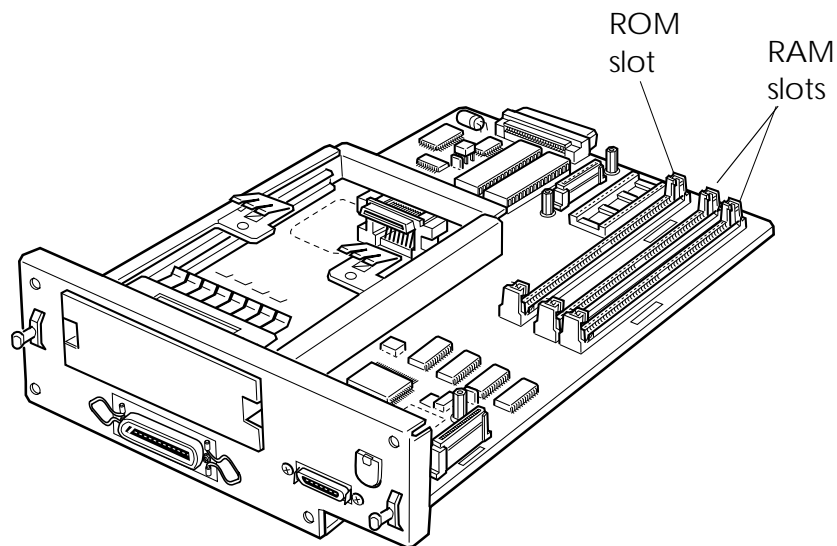
- 72-pins
- 1MB, 2MB, 4MB, 8MB, 16MB, or 32MB capacity
- Maximum 70 ns access speed
- Maximum dimensions: 4.25 inches (108 mm) long, 1.53 inches (39 mm) wide, and 0.4 inch (10 mm) thick.

Follow these steps to install SIMMs:

1. Turn off the printer and unplug the power cable from the electrical outlet.

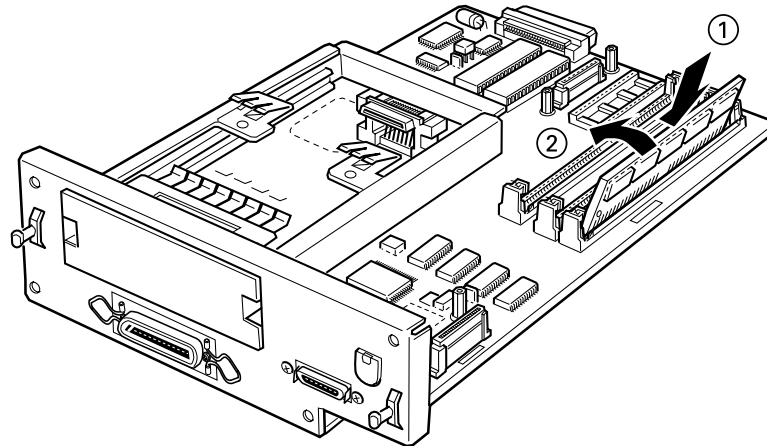
W **Warning:**
To avoid electrical shock, do not access the printer's controller board unless the printer is turned off and unplugged from the electrical outlet.

2. Disconnect any interface cables from the printer.
3. Follow steps 2 and 3 on page 4-5 to remove the controller board from the printer.
4. Locate the two SIMM slots on the controller board. You can use either or both RAM slots, but do not use the ROM slot.



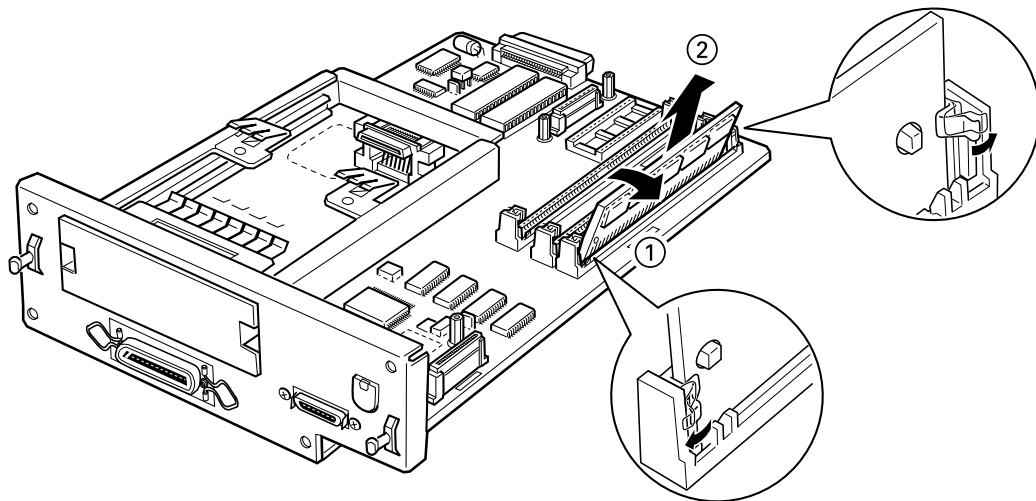
5. Align the SIMM pins marked either 1 or 72 with the pin position marked on the slot.

Then insert the SIMM at an angle and rotate the top until it is vertical and clicks into place. (Do not push too hard.)



6. Follow the steps on pages 4-7 to 4-8 to reinstall the controller board in the printer.

If you ever need to remove a SIMM, pull back the metal clips on each side of the slot; then grasp the SIMM and pull it out.



To verify that the SIMM is working properly, print a status sheet and make sure the correct memory amount is listed under “Hardware Configurations.” To do this, wait until the printer warms up (Ready appears on the control panel display and the On Line light is on); then press the Enter button twice.

Maintenance

Replacing the Imaging Cartridge 5-2

Adjusting the RITech Setting 5-5

Cleaning the Printer 5-8

Transporting the Printer 5-10



Replacing the Imaging Cartridge

Your printer's imaging cartridge can print up to 6,000 pages, depending on how complex your print jobs are. There are several ways to tell when you need to replace a cartridge:

- ❑ You see a Toner Low message on the control panel display
- ❑ You see a Toner Out message on the display
- ❑ You notice that printing is faint and the Toner function in SelecType tells you that you have 0 to 25% toner capacity.

If you see a toner message on the control panel display, replace the cartridge right away.

To check the toner capacity using SelecType, access the Setup menu and select Toner as described in Chapter 3. If there is only one asterisk on the display, you have 25% or less of toner left and must replace the cartridge. If you have more left, there may be another reason your printing is faint; see Chapter 6 for solutions.

Be sure to install EPSON imaging cartridge #S051016 even if the cartridge you are removing has another part number. Follow these steps to replace the imaging cartridge:

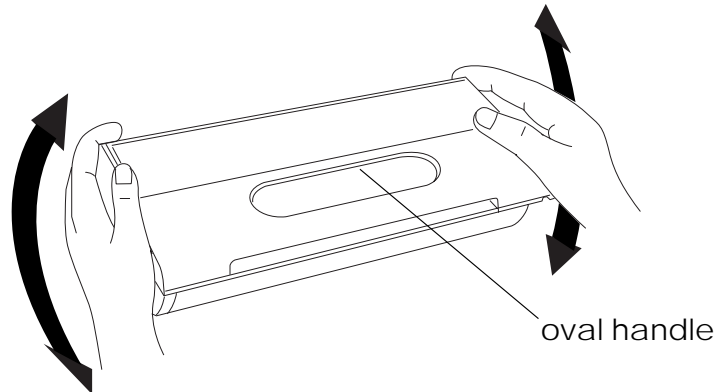
1. Make sure the printer is turned on.
2. Open the printer's top cover.
3. Grasp the old imaging cartridge and pull it straight out of the printer.

W **Warning:**
Do not touch the fuser inside the printer; it is marked with the label CAUTION HOT SURFACE.

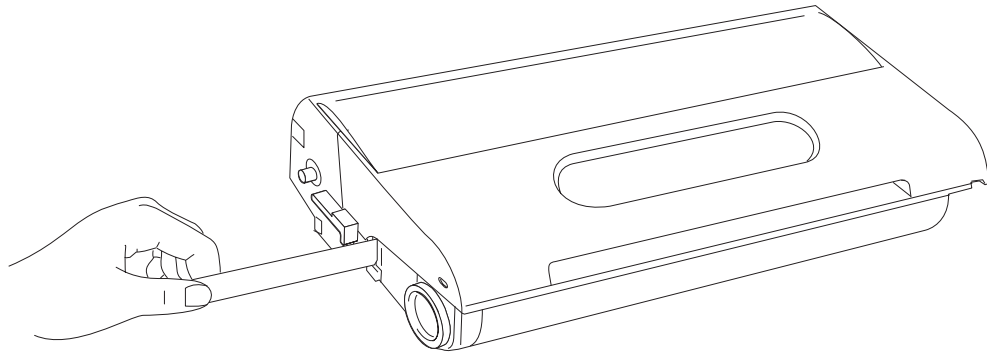
4. Dispose of the used imaging cartridge with non-burnable trash.

- C** **Caution:**
Do not turn the imaging cartridge upside down. Do not expose the imaging cartridge to light any longer than necessary.

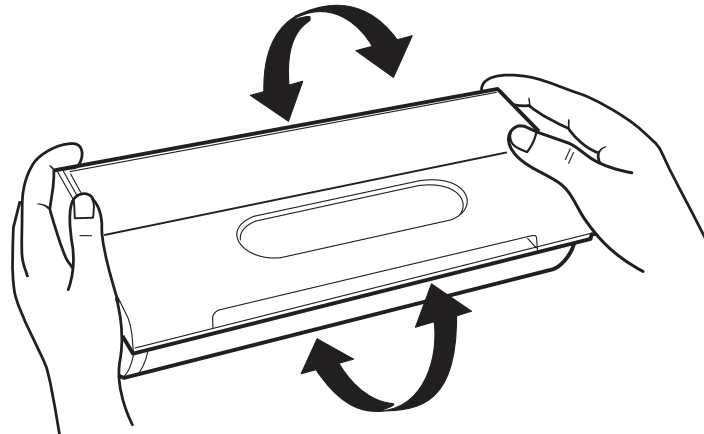
5. Unpack the imaging cartridge and hold it level with the oval handle face up. Then shake the cartridge as shown to distribute the toner.



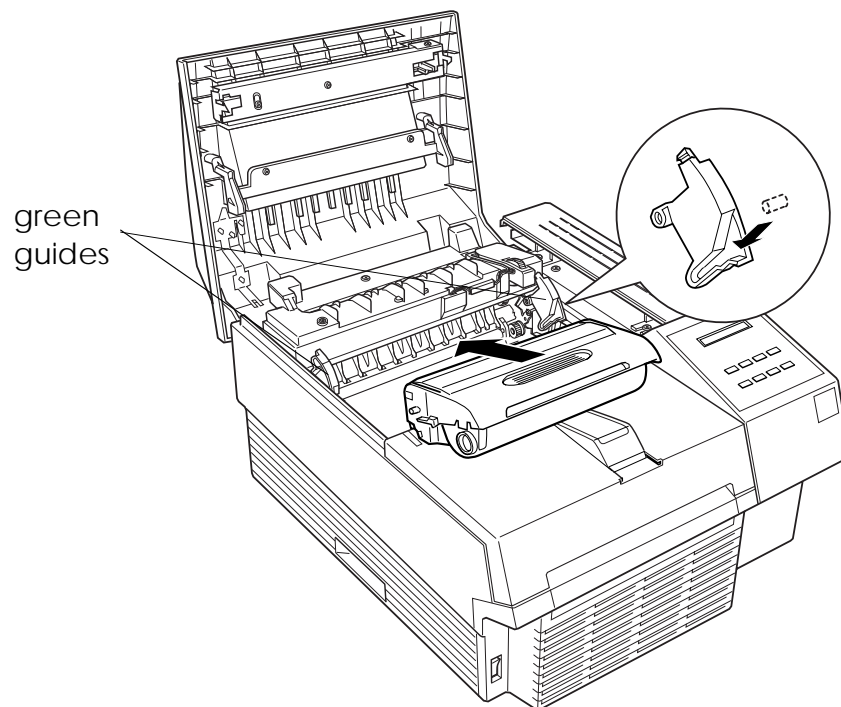
6. Grab the tab on the left side and pull the clear tape all the way out of the cartridge.



7. Now shake the cartridge again as shown to distribute the toner.



8. Line up the cartridge pins with the green guides inside the printer; then slide in the cartridge until it stops.



9. Close the top cover.
10. Select Toner Count Clear on the SelecType Setup menu to reset the toner counter. See Chapter 3 for instructions.

Adjusting the RITech Setting

EPSON's new Resolution Improvement Technology (RITech) automatically improves the print quality of your lines, text, and graphics. Most of the time it works behind the scenes to provide the best printed output. Occasionally, however, you may need to adjust the RITech setting if you notice a change in quality, such as after you replace the imaging cartridge.

To determine whether you need to adjust the RITech setting, print a status sheet using the printer's control panel. Follow the steps below:

1. Turn on the printer and let it warm up until you see the Ready message on the control panel display and the On Line light comes on. (If it doesn't come on, press the On Line button.)

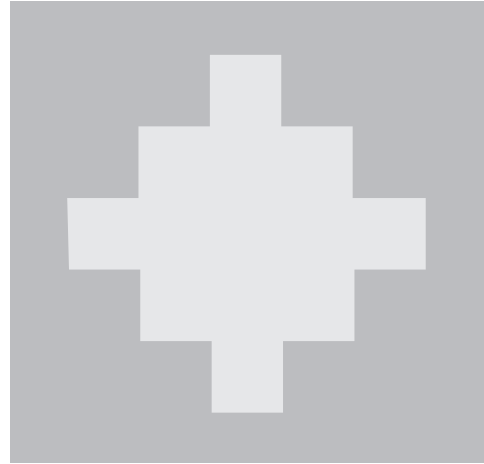
Note:

Before proceeding, make sure Toner Save Mode is turned off or the status sheet will not print. See Chapter 2 for instructions on changing the setting using the printer driver. You can also turn it off using the control panel or the Remote Control Panel utility; see Chapter 3 or the Technical Information manual for more instructions.

2. Press the Enter button twice to print the status sheet. At the bottom of the sheet you see the RITech test pattern:



correct RITech setting



incorrect RITech setting

3. If the test pattern looks correct, do not change the RITech setting. If it looks incorrect, go to step 4.
4. Open an application program and access the printer driver (see Chapter 2 for instructions).

Note:

If you are using the Windows 3.1 EPSONScript driver, you must use the control panel to adjust the RITech setting; see Chapter 3 for instructions.

5. Click the Device Options or Printer SelectType tab.
6. If the RITech test pattern inside the square is lighter than the background, select Dark as the RITech setting. If the pattern is darker than the background, select Light.
7. Click the OK button.
8. When you see the prompt asking if you want to send your changes to the printer, select Yes.
9. Exit the printer driver.

10. Now print a page from your application to check the print quality. If the quality is good, you're finished. If the quality needs further improvement, go to step 11.
11. Access the printer driver again and click Device Options or Printer SelectType.
12. Change the Toner Density setting to Dark or Darkest (if the RITech test pattern was too light) or Light or Lightest (if the test pattern was too dark).

Note:

If you are using the Windows 3.1 EPSONScript driver, you must use the control panel to adjust the Density setting; see Chapter 3 for instructions.

13. Click the OK button.
14. When you see the prompt asking if you want to send your changes to the printer, select Yes.
15. Exit the printer driver.
16. Print several pages from your application that contains text and graphics to check the print quality and make sure the Density setting is not too extreme.

The RITech and Density settings you chose remain in effect even after you turn off your printer. Remember that the darker your Density setting the more toner you use, so change the setting back to Medium if you do not need dark printing later on.

Cleaning the Printer

If the printer case gets dirty, turn off the printer and clean it with a soft cloth slightly dampened with mild soap.

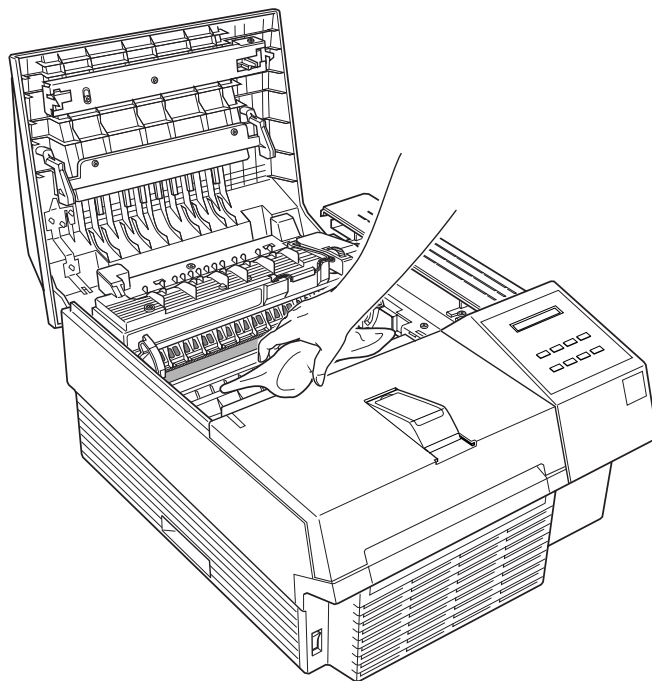
C **Caution:**
Never use alcohol or thinner to clean the printer; they may damage the printer. Do not get water on the printer mechanisms or electrical components. Do not use compressed air to clean inside the printer.

To clean inside the printer, first make sure the power is turned off and the printer is unplugged. Then follow these steps:

1. Open the top cover.
2. Remove the imaging cartridge and cover it with a soft cloth to avoid exposing it to light while you clean the printer.

W **Warning:**
Do not touch the fuser inside the printer; it is marked with the label CAUTION HOT SURFACE.

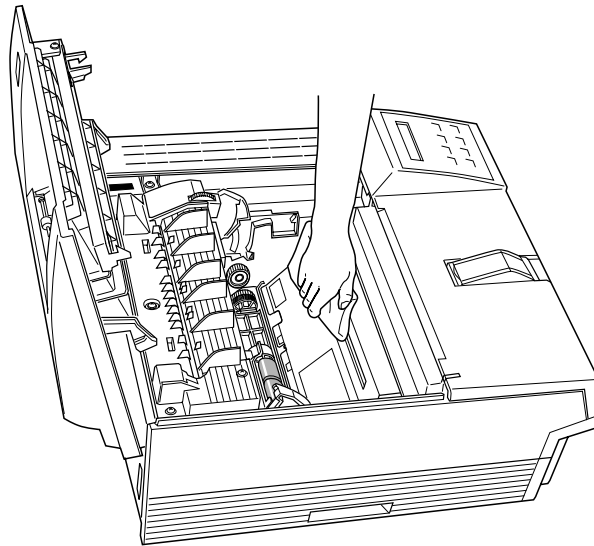
3. Remove any dirt or toner inside with a soft dry cloth.



If there is a lot of spilled toner, remove it with a small vacuum cleaner (available at computer supply stores). Make sure the vacuum can safely remove toner or other fine powders before you use it.

C **Caution:**
If you get toner on your clothing, remove it with cold water. Do not use hot water; it may cause a permanent stain.

4. Clean the printer's lens by wiping it from end to end with a dry, lint-free cloth.



5. Replace the imaging cartridge.
6. Close the top cover and open the front cover.
7. Remove any paper from the built-in paper tray.
8. Clean inside the paper feeder with a soft dry cloth.
9. Reload the paper and close the front cover.

Transporting the Printer

If you need to transport or ship the printer, first remove the imaging cartridge and place it in a sealable plastic bag.

If you installed any lower paper cassettes, lift the printer off the cassettes.

C **Caution:**
Be sure to seal the cartridge in the bag to make sure the toner does not spill on the printer or your clothing.

Then pack the printer, cartridge, and cassettes in their original packing materials, or the equivalent.

Chapter 6

Troubleshooting

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6

Diagnosing Problems

The printer's control panel display indicates the status of the printer as well as providing warning and error messages if a problem occurs. The next section lists the possible control panel display messages in alphabetical order.

If you are an experienced user and suspect a communication problem between your printer and computer, you can set the printer to Hex dump mode (hexadecimal data dump). You then print out codes and give them to a technician to help solve the problem. See page 6-7 for details.

Reading Control Panel Display Messages

This section contains an alphabetical list of status, error, and warning messages that appear in the control panel display. Message text shown here in *italics* indicates text that varies according to your configuration.

Check Paper Size

The Paper Size setting in the printer driver is different from the size loaded in the printer. Check to see if the correct size of paper is loaded in the tray (and set in the driver); then press the Continue button to clear the message.

If you turn on Size Ignore on the SelecType Config menu, this error message does not appear.

Feed Jam

Paper is not feeding into the printer from the specified feeder or has jammed on its way into the printer. Remove the jammed paper as described on page 6-8.

Form Feed

The printer is off line and data remains in the printer's memory. Press Form Feed to print out the data and clear the buffer. After printing, Ready appears on the display.

Hex Dump

Hex dump mode is on; see page 6-7 for details.

Illegal AUX I/F Card

The printer cannot recognize the installed optional interface card. Turn off the printer, then remove the card and reinstall it as described in Chapter 4. This message could also indicate that you have installed both the LocalTalk/Serial module (set to use LocalTalk) and the LocalTalk Type B interface card; if so, remove one of the interfaces.

Illegal I/F Module

The printer cannot recognize the installed optional LocalTalk/Serial module. Turn off the printer, then remove the module and reinstall it as described in Chapter 4.

Image Optimum

The printer cannot print at the requested quality level because of insufficient memory. The printer reduces the quality automatically so that it can continue printing. Check to see if the printout is acceptable. If not, add more memory (for a permanent solution) or set Resolution to 300 dpi and Page Protect to OFF (temporarily). See Chapters 2 and 3 for instructions.

Manual Feed *paper size*

Manual feed mode is specified for the current print job. Make sure the indicated *paper size* is loaded in the built-in paper tray; then press On Line.

If you do not want to print in manual feed mode, press Continue. The printer loads the paper as instructed by the Paper Source setting. (For details on using manual feed mode, see Chapter 1.)

Mem Overflow

The printer has insufficient memory available for the current print job. To correct the error, press Continue. If the message remains, press Reset. You can also clear the error by turning the printer off and back on again.

If you still receive a Mem Overflow error, it may be necessary to reduce the number or size of fonts, reduce the number or size of graphics, lower the resolution, or add more memory to the printer.

If you add more memory and you still receive a Mem Overflow message, change the Page Protect setting in the printer driver; see Chapter 2 for details. (If you are using the Windows 3.1 EPSONScript driver, change the setting on the Control Panel as described in Chapter 3.) You can also add even more memory or print at 300 dpi instead of 600 dpi.

Paper Jam

Paper is jammed in the paper path. Open the printer cover and clear the jammed paper as described on page 6-8. The jammed page's print data is then automatically reprinted.

Paper Out *source size*

There is no paper in the indicated paper *SOURCE*. Load paper of the indicated *SIZE* into the printer and press Continue.

Paper Set *source size*

The paper loaded in the indicated paper *source* does not match the required paper *size*. Replace the paper with the correct size paper and press Continue.

Print Overrun

The time required to process data exceeds the print speed due to an excess of received data. Press Continue to resume printing. If this message appears again, change the Page Protect setting in the driver or on the control panel; see Chapters 2 and 3 for instructions.

Printer Open

The printer cover is open; close it to continue printing.

RAM Check

The printer is checking the RAM; wait a moment for it to finish.

ROM Check

The printer is checking the ROM; wait a moment for it to finish.

Ready

The printer is ready to print.

Reset

The printer's current interface has been reset and the buffer is cleared. However, other interfaces may still be active and retain their settings and data.

Reset All

All printer settings for all interfaces have been reset to the default configuration.

Reset to Save

You have changed a SelecType setting but the new value is not activated yet. Do one of the following: (1) exit SelecType by pressing Continue or On Line (the new setting is activated after the current print job is finished), or (2) reset the printer by pressing ALT and Reset at the same time.

Self Test

The printer is performing its internal self test; wait a few moments for it to finish.

Service Req.*Cnnn*

Service Req.*Ennn*

A controller error (*Cnnn*) or a print engine error (*Ennn*) has occurred. Write down the error number and turn off the printer. Wait at least five seconds and then turn it back on. If the error message still appears, turn off the printer, unplug the power cord, and contact an authorized EPSON Customer Care Center.

Standby

The printer is in its low power state. If the On Line light is on, it is still on line and you may send a print job.

Toner Low

The printer is almost out of toner. You should replace the imaging cartridge soon; see Chapter 5 for instructions.

Toner Out

You must replace the imaging cartridge as described in Chapter 5. You can press Continue to print one more page.

Warming Up

The printer is warming up; wait a few moments for it to finish.

Using Hex Dump Mode

Hex dump mode is a special feature that makes it easy for experienced users to find the cause of communication problems between the printer and the computer. In hex dump mode, the printer produces an exact printout of the codes it receives. Follow these steps to turn on hex dump mode and send a print job using it:

1. Make sure paper is loaded and the printer is turned off.
2. Hold down the Form Feed button while you turn on the printer; hold down the button until you see Hex on the control panel display.
3. Open an application and print a document. Your printer prints out all the codes it receives in hexadecimal format.
4. To turn off hex dump mode, turn off the printer or reset it by pressing and holding down the ALT and Continue buttons at the same time. When Reset All appears on the display, release the buttons.

Paper Feeding Problems

If you have frequent paper feed or paper jam problems, try the following to prevent them:

- Use a higher-quality paper, one that is not too thin or rough.
- Fan the stack of paper and then tap the edges to align them before you load the stack.
- Be sure you do not load too much paper.
- Be sure to adjust the paper guides so that the paper can slide in freely.
- Never let more than 250 sheets accumulate in the output tray on top of the printer.
- Try turning over the stack of paper in the tray. Most packages of paper indicate the printable surface with an arrow on the end of the package. Make sure that side is loaded face up.

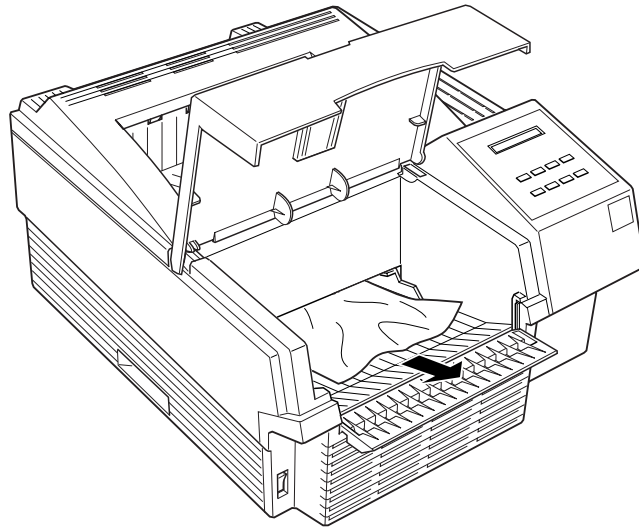
If you use an optional lower paper cassette, check the following:

- If paper will not load at all, be sure you have selected to load from the cassette in the printer driver; see Chapter 2 for details. (Also make sure the cassette contains paper and is properly installed; see Chapter 4.)
- Make sure you are using letter size paper in the cassette(s) you have.

Fixing Paper Jams in the Built-in Paper Tray

If the printer stops and the Feed Jam or Paper Jam message appears, follow these steps:

1. Open the printer's front cover.
2. Carefully remove all the paper in the built-in paper tray and any sheets fed partially into the printer.



3. Open the printer's top cover and remove the imaging cartridge. Then remove any paper remaining inside the printer and replace the imaging cartridge.

W **Warning:** Do not touch the fuser inside the printer; it is marked with the label **CAUTION HOT SURFACE**.

C **Caution:** If toner gets on your hands as you remove paper, be careful not to touch your clothing. If toner gets on your clothes, remove it with cold water; hot water may leave a permanent stain.

4. Tap the edges of your stack of paper and carefully reload it into the built-in paper tray.
5. Close the printer covers and press the Continue button. The jammed page's print data is automatically reprinted.

Fixing Paper Jams in an Optional Lower Paper Cassette

If the printer stops and the Feed Jam or Paper Jam message appears, follow these steps:

1. Remove the paper tray from the lower paper cassette.
2. Remove all the paper from the cassette and discard any curled or wrinkled sheets.
3. Tap the edges of your stack of paper and carefully reload it into the cassette's paper tray.
4. Reinstall the paper tray in the lower paper cassette.
5. Follow step 3 under "Fixing Paper Jams in the Built-in Paper Tray," above.
6. Press the Continue button. The jammed page's print data is automatically reprinted.

Printing Problems

This section describes solutions to problems you may encounter as you print. Many printer driver settings mentioned here can also be set using SelecType or the Remote Control Panel utility; if you want to use these utilities instead of the printer driver, see Chapter 3 or the *Technical Information* manual for details.

The display panel stays blank after you turn on the printer.

Turn off the printer and check the power cable connections between the printer and the electrical outlet; then turn the printer back on.

If the electrical outlet is controlled by an outside source such as a wall switch, plug the printer into a different outlet. Also plug another electrical device into the outlet to check whether the outlet is operating properly.

The printer doesn't print and the On Line light is off.

Press On Line once; the On Line light should come on.

The On Line light is on but nothing prints.

Your computer may not be properly connected to the printer. Check both ends of the cable between your printer and computer. Also make sure your interface cable meets the specifications for your printer and computer.

If you are using the serial interface, set the baud rate, protocol, data bit, and related settings. See your computer manual for the correct settings and interface requirements.

If you are using a parallel interface, check the Speed setting in SelecType to match the value the computer requires; see Chapter 3 for details.

Make sure that your software is properly set up for your printer.

The imaging cartridge may be empty; if necessary, replace it as described in Chapter 5.

The font selected in your software won't print correctly.

The selected font is not supported by your printer; see the Introduction or the *Technical Information* manual for more information.

If Image Optimum is set to Auto or On, fonts may be changed to increase print speed. Set Image Optimum to Off in the printer driver or the SelecType Config menu; see Chapters 2 and 3 for details.

The output is garbled or printed as asterisks (*).

If you use the Remote Control Panel, check whether any settings have been changed by another user; see the *Technical Information* manual for details.

Make sure that both ends of the interface cable are plugged in securely. Also be sure you use a double-shielded, twisted-pair parallel interface cable no longer than six feet in length for Parallel B; no longer than 30 feet in length for Parallel C.

If you are using an optional serial interface, set the parity, baud rate, number of data bits, and number of stop bits to match your computer; see your computer manual for details.

The emulation setting for that port may not be correct. Specify the emulation mode with SelecType (see Chapter 3) or the Remote Control Panel utility (see the *Technical Information* manual).

If the printer still does not print correctly, contact your dealer or an authorized EPSON Customer Care Center.

The position of the printout on the page is incorrect.

Make sure you are using the correct page length and margin settings in your application program.

Graphics don't print correctly.

Make sure that your software program is set for the printer emulation you are using. For example, if you are using the PS emulation, be sure that your graphics software is set for a PS printer.

If you are using a serial interface, make sure that you set the appropriate protocol settings in the SelecType Serial menu; see Chapter 3.

Graphics require large amounts of memory, so you may need to install additional memory in your printer; see Chapter 4.

The printer prints completely blank pages.

Make sure you have enough toner by checking the SelecType Toner option in the Setup menu; see Chapter 3 for instructions.

Check that the imaging cartridge is installed correctly.

Print out a status sheet by pressing the Enter button twice after the printer is warmed up and on line. If the status sheet prints correctly, check your interface cable connection and software settings for a solution. If blank pages continue to print, the problem may be with the printer. Turn off the printer and contact your authorized EPSON Customer Care Center.

SelecType does not function as expected.

Software programs override SelecType settings, so use your software settings instead of SelecType whenever possible. If your settings have been changed by your software, reset SelecType using the SelecType Init setting on the Setup menu; see Chapter 3 for details.

You may not have activated new SelecType settings. Press the Alt and Continue buttons at the same time to reset the printer and enable the new settings.

The Remote Control Panel utility does not function as expected.

Software programs override Remote Control Panel settings, so use your software settings instead of the utility whenever possible. If your settings have been changed by your software, reset your printer; see Chapter 3 for details.

Print Quality Problems

This section describes solutions to any problems you may encounter with the quality of your printout. Many printer driver settings mentioned here can also be set using SelecType or the Remote Control Panel utility; if you need to use these utilities instead of the printer driver, see Chapter 3 or the *Technical Information* manual for details.

The printout has a dark or dirty-looking background.

Lighten the Density setting in the printer driver; see Chapter 2 for details. If you're using the Windows 3.1 EPSONScript driver, use the SelecType Config menu to change the density setting.

Clean the paper path inside the printer with a clean, dry cloth; see Chapter 5 for instructions.

To clean the internal printer components, try printing three pages containing only one character per page.

If you still have dark output, there may be a problem with the imaging cartridge. Remove the cartridge, shake it from side to side, and then reinstall it. If this does not solve the problem, replace the imaging cartridge as described in Chapter 5.

The printout contains vertical black or white lines.

Clean the printer lens as described under “Cleaning the Printer” in Chapter 5. If the problem persists, install a new imaging cartridge and print several pages to check the print quality.

The printout contains horizontal black or white lines, or is all black.

Install a new imaging cartridge as described in Chapter 5.

The darkness of the printout is uneven.

Remove the imaging cartridge, shake it from side to side, and reinstall it.

Your paper may be moist or damp; replace the stack of paper and try printing again. (Printing is sensitive to moisture absorbed by the paper, so avoid storing your paper in a humid or damp environment.)

Install a new imaging cartridge as described in Chapter 5.

The printout contains toner smudges.

Remove the imaging cartridge, shake it from side to side, and wipe the bottom of it with a clean, dry cloth. Then clean the paper path inside the printer; see Chapter 5 for instructions.

Try cleaning the internal printer components by printing three pages with only one character per page. If the problem persists, replace the imaging cartridge as described in Chapter 5.

The printout is missing portions of the image.

Your paper may be moist or damp; replace the stack of paper and try printing again. (Printing is sensitive to moisture absorbed by the paper, so avoid storing your paper in a humid or damp environment.)

You may not be using the correct type of paper. Smooth, high-quality copier paper is recommended for best results. See Chapter 1 and Appendix A for information on choosing paper.

The printout is light or faint

Darken the Density setting in the printer driver; see Chapter 2 for details. If you're using the Windows 3.1 EPSONScript driver, use the SelecType Config menu to change the Density setting.

Your paper may be moist or damp; replace the stack of paper and try printing again. (Printing is sensitive to moisture absorbed by the paper, so avoid storing your paper in a humid or damp environment.)

Toner Save mode may be on. Turn off Toner Save mode using the printer driver; see Chapter 2 for details. You can also turn off Toner Save on the printer's control panel.

Take out the imaging cartridge, shake it from side to side, and then reinstall it. If the problem persists, replace the imaging cartridge as described in Chapter 5.

The printout is too dark.

Lighten the Density setting in the printer driver; see Chapter 2 for details. If you're using the Windows 3.1 EPSONScript driver, use the SelecType Config menu to change the Density setting.

If the problem persists, replace the imaging cartridge as described in Chapter 5.

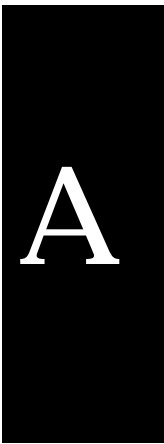
The back side of the printed page is smudged.

Toner may have spilled in the paper feed path. Remove the imaging cartridge and then clean the paper path of the printer using a soft, lint-free cloth as described in Chapter 5.

Appendix A

Specifications

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Imaging Cartridge (S051016)	A-10



Paper

Note:

Since the quality of any particular brand or type of paper may be changed by the manufacturer at any time, EPSON cannot guarantee the quality of any type of paper. Always test samples of paper stock before purchasing large quantities or printing large jobs.

Paper types: Plain paper, recycled paper, labels, envelopes, transparencies, colored paper, card stock, letter head

Note:

Use recycled paper under normal temperature and humidity conditions only. Poor quality paper may reduce print quality, cause paper jams and other problems.

Paper weight:

Plain paper 60 to 90 g/m², 16 to 24 lb

Card stock 90 to 157 g/m², 24 to 42 lb

Paper size:

Paper A4 (210 mm × 297 mm)
A5 (148 mm × 210 mm)
B5 (182 mm × 257 mm)
Letter (8.5 × 11 inches)
Half-Letter (5.5 × 8.5 inches)
Legal (8.5 × 14 inches)
Government Letter (8.5 × 10.5 inches)
Government Legal (8.5 × 13 inches)
Executive (7.25 × 10.5 inches)
F4 (210 mm × 330 mm)
Custom (92 ~ 216 mm × 148.5 ~ 356 mm)

Envelopes Monarch (3⁷/₈ × 7¹/₂ inches)
Commercial 10 (4¹/₈ × 9¹/₂ inches)
DL (110 mm × 220 mm)
C5 (162 mm × 229 mm)
International B5 (176 mm × 250 mm)
C6 (114 mm × 162 mm)

C

Caution:

Only load paper sizes that are listed above.

Printable area: 95 dots from paper edge based on 600 dpi;
varies depending on the emulation mode

Printer

General

Printing method:	Laser beam scanning and dry electrophotographic process
Resolution:	600 × 600 dpi
Printing speed:	Up to 12 pages per minute depending on the font and quantity of data
First print:	Less than 16 seconds with A4- or letter-size paper
Warm-up time:	About 60 seconds at normal temperature
Paper feed:	Automatic or manual feed
Paper feed alignment:	Center alignment for all sizes
Input paper supply (20 lb [75g/m ²] paper):	Up to 250 sheets in the MP Tray Up to 500 sheets per optional lower paper cassette (up to two optional cassettes) Up to 10 envelopes, depending on thickness
Paper eject:	Face down
Paper eject capacity:	250 sheets of 20 lb (75g/m ²) paper
Internal emulation:	PS emulation (EPSONScript Level 2) HP LJ4 Plus (PCL5e) emulation (LJ4) HP-GL/2 emulation (GL2 mode) LQ 24-pin printer emulation (ESC/P 2) ESC/P 9-pin printer emulation (FX) IBM Proprinter emulation (I239X)
Resident fonts:	35 scalable fonts in PS mode 45 scalable, 1 bitmap font in LJ4 (PCL5e) mode
RAM:	2MB, expandable up to 64MB

Environmental

Temperature:	Operation: 50 to 95°F (10 to 35°C) Storage: 32 to 95°F (0 to 35°C)
Humidity:	Operation: 15 to 85% RH Storage: 35 to 85% RH
Altitude:	8200 feet (2,500 meters) maximum

Mechanical

Dimensions and weight:

Height:	10.4 inches (265 mm)
Width:	16.2 inches (411 mm)
Depth:	19.0 inches (484 mm)
Weight:	33.1 lb (15 kg) including the imaging cartridge
Durability:	5 years or 300,000 sheets, whichever comes first

Electrical

Specification	110 V model
Voltage	90 V to 132 V
Rated frequency	50 Hz to 60 Hz \pm 3 Hz
Rated current	7 A
Power consumption	Less than 900 W
Power consumption in Standby mode with no options installed	Less than 30 W

Interfaces

In the tables below, the column heading “Direction” refers to the direction of signal flow as viewed from the printer.

Parallel B Interface

The parallel B (IEEE 1284-I compliant) interface connector pin assignments are shown in the table below.

Pin	Direction	Compatibility	Nibble
1	IN	$\overline{\text{nStrobe}}$	HostClk
2	IN	DATA1	
3	IN	DATA2	
4	IN	DATA3	
5	IN	DATA4	
6	IN	DATA5	
7	IN	DATA6	
8	IN	DATA7	
9	IN	DATA8	
10	OUT	$\overline{\text{nACK}}$	PtrClk
11	OUT	Busy	PrtBusy
12	OUT	PError	AckDataReq
13	OUT	Select	Xflag
14	IN	$\overline{\text{nAutoFd}}$	HostBusy
15	—	NC	
16	—	GND	
17	—	CG	
18	OUT	Peripheral Logic High	
19 - 30	—	GND	
31	IN	$\overline{\text{nInIt}}$	
32	OUT	$\overline{\text{nFault}}$	nDataAvail
33	—	GND	
34	—	NC	
35	OUT	+5V	
36	IN	$\overline{\text{nSelectIn}}$	IEEE1284active

Parallel C Interface

The parallel C (IEEE 1284-II compliant) interface connector pin assignments are shown in the table below.

Pin	Direction	Compatibility	Nibble	ECP
1	OUT	Busy	PtrBusy	PeriphAck
2	OUT	Select	Xflag	
3	OUT	$\overline{\text{nAck}}$	PtrClk	PeriphClk
4	OUT	nFault	nDataAvail	nPeriphRequest
5	OUT	PE	AckDataReq	nAckReverse
6	IN/OUT	DATA1		
7	IN/OUT	DATA2		
8	IN/OUT	DATA3		
9	IN/OUT	DATA4		
10	IN/OUT	DATA5		
11	IN/OUT	DATA6		
12	IN/OUT	DATA7		
13	IN/OUT	DATA8		
14	IN	$\overline{\text{nInit}}$	nReverseRequest	
15	IN	$\overline{\text{nStrobe}}$	HostClk	
16	IN	$\overline{\text{nSelectIn}}$	IEEE1284active	
17	IN	nAutoFd	HostBusy	HostAck
18	IN	Host Logic High		
19 - 35	—	GND		
36	OUT	Peripheral Logic High		

Using ECP Mode in Windows 95

To use the ECP mode with a Parallel C (IEEE 1284 level II compliant) connector, your computer must support the ECP mode.

Note:

The ECP mode is not available with Windows 3.1 and Windows NT.

To use the ECP mode, follow these steps:

1. Make the ECP mode settings in the BIOS setting program that comes with your computer. (For details of the settings and the program, see your computer manual.)
2. Click the Start button, point to Settings, and then click Control Panel.
3. Right-click the System icon, and click Open in the menu that appears.
4. Select the Device Manager tab.
5. Select the ECP Printer Port under Ports [COM & LPT], then click the Properties button.
6. Select the Resources tab.
7. Make the appropriate setting in the Resource settings dialog box. (This setting depends on your computer system. For details, see your computer manual.)
8. Click OK to save the settings.

Serial Interface

The printer's resident serial interface can be set for either RS-232C or current loop operation. The data format settings can be changed using SelecType; see Chapter 3.

Word length:	7 or 8 bits
Parity:	None, odd, or even
Stop bits:	1 or 2
Printer ready protocol:	Enabled (XON/XOFF protocol set to ON)
Baud rate (bits per second):	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600
Signal level:	RS-232C; conforms to EIA
Connector:	D-sub 25-pin connector (computer)/mini DIN (printer)

Note:

When using the serial interface as RS-232C, the availability of baud rates over 38400 depends on your computer's hardware reliability (including the interface cable). When using the serial interface as current loop, the availability of baud rates over 2400 depends on your computer's hardware reliability (including the interface cable). EPSON does not recommend or guarantee the use of any particular brand of computer.

Handshaking

The printer's serial interface can use DTR (Data Terminal Ready) signal levels and XON/XOFF communication protocols either separately or in combination. When the vacant area for data in the input buffer drops to 256 bytes, the printer outputs an XOFF code or sets the DTR signal level to low (MARK), indicating that it cannot receive more data.

Once the vacant area for data in the buffer recovers to 512 bytes, the printer outputs the XON code or sets the DTR flag to high (SPACE), indicating that it is again ready to receive data.

Error handling

An asterisk (*) is printed if a parity error, framing error, or overrun error is detected.

Pin assignments

The serial interface connector pin assignments and interface signals are described in the table below. The column heading "Direction" refers to the direction of signal flow as viewed from the printer.

Signal pin	RS-232C	Current loop	Direction	Description
2	TXD	—	OUT	Transmits data. This pin transmits serial data from the printer to the computer.
3	RXD	—	IN	Received data. This pin transmits data from the computer to the printer.
5	CTS	—	IN	Always ignored

Signal pin	RS-232C	Current loop	Direction	Description
17	—	TTY-TXD	OUT	Transmits data. This pin transmits serial data from the printer to the computer.
20	DTR	—	OUT	Data terminal ready. This pin indicates whether or not the printer is ready to receive data. If the printer ready protocol is not selected, the printer is always ready to receive data (this pin is always HIGH). If the printer ready protocol is selected, the printer can accept data when the pin level is HIGH and cannot accept data when the pin level is LOW. When the DTR signal goes LOW, the host computer must stop sending data within 256 characters. This function can be set on or off with the default-setting mode of the printer.
23	—	TTY-RXD Return	—	Received data. This pin transmits serial data from the computer to the printer.
24	—	TTY-RXD Return	—	Transmits data. This pin transmits serial data from the printer to the computer.
25	—	TTY-RXD	IN	Received data. This pin transmits serial data from the computer to the printer.

500 Sheet Lower Paper Cassette

Paper size:	Letter (C81263*)
Paper weight:	16 to 24 lb (60 to 90 g/m ²)
Paper feed:	Automatic feed delivery system Cassette capacity up to 500 sheets (20 lb or 75 g/m ² paper)
Feeding speed:	For the first sheet, 22 seconds or less; subsequent sheets, 12 pages per minute
Paper types:	Plain paper, such as copier paper, and recycled paper
AC power supply:	DC 5 V supplied by the printer
Dimensions and weight:	
Height	4.2 inches (107 mm)
Width	15.9 inches (405 mm)
Depth	18.9 inches (477 mm)
Weight	8.8 lb (4.0 kg)

Imaging Cartridge (S051016)

Storage temperature:	32 to 95°F (0 to 35°C)
Storage humidity:	35 to 85% RH
Shelf life:	18 months after production
Life:	Up to 6000 pages under the following conditions: letter paper, continuous printing, and 5% print ratio

The number of pages you can print with an imaging cartridge varies depending on the type of printing. If you print a few pages at a time or print dense text exceeding the 5% print ratio, your cartridge may print fewer pages.

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