EPSON

Page Printer

EPL-N1600

Reference Guide

Printer Parts

printer cover

printer cover latch

MP Tray

control panel

lower cassette tray

Type-B interface connector (option)

Parallel interface connector

Serial interface connector

power switch

AC inlet

EPSON®

EPL-N1600

Printed on Recycled Paper.

Reference Guide

Declaration of Conformity

According to ISO/IEC Guide 22 and EN 45014

Manufacturer: SEIKO EPSON CORPORATION
Address: 3-5, Owa 3-chome, Suwa-shi,
                 Nagano-ken 392 Japan

Representative: EPSON EUROPE B.V.
Address: Prof. J. H. Bavincklaan 5 1183
                 AT Amstelveen
                 The Netherlands

Declares that the Product:

  Product Name: Laser Printer
  Type Name: EPL-N1600
  Model: XXB-2

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

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

        Directive 73/23/EEC:
                        EN 60950

July 1998

Y. Ishii
President of EPSON EUROPE B.V.

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Glossary

Getting Started

The EPSON EPL-N1600 printer combines high performance and reliability with a wide range of features.

To get started with your laser printer, please:

❏ Use your *Getting Ready!* guide to set up and test your new printer.

❏ Read the safety information, laser printer precautions, and important safety instructions in this section.

See this guide for detailed information about your printer.

About This Guide

This guide contains information about using your printer. For information about installing and setting up the printer, see the separate *Getting Ready!* guide.

Chapter 1, "Understanding Your Printer", describes the basics of how to control the printer.

Chapter 2, "Paper Handling", describes how to load paper into and setting up the printer for type and size of paper that you loaded.

Chapter 3, "Options", gives step-by-step instructions for installing the options available for the printer.

Chapter 4, "EPSON Status Monitor Utility", describes how to install the EPSON Status Monitor utility.

Chapter 5, "SelecType", describes the printer settings that can be modified printer's control panel, including the SelecType and the OneTouch modes.

Chapter 6, "Troubleshooting and Maintenance", gives helpful information for what to do if you encounter a printer error and provides instructions on how to maintain your printer.

Appendix A, "Technical Specifications", contains the technical specifications about the printer.

Appendix B, "Symbol Sets", lists the symbol sets available in each emulation mode with the tables of the characters for each set.

Appendix C, "Command Summary", lists the commands that can be embedded in print jobs to control the printer. This appendix is intended for advanced users only.

Appendix D, "Working with Fonts", describes the steps you need to follow to add more fonts.

Appendix E, "Contacting Customer Support", details customer support information.

Appendix F, "Map of SelecType Menus", lists the SelecType menus and the order in which you access them. This appendix is useful when you use SelecType.

About Your Printer

Your printer is the latest in EPSON's advanced line of laser printers. It emulates the Hewlett-Packard® LaserJet 4™ (LJ4) printer, allowing you to print using the wide variety of software programs that support HP LaserJet printers.

The printer's 600-dpi (dots per inch) resolution is enhanced by EPSON's Resolution Improvement Technology (RITech), which smoothes the jagged edges of diagonal lines in both text and graphics. This gives your documents a clean, crisp look that contributes to a professional appearance.

In addition, EPSON's Enhance MicroGray technology provides you with better halftoning when printing graphics.

The printer is easy to install and use. You simply set up the printer, connect it to your computer, and install the printer driver as described in the *Getting Ready!* guide.

The printer supports ECP mode in Windows 95. ECP mode is useful for high-speed data transfer and bidirectional communication with your computer.

Features

The printer comes with a full set of features that contributes to ease of use and consistent, high-quality output. The main features are described below.

High-quality printing

Your printer provides 600-dpi printing at a speed of up to 16 pages per minute. You'll appreciate the professional print quality produced by your printer and its quick processing speed.

Wide variety of fonts

The printer comes with a full selection of scalable TrueType®
fonts, LaserJet-compatible scalable fonts, and one bitmap font in LJ4
emulation mode to provide you with the fonts you need to create
professional-looking documents.

Toner Save Mode

To reduce the amount of toner used in printing documents, you
can print rough drafts using the Toner Save Mode.

Options

The printer comes with built-in bidirectional parallel interface,
serial interface, and 8 MB of memory, which can be expanded up
to 40 MB. You can also install an additional Type-B Ethernet,
serial, coax, or twinax interface. The 500 Sheet Lower Paper
Cassette Unit-Universal (C81290✽), automatically feeds up to 500
sheets without reloading. The Duplex Unit (C81293✽) allows you to
print on both sides of paper fed from the 250 sheet cassette or the
optional 500 sheet lower cassette. The Face Up Tray (C81294✽) is
recommended for printing on media that require a straight-through
paper path, such as labels and transparencies.

ENERGY STAR Compliance

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

The International ENERGY STAR Program promotes the voluntary
development of energy-efficient computers, printers, and other
peripheral equipment.

Safety Information

Laser safety

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.

For European users

United Kingdom

The EPL-N1600 is a page printer which utilizes a semiconductor laser.

There is no possibility of danger from the laser, provided the printer is operated according to the instructions in the guides provided.

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

Warning:
Use of controls or adjustments or performance of procedures other than those specified in this guide, may result in hazardous radiation exposure.

This is a semiconductor laser. The maximum power of the laser diode is 5 mW and the wavelength is 770 - 795 nm.

Denmark

Advarsel
Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

Klasse 1 laser produkt der opfylder IEC825 sikkerheds kravene.

Finland and Sweden

EPL-N1600 on lasertoiminen sivukirjoitin. Laserista ei aiheudu käyttäjälle vaaraa, kun kirjoitinta käytetään käyttöohjeiden mukaisesti.

Laserin aiheuttama säteily jää kokonaisuudessaan suojarakenteiden sisäpuolelle, eikä lasersäde pääse laitteen ulkopuolelle sit käytettäessä.

VAROITUS!
Laitteen käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!
Om apparaten används på annat sätt än i denna bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laser
klass 1.

LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

Kirjoittimen taakse kuvan osoitamiin paikkoihin on kiinnitetty tarrat, jotka osoittavat, että kirjoitin on B.S.7192 ja IEC 825-määräysten mukainen luokan 1 laserlaite. Jos kirjoittimen kuori poistetaan, näkyviin tulee kolmas, alla oleva tarra.

Norway

Advarsel
Dersom apparatet brukes på annen måte enn spesifisert i denne bruksanvisning, kan brukeren utsettes for unsynlig laserstråling som overskrider grensen for laser klasse 1.

Dette er en halvleder laser. Maksimal effeckt til laserdiode er 5 mW og bolgelengde er 770 - 795 nm.

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.

Laser safety labels

> ![warning icon] **Warning:**
> *Use of controls, adjustments, or performance of procedures other than those specified in this 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.

LASER KLASSE 1 NACH IEC 825
CLASS 1 LASER PRODUCT TO IEC 825
KLASSE 1 LASER PRODUKT I.H.T. IEC 825
LUOKAN 1 LASERLAITE
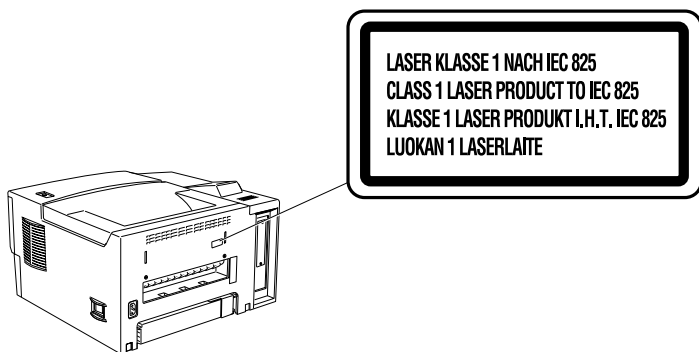
Internal laser radiation

Max. Radiation Power   5 mW

Wavelength   770 - 795 nm

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.

For Denmark, Finland, Sweden, and Norway users

An additional laser warning label is affixed to the inside of the printer, as shown below.

	CAUTION	INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM
	PRECAUCIÓN	LASÉRICA INVISIBLE CUANDO SE ABRA Y ANULE EL INTERBLOOUEO. EYITE LA EXPOSICION DIRECTA AL HAZ
	VARNING	OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD STRÅLEN ÅR FARLIG
ADVARSEL		USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN
ADVARSEL		USYNLIG LASERSTRÅLING VED ÅBNING UNDGÅ UDSÆTTELSE FOR STRÅLING
VARO!		AVATTAESSA OLET ALTTIINA NÄKYMÄTÖN LASERSÄTEILYLLE ÅLÅ KATSO SÅTEESEEN
VORSICHT!		UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN
ATTENTION		EVISSION DE RADIATION LASER INVISIBLE L'APPAREIL EST OUYERT ET LORSOUE LA SECURITE EST NEUTRALISEE. EYITER DE S'EXPOSER AU RAYON LASER

Ozone safety

Ozone emission

Ozone gas is generated by laser printers as a by-product of the printing process. Ozone is produced only when the printer is printing.

Ozone exposure limit

The recommended exposure limit for ozone is 0.1 parts per million (ppm) expressed as an average time-weighted concentration over an eight (8) hour period.

The EPL-1600 laser printer generates <0.01ppm for 8 hours of continuous printing when considering a closed room of approximately 1000 cu ft (8' × 10' × 12').

Minimize the risk

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

Printer location

The printer should be located so that the exhaust gases and heat generated are:

❏ Not blown directly into the user's face

❏ Vented directly out of the building whenever possible

Laser Printer 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 HIGH TEMPERATURE. If the printer has been in use, the fuser can be very hot.

CAUTION HIGH TEMPERATURE
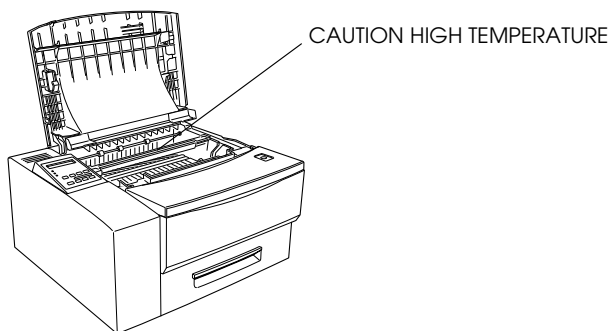
❏ Avoid touching the components inside the printer unless instructed to do so in this guide.

❏ Never force the printer's components into place. Although the printer is designed to be sturdy, rough handling can damage it.

❏ Be sure not to scratch the surface of the drum. When you remove the cartridge from the printer, always set the unit on a clean, smooth surface. Also, avoid touching the drum, 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 sides.

❏ Protect the light-sensitive drum from exposure to light. Avoid exposing the imaging cartridge to room light any longer than necessary. Do not open the drum's protective cover. Overexposing the drum may cause abnormally dark or light areas to appear on the printed page and reduce the service life of the drum.

❏ When handling the cartridge, always set it on a clean, smooth surface.

❏ Do not attempt to modify or take apart the cartridge. It cannot be refilled.

❏ Try not to touch the toner and avoid all contact with your eyes.

❏ Do not use a cartridge for at least one hour after moving it from a cool to a warm environment.

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

Hinweis:
❏ *Die Geräteanschlußleitung muß den einshlägigen Normen genügen.Es muß eine dreiadrige Leitung verwendet werden. Die Anshlußleitung darf nicht leichter als H05VV-F order H05VVH2-F sein.*

❏ *Maschinenlärminformations-Verordnung-3. GSGV, 18. 01. 1991: Der arbeitsplatzbezogene schalldruckpegel beträgt 70 dB (A) oder weniger gemäß ISO 7779.*

Important Safety Instructions

Read all of these instructions before operating your printer.

❏ Follow all warnings and instructions marked on the printer.

❏ Unplug this printer from the wall outlet before cleaning. Use a damp cloth for cleaning and do not use liquid or aerosol cleaners.

❏ Do not use this printer near water.

❏ Do not place the printer on an unstable cart, stand, or table.

❏ Slots and openings in the cabinet and the back or bottom are provided for ventilation. Do not block or cover them. Do not put the printer on a bed, sofa, rug, or other similar surface or in a built-in installation unless proper ventilation is provided.

❏ Use the type of power source indicated on the label. If you are not sure of the type of power available, consult your dealer or local power company.

❏ If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet.

❏ Do not put your printer where the cord will be walked on.

❏ If you use an extension cord, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.

❏ Never push objects of any kind through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock.

❏ Never spill liquid of any kind on the printer.

❏ Except as specifically explained in this guide, do not attempt to service this product yourself. Opening or removing those covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks. Refer all servicing in those compartments to service personnel.

❏ Unplug this printer from the wall outlet and refer servicing to qualified service personnel under the following conditions:

1. When the power cord or plug is damaged or frayed.

2. If liquid has been spilled into it.

3. If it has been exposed to rain or water.

4. If it does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.

5. If it has been dropped or the cabinet has been damaged.

6. If it exhibits a distinct change in performance, indicating a need for service.

For United Kingdom Users

Use of options

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

Safety information

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

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

Green and yellow—Earth
Blue—Neutral
Brown—Live

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

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

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

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

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

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

Warnings, Cautions, and Notes

![w] **Warnings** *must be followed carefully to avoid bodily injury.*

![c] **Cautions** *must be observed to avoid damage to your equipment.*

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

Chapter 1

Understanding Your Printer

Controlling the Printer

There are a two ways to control your printer and change its settings:

❏ The printer driver (for Windows users only)

❏ Control Panel operation (SelecType)

Normally, you should use the printer driver to control your printer. The printer driver allows you to easily make the most common printer settings, including the paper source, paper size, and orientation. To access the driver menus, see below.

A few software programs do not allow you to control printer setting using the printer driver. In these cases, you can use the printer's control panel to adjust the printer settings. For information on using the control panel, see Chapter 5.

Accessing the printer driver

You can access your printer driver directly from most Windows-based applications, or from your Windows operating system, as explained below. The printer driver settings made from many Windows applications override settings made when the driver is accessed from the operating system, so in most cases you should access the driver from your application to make sure you get the results you want.

❏ To access the printer driver from your application software, click the Print or Page Setup command on the File menu. You also need to click Setup, Options, Properties, or a combination of these buttons.

❏ To access the driver from Windows 3.1 or Windows 3.11 for Workgroups, double-click the Control Panel icon in the Main program group, then double-click the Printers icon. Choose your EPSON printer from the Installed Printers list and click Setup.

❑ To access the driver from Windows NT 3.51, double-click the Control Panel icon in the Main program group, then double-click the Printers icon. Double-click your printer icon and select Properties from the Printers menu. Make sure your printer is selected and click Setup.

❑ To access the driver from Windows 95, or Windows NT 4.0, click Start, point to Settings, and click Printers. Next, right-click the icon of your EPSON printer and click Properties (in Windows 95) or Document Defaults (in Windows NT 4.0).

The Control Panel

The printer control panel gives you easy control over most common printer operations. The panel is made up of three elements: a liquid crystal display (LCD), indicator lights, and buttons. The display and indicator lights tell you about the current status of the printer, and you can use the buttons to select printer settings and functions. However, settings that you make with the buttons will be overridden by settings made by software.

Getting familiar with the way your printer's control panel works may help you get more from your printer. For more information on the SelecType settings available from the control, including the OneTouch modes, see Chapter 5, "SelecType".

This section also shows all SelecType menu categories and options. It can be used as a guide whenever you use SelecType features.

Optimizing Print Quality

Your printer provides you with a number of ways to print your documents so that they are presented with the highest possible quality. The two features discussed here are EPSON's Resolution Improvement Technology (RITech) and Enhanced MicroGray (Enh. MG).

Resolution Improvement Technology

Resolution Improvement Technology (RITech) is EPSON's original printer technology that improves the appearance of printed lines, text and graphics.

The factory default setting for RITech is on. The RITech gives the best quality text and graphics for nearly all purposes. You may not need to turn the setting off. However, if you are printing gray shading or screen patterns, change the setting to Off.

To change the RITech setting, follow these steps:

Using the printer driver:
Check or uncheck the RITech check box on the Panel menu in the printer driver to turn RITech on or off.

Using the SelecType:
Follow the instructions in the section on using SelecType. This setting is made in the Config menu (page 5-21).

Adjusting Print Density

Do not change the print density unless it is necessary. Changing the print density affects all text and graphics. Check the new density setting by printing several pages with various kinds of text and graphics.

If your printouts are too light or too dark, adjust the print density with the printer driver or the SelecType mode.

Using the printer driver:
Change the Density setting on the Panel menu of the printer driver.

Using SelecType:
Follow the instructions in the section on SelecType to change this setting. You should use the Config menu for this ("Density", page 5-21).

Note:
Increasing the print density increases toner consumption. If you select darker printing, you may need to replace the toner cartridge more often.

Enhanced MicroGray

Enhanced MicroGray (Enh. MG) is EPSON's new printer technology created especially for high quality output of photos and other images with smooth total changes.
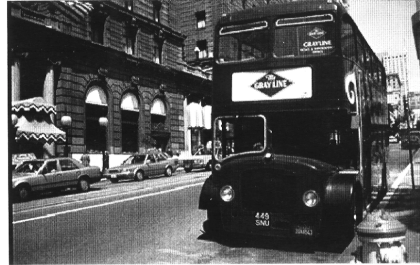
Enh. MG off   Enh. MG on

To use the Enhanced MicroGray setting folow these steps:

Using the printer driver:
Click the Enh. MG button on the Graphic menu in the printer driver.

Paper Handling

2

The printer can feed paper from any of three sources: the standard paper cassette tray, the MP Tray, or the optional 500 sheet lower cassette unit. To load paper from standard paper cassette tray, see your *Getting Ready!* guide. To load paper in an optional lower cassette, see page 3-11.

❏ Paper should be high quality and relatively smooth with a weight between 60 and 105 g/m^2 (16 to 28 lb) for the standard paper cassette tray and optional 500 sheet lower cassette unit, or between 60 and 157 g/m^2 (16 to 42 lb) for the MP Tray.

❏ The printer is extremely sensitive to moisture. Be sure to store your paper in a dry environment.

❏ Use of colored paper is acceptable, but coated paper should be avoided.

❏ You may use paper with preprinted letterheads, provided that the paper and ink are both of laser printer types.

Using the MP Tray

The MP tray is used for making short print runs on paper types and sizes which are not loaded in the paper cassettes, or for printing other media such as transparencies, labels, or envelopes.

Selecting the MP tray as the paper source

There are two ways to selelct the source of the paper used by the printer:

❏ Using the printer driver from Windows

❏ Using the SelecType mode

Using the printer driver:
Choose the paper source on the Basic Setting menu (except Windows NT 3.51) or Document Setting menu (in Windows NT 3.51). For more information on using the printer driver, see online help in the driver.

Using the SelecType mode:
For information on changing the paper size in SelecType mode, see Chapter 5.

Printing with the MP tray

1. Open the front cover by pulling the top of the panel towards you.
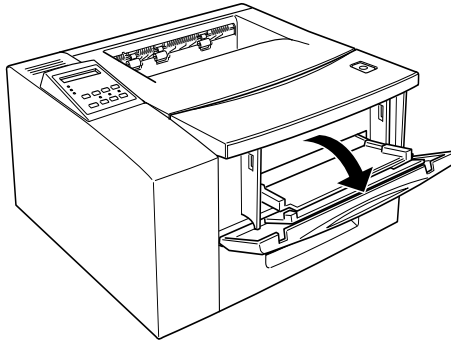
2. As shown in the illustration below, pull the tab so that the MP tray folded inside the front cover flips out.
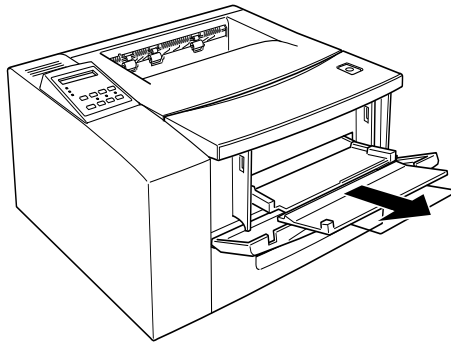
3. Slide the guide to the far right of the MP tray.
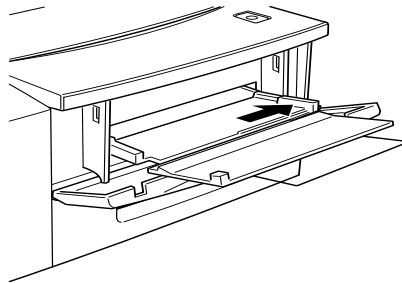
4. Fan the media and tap the edges on a flat surface to align them before loading the media.

5. Place the stack of the media in the MP tray. The top of the media (for example, the printed letterhead at the top of a sheet of paper) should go in first. The surface on which you are printing should face upwards.
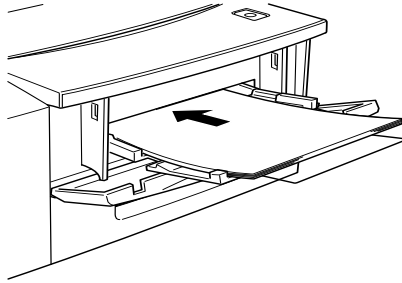
6. Adjust the side guide so that it touches the right edge of the media stack. Make sure that the top of the stack is under the plastic tab on the side guide.
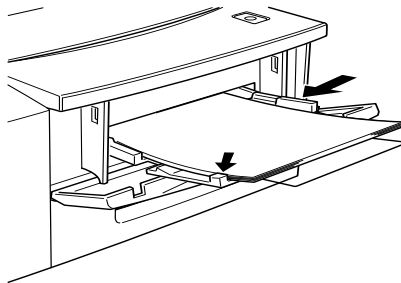
Note:
Do not add any media to the MP tray while you are printing, otherwise paper jams may occur.

Printing envelopes with the MP tray

1. Open the MP tray as explained above.

2. Slide the side guide to the far right of the MP tray.

3. Before you put the envelopes in the MP tray, make sure that they are not stuck together and that all their flaps are closed.

4. Put the envelopes with their flaps down, and the short edge leading into the printer.
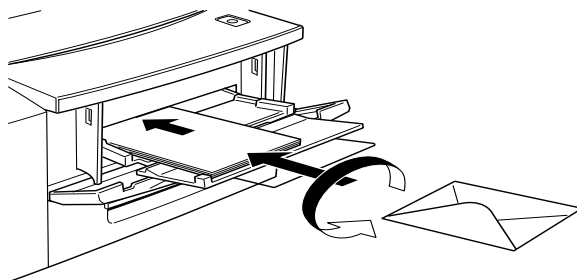
Note:
❏ *If the flaps of the envelopes are on the long edge of the envelopes, make sure that the envelopes are placed in the MP tray with the flaps to the right.*

❏ *If the flaps of the envelopes are on the short edge of the envelope, make sure that the short edge with the flap goes into the printer first.*

❏ *Make sure that the envelopes are against the left edge of the MP tray and that they are all under the plastic tab of the left guide of the MP tray.*

5. Slide the right side guide to the loaded envelopes. All the envelopes should be under the plastic tab of the right side guide.
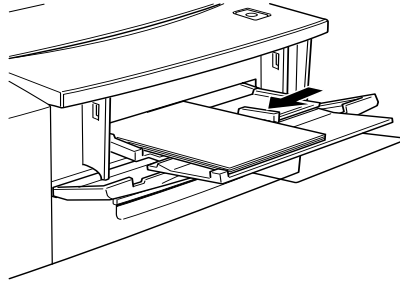
Note:
Do not add envelopes to the MP tray while you are printing, otherwise paper jams may occur.

Manually Loading Paper

You can manually load paper. Manually loading paper can be helpful when you want to check the print quality after each page is printed.

❏ This loading procedure is almost the same as the procedure for automatic paper feeding, except you load paper sheet-by-sheet, send print data to print the first page, and press the On Line button to print each page.

To load paper maually, follow the steps below.

1. Access the printer driver menus in one of the following ways:

    ❏ To access the printer driver from your application software, click the Print or Page Setup command on the File menu. You also need to click Setup, Options, Properties, or a combination of these buttons.

    ❏ To access the driver from Windows 3.1 or Windows 3.11 for Workgroups, double-click the Control Panel icon in the Main program group, then double-click the Printers icon. Choose your EPSON printer from the Installed Printers list and click Setup.

    ❏ To access the driver from Windows NT 3.51, double-click the Control Panel icon in the Main program group, then double-click the Printers icon. Double-click your printer icon and select Properties from the Printers menu. Make sure your printer is selected and click Setup.

    ❏ To access the driver from Windows 95, or Windows NT 4.0, click Start, point to Settings, and click Printers. Next, right-click the icon of your EPSON printer and click Properties (in Windows 95) or Document Defaults (in Windows NT 4.0).

2. The Basic Setting menu (except Windows NT 3.51) or the Printer Setup menu (Windows NT 3.51) appears. Check the Manual Feed check box.

3. Select the paper size from the paper size list.

2

4. If the correct paper size is already loaded, skip this step.

   Otherwise, remove any paper remaining in the tray or cassette that you use. Insert a sheet or stack of the correct size paper into the tray or cassette that you use, with the printable side up, as far as it will go. Adjust the paper guides to match the paper size you are loading.

5. Send a print job from your application. The control panel display shows Manual Feed and the selected page size.

6. Press On Line to print. The sheet of paper is loaded and printed.

   Note:
   If you check the continuous check box in the printer driver, the sheet of paper is loaded and printed successively by pressing On Line *button only once after you press the* On Line *button, the printer will feed paper automatically. You will not have to continue to press the* On Line *button.*

7. Press On Line again to print the next page of print data, if necessary. Repeat this steps for every page to be printed.

Selecting the Paper Size

By default, the printer driver is set for A4 size paper. If you load paper of a different size, you need to change the paper size setting using one of the following methods.

Using the printer driver:
Choose the paper size on the Basic Settings menu (except Windows NT 3.51) or Document setting menu (in Windows NT 3.51). For more information on using the printer driver, see online help in the driver.

Using the SelecType mode:
For more information on changing the paper size in SelecType mode, see Chapter 5.

Loading an uncommon paper size

To load an uncommon, or custom, paper size from 90×148 mm (3.5×5.8 inches) to 215.9×355.6 mm (8.5×14 inches), use the MP Tray (as described in your Getting Ready! guide) and make the size setting by one of the following methods:

❏ Access the printer, click inside the paper size box on the paper menu. When you finish adjust the Width, Height, and Unit settings to match your custom paper, click the OK button and your custom paper size will be saved.

❏ Access SelecType mode (see Chapter 5) and set page size to CTM (custom).

Printing on Special Paper

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

You can print on special paper stock such as heavy paper, envelopes, labels, and transparencies.

Envelopes

The printing quality on envelopes may be irregular because different parts of an envelope have different thicknesses. Print one or two envelopes to check the print quality. If the printing is too light, adjust the print density as described elsewhere in this manual.

Do not use window envelopes unless they are specially designed for laser printers. The plastic on most window envelopes will melt when it comes in contact with the fuser.

Labels

You can load a number of sheets of labels in the MP tray. However, you may need to feed some types of labels one sheet at a time in the paper tray, or load them manually.

You must use only labels designed for laser printers or plain-paper copiers.

To prevent the adhesive from coming into contact with printer parts, always use labels that completely cover the backing sheet, with no gaps between the individual labels.

You should test the label sheet for leaking adhesive by pressing a sheet of paper on top of a sheet of labels. If the paper sticks to the sheet of labels, do not use the labels in your printer.

Transparencies

You may need to feed some types of transparencies one sheet at a time in the MP tray, or load them manually.

Caution:
You must use only overhead projector transparencies or adhesive drafting film made for use with laser printers or plain-paper copiers. If you use any other kind of transparent media, you may damage your printer.

Chapter 3
Options

There are a number of options available for your printer. These include:

❏ The 500 Sheet Lower Paper Cassette Unit - Universal (C81290✽) increases paper feeding capacity (up to 500 sheets of paper).

❏ The Duplex Unit (C81293✽) is useful for printing on both sides of paper.

❏ The Face Up Tray(C81294])enables face-up output.

❏ Optional memory module expands your printer's memory.

❏ EPSONScript Level 2 module (C83229✽) generates crisp PostScript output. See "ROM module".

❏ Optional interface cards and modules provides a variety of interfaces, allowing you to use your EPL-N1600 with an Ethernet network, an IBM mainframe and other specialized interfaces.

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

Each of these options is discussed in its own section.

If you purchased your printer and options at the same time, first set up the printer and run the printer test by following the instructions in the *Getting Ready!* guide. Then install the options.

500 Sheet Lower Paper Cassette Unit

The optional lower paper cassette gives you a third paper source, in addition to the standard cassette tray and the MP Tray. This section describes how to install the cassette and load paper.

If you have installed the optional 500 sheet lower paper cassette, you can use this in a very similar way to the standard 250 sheet paper cassette. You can use the same kinds of paper, but the optional lower cassette will hold twice as much.

You select the lower paper cassette in the same way that you select the MP tray: using the printer driver software, or with the control panel.

❏ If you use the printer driver software, remember to add the lower paper cassette to the list of available paper sources in the Option menu of the printer driver.

❏ When you use the control panel to select the lower cassette, the abbreviation shown in the display is LC2 (lower cassette 2).

No Duplex Unit Installed

If you have not installed the optional duplex unit, follow the instructions below to install the 500 sheet lower paper cassette.

1. Unpack the 500 sheet lower paper cassette and place it on the surface where the printer is to be installed.
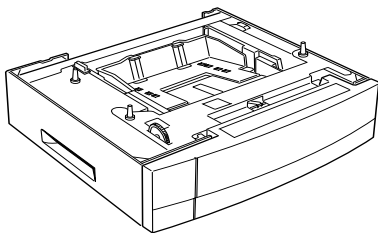
2. Make sure the printer and cassette are facing in the same direction.

3. Lift the printer and align the pins on the cassette with the holes on the bottom of the printer.
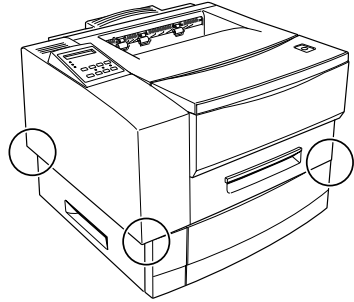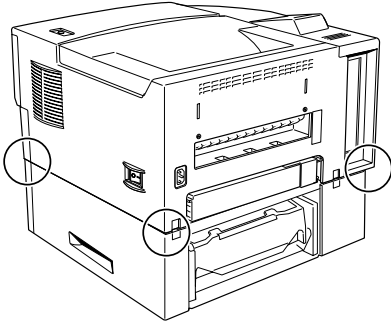
⚠ *Warning:*
The printer weighs over 12 kg (about 26 lb). Take care when lifting the printer. If necessary, get someone to help you

4. Lower the printer until it rests securely on the cassette.

5. Fasten the two feeder joints at the rear of the printer securely, using the supplied clips.
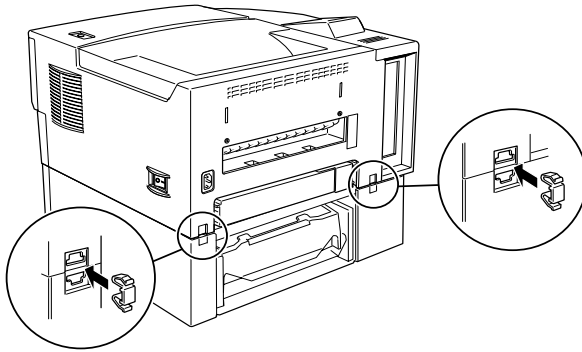
6. Remove the upper 250 sheet paper cassette completely from the printer, and pull out the lower 500 sheet paper cassette until you can see the front feeder joints.
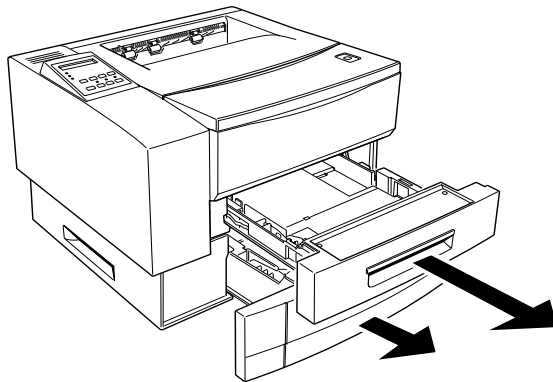
7. Fasten the front feeder joints securely, using the supplied clips.
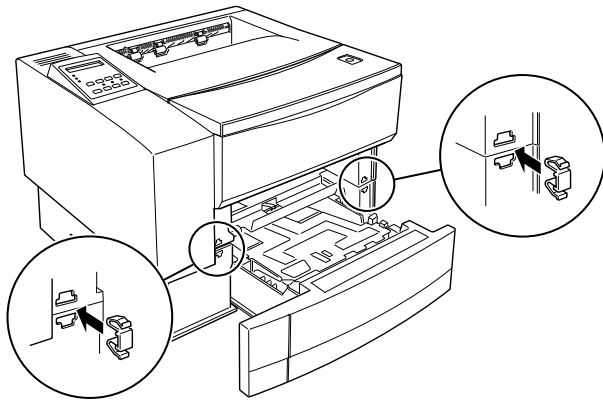
⚠ _Warning:_
Always remove the optional 500 sheet lower paper cassette before lifting the printer. Never try to lift up the printer together with the 500 sheet lower paper cassette attached to the printer.

Duplex Unit Installed

If you have already installed the duplex unit, follow the instructions below. Otherwise, if you are installing the 500 sheet lower paper cassette without installing the duplex unit, turn to "No Duplex Unit Installed", page 3-3.

If you are installing both the duplex unit and the 500 sheet lower cassette, you must install the duplex unit first. Turn to "Installing the Duplex Unit", page 3-20 and install the duplex unit if you have not yet done so.

3

1. Unpack the 500 sheet lower paper cassette and place it on the surface where the printer is to be installed.
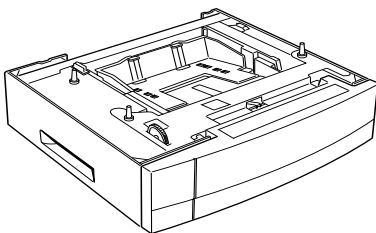
2. Make sure the printer and cassette are facing in the same direction.

3. Face the front of the printer. Pick it up using the grips on the duplex unit, as shown below.

    Note:
    There are three pins on top of the 500 sheet lower paper cassette: two on the left and one on the right. These three pins fit into three corresponding holes on the bottom of the duplex unit for a secure fit.
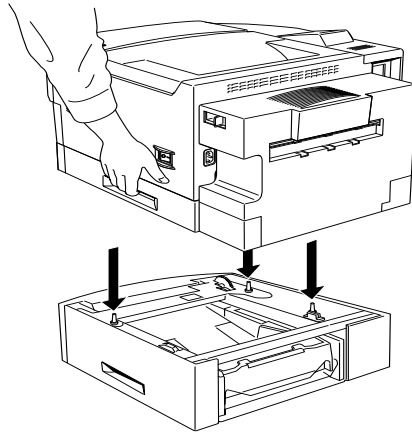
4. Lower the printer and duplex unit combination onto the 500 sheet lower paper cassette, taking care to line up the corners. Make sure that the printer and duplex unit are firmly seated.
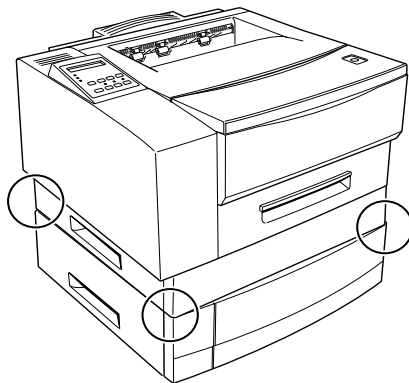
5. Use the supplied clips to fasten the two joints at the rear of the printer (joining the duplex unit to the 500 sheet lower paper cassette). Make sure the clips are securely fastened.
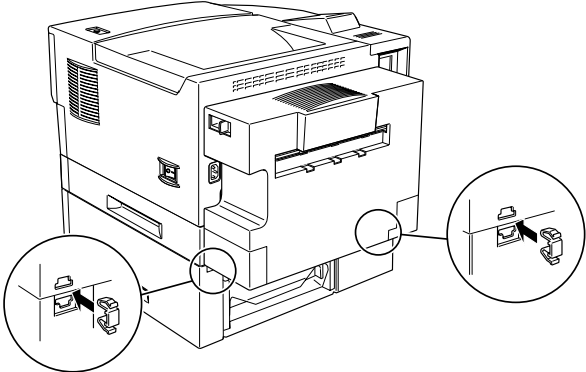
6. Completely remove the duplex feeder tray and pull out the 500 sheet lower paper cassette until you can clearly see the two feeder joint areas on the duplex unit.
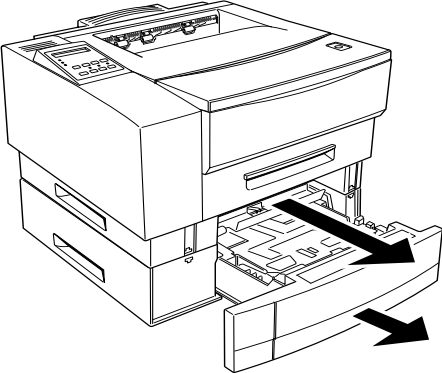
7. Use the supplied clips to fasten the two joints as shown below. Make sure the clips are fastened securely.
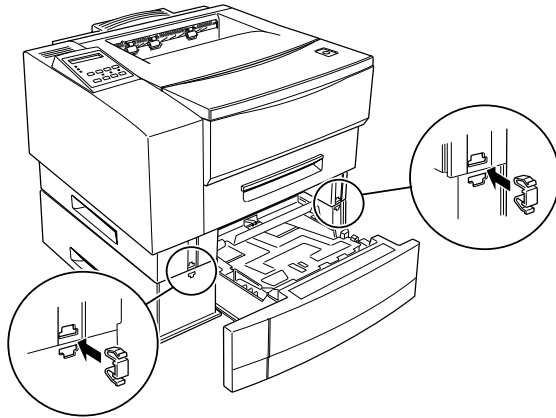
8. Push back the 500 sheet lower paper cassette and replace the duplex feeder tray.

Loading the optional lower cassette with paper

1. Remove the lower cassette by reaching into the handle and pulling straight towards you.
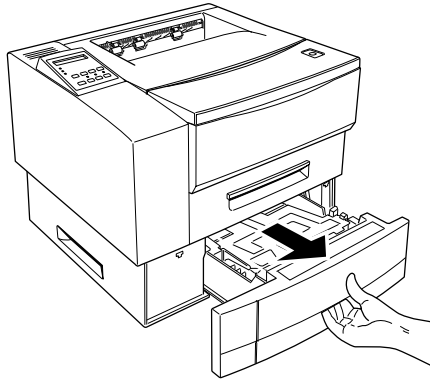
2. Press down on the bottom plate until you feel it click into place.
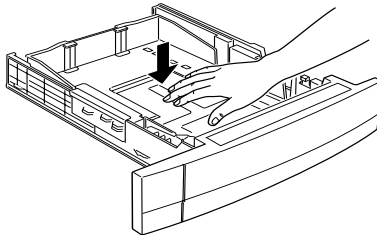
3. Squeeze the side guide and slide it to the far right of the cassette.
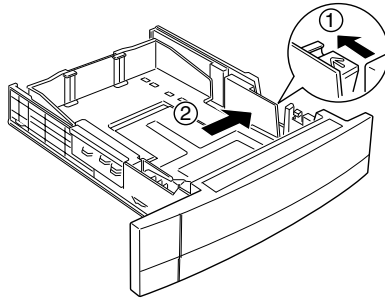
4. You may need to adjust the length of the cassette to fit the paper you are using. Use one hand to hold the cassette steady. Use the other hand to raise and unlock the left corner of the end guide. While continuing to hold the cassette steady, raise and unlock the right corner of the end guide. Slide the end guide so that the length of the cassette matches the paper you are using. Push the end guide down until it locks into place.
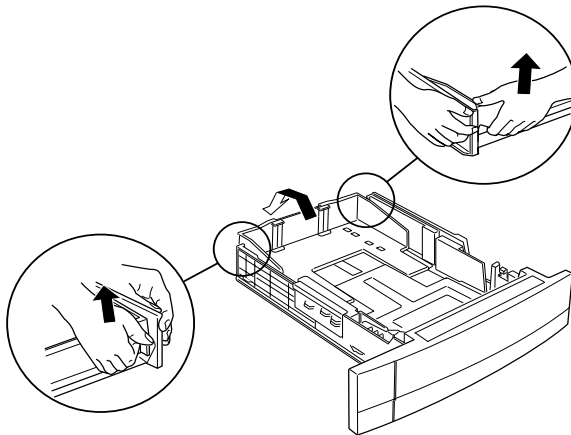
Note:
There are notches on the bottom of the cassette which you can use to help set the guide to match the paper length.

5. Fan a stack of paper (up to 500 sheets) to prevent the sheets from sticking together, and tap the edge of the stack on a firm surface to line up the edges of the paper.

6. Insert the stack into the cassette, lining it up with the left side of the cassette. Make sure that all the paper is under the metal retaining clip and the plastic caps on the end guides. If you load the printer with too much paper, it may cause paper jams.
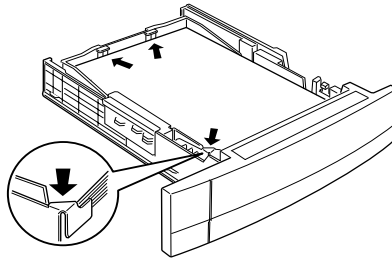
7. Slide the side guide to the left, so it just touches the edge of the stack of paper.
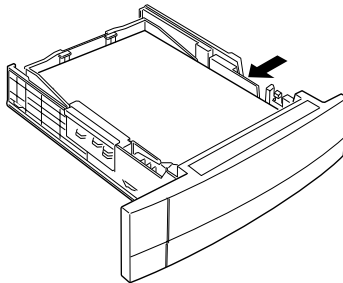
8. Replace the paper cassette in the printer.
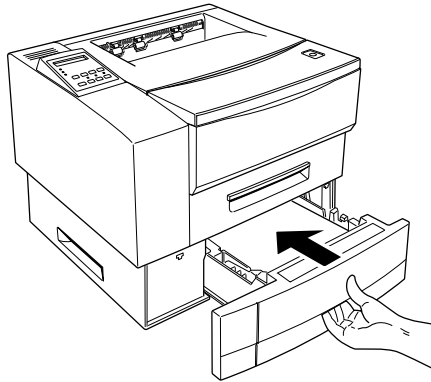
c *Caution:*
Do not remove the cassette while you are printing, otherwise you may cause a paper jam.

Removing the Lower Paper Cassette (no duplex unit installed)

When moving the printer, you should remove the lower paper cassette first. When fitted with the lower paper cassette the printer is very heavy.

1. Make sure that the computer and printer are turned off, remove the power cord from the wall outlet and from the printer. Remove any interface cables from the printer.

2. At the rear of the printer, you see the two feeder joint clips joining the lower paper cassette to the printer. Pinch these feeder joint clips between your thumb and finger and remove them, as shown below.
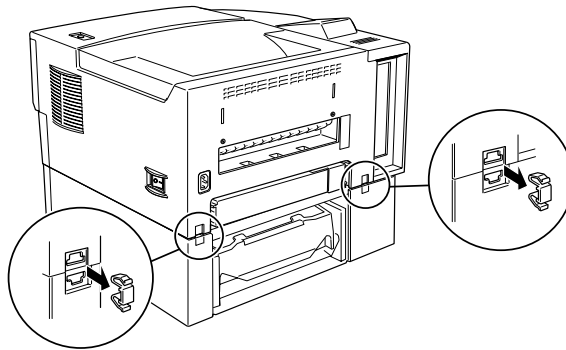
3. Completely remove the 250 sheet standard cassette, and partly remove the 500 sheet lower cassette until you can see the front feeder joint clips joining the lower paper cassette to the printer.
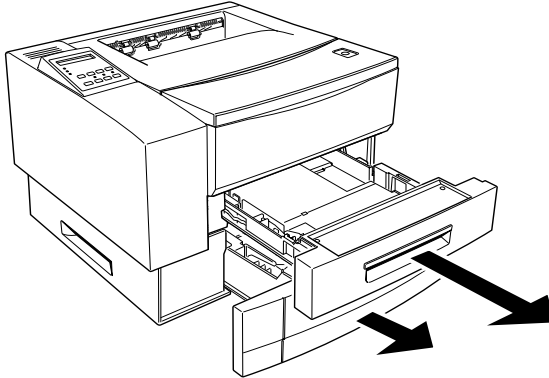
4. Pinch the feeder joint clips between your thumb and finger and remove them as shown below.
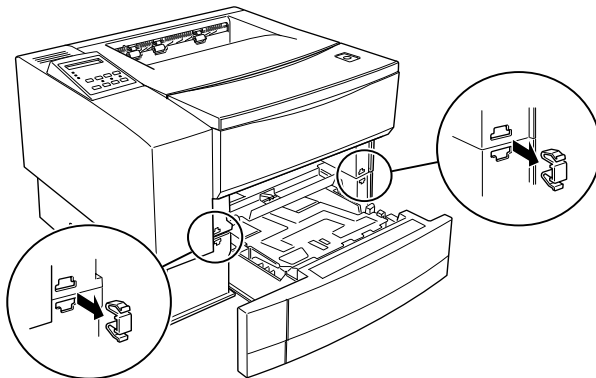
5. Push the 500 sheet lower paper cassette back into place, and replace the 250 sheet standard paper cassette.

6. Lift the printer up and away from the lower paper cassette unit.

Removing the Lower Paper Cassette (duplex unit installed)

1. Make sure that the computer and printer are turned off, remove the power cord from the wall outlet and from the printer. Remove any interface cables from the printer.

2. At the rear of the printer, locate the feeder joint clips, pinch them between your thumb and finger and remove them as shown below.
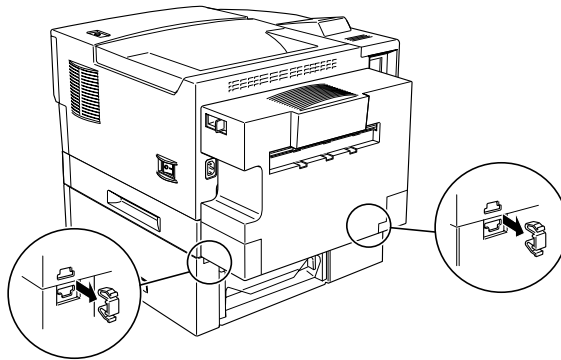
3. Completely remove the duplex tray, and pull out the 500 sheet lower cassette until you can see the two feeder joints the front of the printer as shown below.
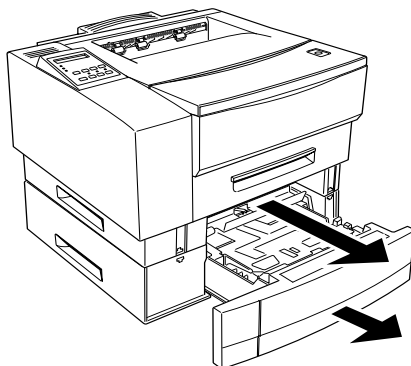
4. Pinch the feeder joint clips between your thumb and finger and remove them, as shown below.
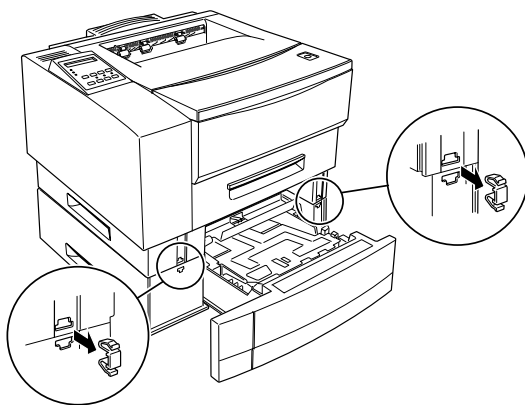
5. Replace the 500 sheet lower paper cassette and the duplex feeder tray.

6. Lift the printer and duplex unit up and away from the 500 sheet lower paper cassette.
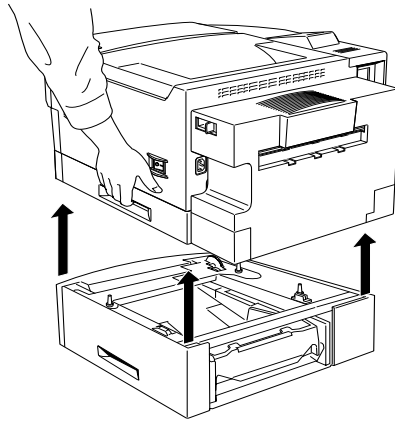
⚠ Caution:
When you lift the printer and duplex unit, always use the lifting grips in the duplex unit, as shown above. Do not use the grips in the printer itself. If you lift the printer/duplex unit combination using the printer grips, you may drop the duplex unit and damage it.

3

Duplex Unit

Installing the Duplex Unit

The optional duplex unit allows you to print on both sides of the paper automatically. To install the duplex unit, follow the instructions below:

1. Unpack the parts of the duplex feeder, and place them on the stable surface where you will be installing the printer. Lift up the vertical unit so that it locks into the locking bar on the side of the horizontal unit, as shown below.
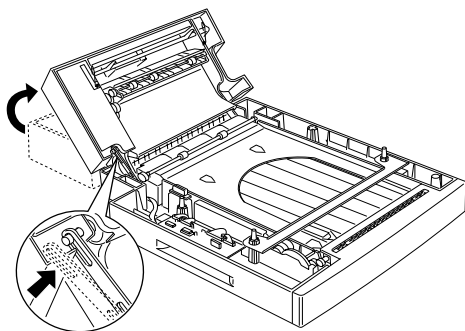
2. Insert the duplex chute into the body exit of the printer, and secure it with the two supplied clips.
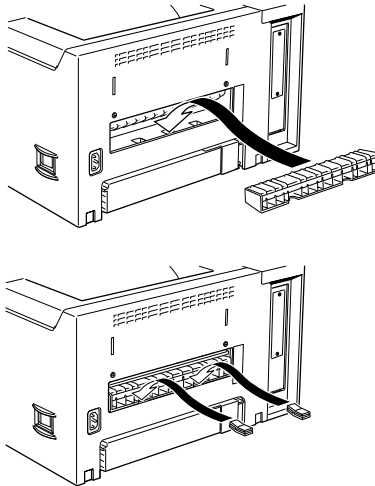
3. Inside the vertical unit, you will find a metal bar. Use this bar to remove the plastic cover located to the right of the body exit.
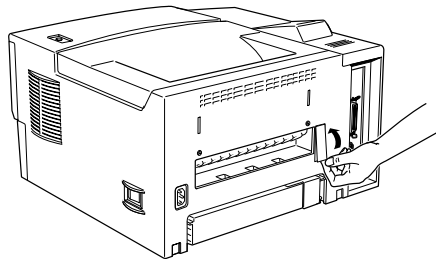
When you have removed the plastic cover, store it together with the metal bar in the place in the vertical unit from where you took the metal bar.

4. With the front of the printer towards you, grasp the sides of the printer. Line up the corners of the printer with the corners of the duplex unit and place the printer on the duplex unit.

Note:
❏ *The printer weighs about 12 kg (about 26lb). Take care when lifting it, and get another person to help you if necessary.*

❏ *There are three pins on top of the duplex feeder: two on the left and one on the right. These three pins fit into three corresponding holes on the bottom of the printer body for a secure fit.*
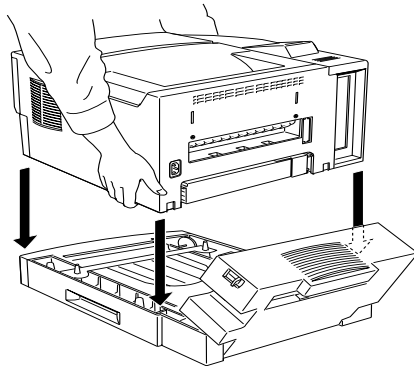
5. Check that the printer is securely seated on top of the duplex unit.
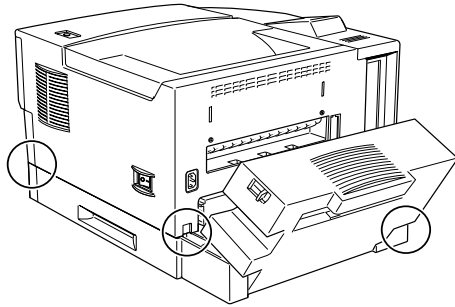
6. Use the supplied clips to fasten the duplex unit to the printer and close the duplex unit's vertical unit. Make sure the clips are fastened securely.
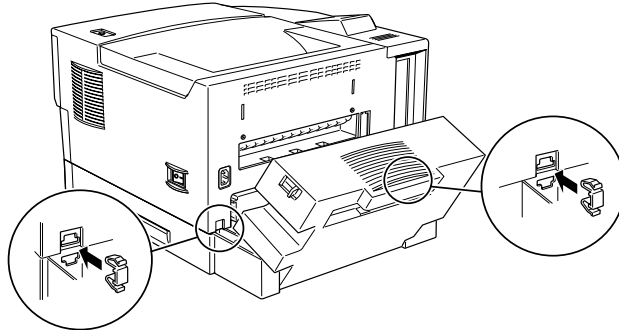
7. Completely remove the paper cassette. Pull out the duplex unit feeder tray until you can see the two feeder joints at the front of the printer.
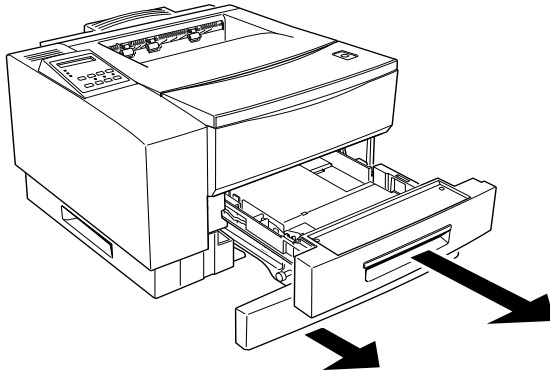
8. Use the supplied clips to fasten the duplex unit to the printer at the front. Make sure the clips are fastened securely.
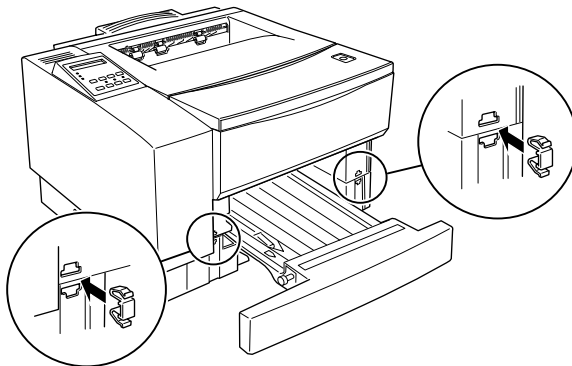
9. Replace the duplex unit feeder tray and the paper cassette.

To confirm that the Duplex Unit is installed correctly, print a status sheet. if the unit is not listed on the status sheet, try reinstalling it.

You can select duplex printing either through the printer driver software, or through the printer's control panel.

Using the printer driver:
Check the Duplex Unit check box on the Basic Setting menu (except Windows NT 3.51) or Document Setting menu (Windows NT 3.51) of the printer driver.

Using SelecType:
Follow the instruction in the section on SelecType to change this setting. You should use the Printing menu for this ("Duplex", page 5-18).

Removing the Duplex Unit

When you wish to move or store the printer, or if you wish to transfer the duplex unit to another printer, you should follow the procedures described below.

1. Make sure that the computer and printer are turned off, remove the power cord from the wall outlet and from the printer. Remove any interface cables from the printer.

2. Push the release button to open the vertical unit of the duplex unit fully.
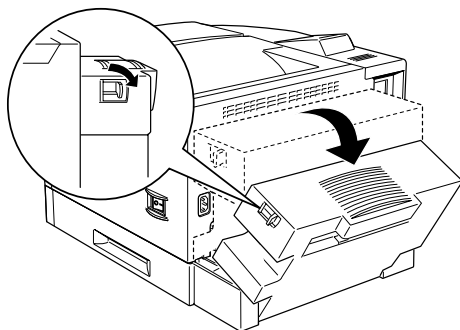
3. At the rear of the printer, pinch the two feeder joint clips between your thumb and finger and remove them, as shown in the illustration below.
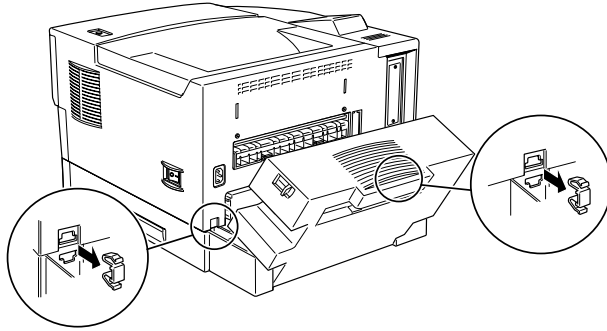
4. Completely remove the standard paper cassette, and pull out the duplex unit feeder tray until you can see the two front feeder joints.
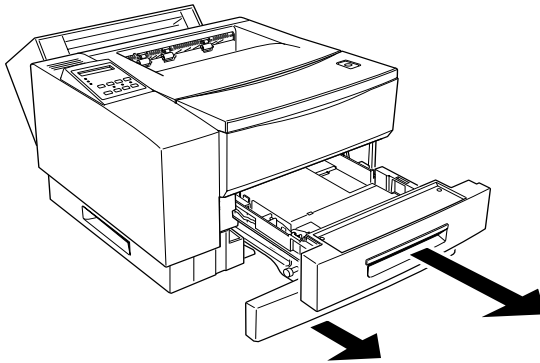
5. Pinch the two front feeder joint clips between your thumb and finger, and remove them from the front of the printer, as shown below.
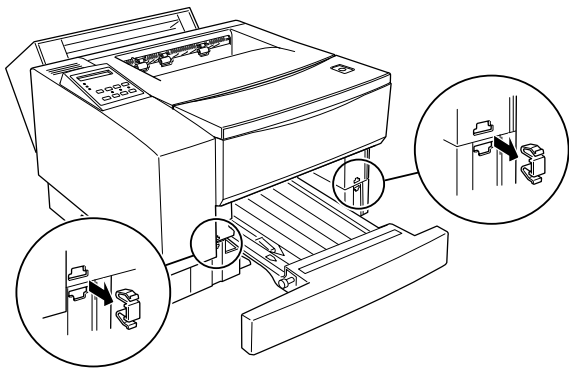
6. Save the front and rear feeder joint clips in a safe place— you will need them later. Replace the standard paper cassette and push back the duplex feeder tray.

7. Lift the printer up and away from the duplex unit.
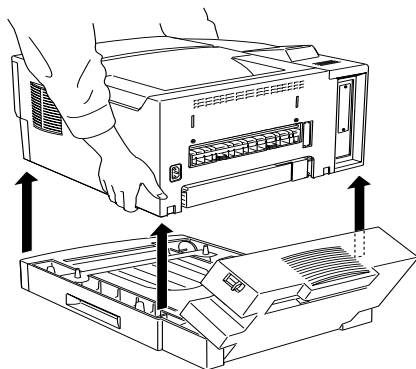
8. Inside the vertical component of the duplex unit is the plastic cover which was originally taken from the printer. Remove it from the duplex unit and restore it to its original location at the right of the printer body exit.
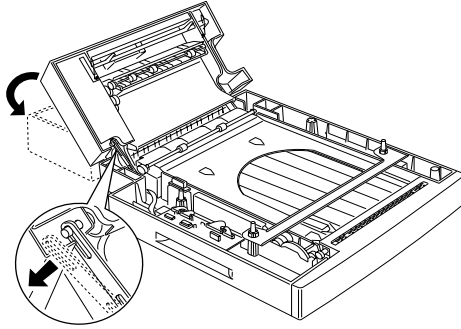
9. Remove the two clips that hold the duplex chute to the printer, and then remove the duplex chute.
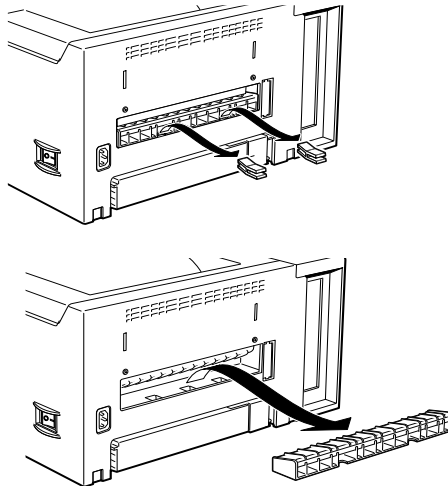
10. Store the duplex unit, the clips, and the duplex chute in a safe place.

Face Up Tray

The printer normally outputs paper face down on top of the printer. If you want face-up output, you can install the optional Face Up Tray (C81294✽). This tray gives you immediate viewing of your printed output and is recommended for printing on media such as labels and transparencies that require a straight-through paper path.

The Face Up Tray can hold about twenty sheets of media.

Note:
Remember that when you use the face-up tray, you need to allow about 297 mm (about 11.7 inches) at the rear of the printer for the tray and the ejected media.

Installing the Face Up Tray

To install the face-up tray, follow the instructions below.

1. Find the three mounting holes on the rear of the printer. If you have installed the optional duplex unit, there will be the openings on the rear of the vertical unit of the duplex unit. Locate and insert the three tabs on the face-up tray into these mounting holes.
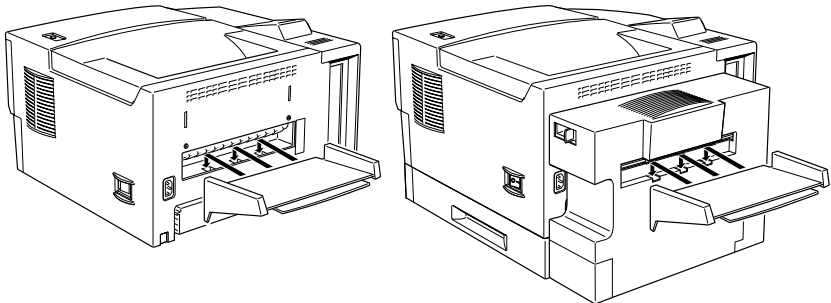
2. Pull the center grip of the face-up tray to open the large part of the tray extension. If you need to use the small part of the tray extension, flip this out as well.

You select face up or down print out either through the printer driver software, or through the printer's control panel.

Using the printer driver:
Check the Face Up check box on the Basic Setting menu (except Windows NT 3.51) or Document Setting menu (Windows NT 3.51) of the printer driver.

Using SelecType:
Follow the instructions in the section on SelecType to change this setting. You should use the Printing menu for this ("Out Bin", page 5-18).

Removing the Face Up Tray

Follow the instructions below to remove the face-up tray.

1. If the small part of the tray extension is extended, flip it closed. Push the large extension so that it retracts into the face-up tray.
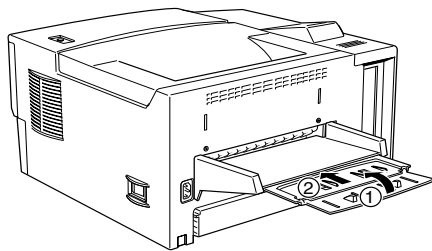
2. Detach the face-up tray from the rear of the printer (or from the rear of the optional duplex unit, if you have installed it). Store the face-up tray in a safe place.
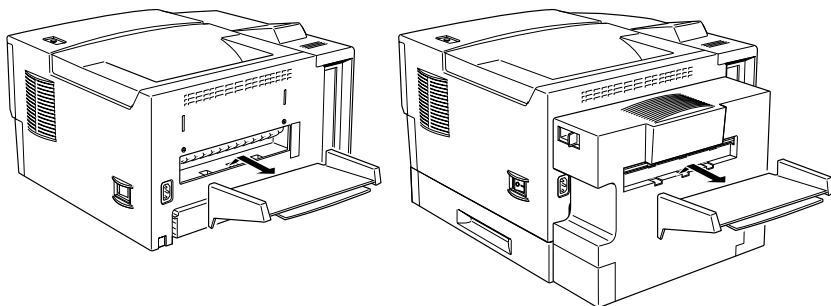
Memory Modules

By installing a Single In-Line Memory Module (SIMM), you can increase printer memory up to 40MB (printer default 8 MB + optional 32MB). You may want to add additional memory if you are having difficulty printing complex, graphics-intensive pages or if you regularly use numerous downloaded fonts.

You can purchase SIMMs form various vendors. Be sure the SIMM you purchase meets the following requirements:

❏ 72-pin, EDO type

❏ Capacity of 4, 8, 16, or 32MB

❏ Access speed of 60 ns or less

❏ Dimensions within 108 mm (4.25 inches) x 26 mm (1.02 inches), with a thickness of 10 mm (0.4 inch)

Installing a memory module

1. Turn off the printer.

   Warning:
   To avoid electrical shock, do not attempt to install a SIMM
   unless the printer is turned off.

2. Unplug the power cable from the electrical outlet.

3. Pull out the paper cassette, if necessary.

4. Turn the printer so its left side faces you.

5. Open the printer cover by pressing the latch on the right side
   of the printer.
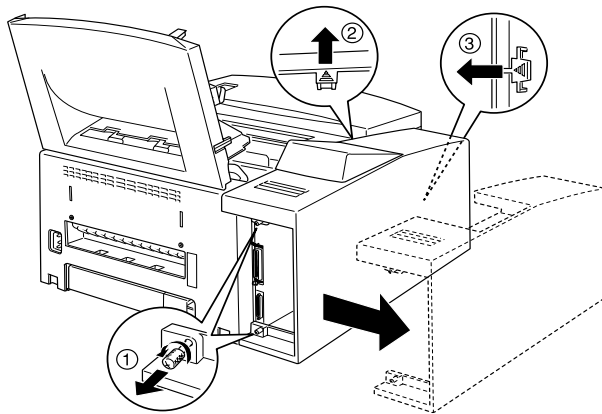
6. Loosen the retaining screws securing the printer's side cover.

7. Grasp and slightly bend the side cover outside; then remove
   the cover.

8. Insert the SIMM module into the RAM slot at an angle, making sure the pint numbers of the slot and the SIMM match, either 1 or 72
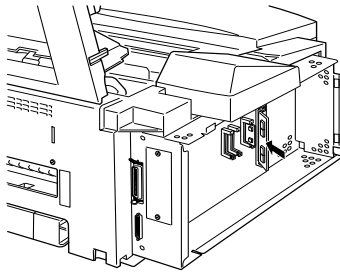
9. Press the module down until it clicks into place at right angles to the slot. Do not apply too much force.
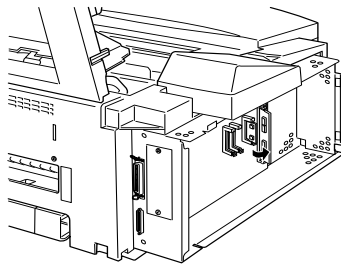
10. Replace the printer's side cover.

11. Secure the retaining screws.

12. Gently close the printer cover.

13. Plug the power cord back in and turn on the printer.

To verify that memory is correctly installed, print a status sheet by pressing the control panel button.

If an incorrect amount of memory is shown on the status sheet, turn off the printer and review the steps above to make sure you correctly installed the SIMM. If the amount of RAM is still incorrect, contact your dealer or a qualified service person for assistance.

Removing a memory module

1. Perform steps 1 through 7 in the previous section to access the printer's RAM slot.

2. Pull the clips on each side of the RAM slot outward to release the memory module.
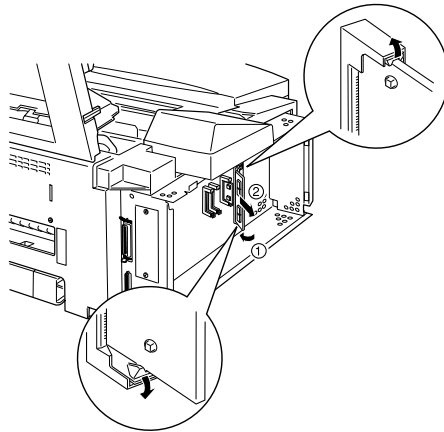
3. Grasp both sides of the SIMM and pull it out as shown above.

4. Follow steps 10 through 13 in the previous section to complete the procedure.

ROM module

Installing a ROM Module

You can install the EPSONScript Level 2 Package (C83229✻) using the same basic steps as those used to install the memory module.

1. Perform steps 1 through 7 in "Installing a memory module" section to access the printer's RAM slots.

2. Make sure the printer has three ROM slots. The right ROM slot should be already in use. You should install the EPSONScript board in the center ROM slot.
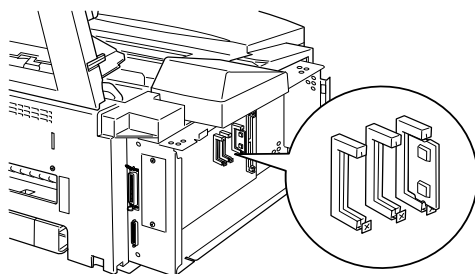
3. Insert the EPSONScript module all the way into the center slot.
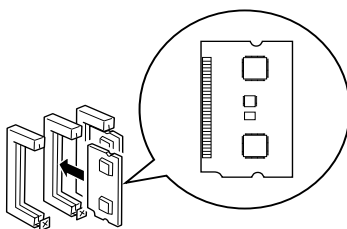
Removing a ROM Module

1. Perform steps 1 through 7 in "Installing memory module" section to access the printer's RAM slots.

2. Push the metal switch to release the ROM module.
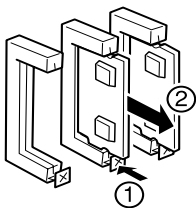
Optional Interfaces

This section describes how to install the optional interface cards listed below.

To add a direct connection to an Ethernet system, use an optional Ethernet Card (C82357]/C82362]/C82363]/C82364])

To add a serial or parallel interface to your printer, use one of the following:

    32KB Serial Interface Card   C82307]
    32KB Parallel Interface Card   C82310]

To add a direct connection to an IBM mini or mainframe system, use one of the following:

    Coax Interface Card   C82314]
    Twinax Interface Card   C82315]

The coax and twinax connectors each contain a parallel interface. since the printer's built-in parallel interface remains active, this gives you two parallel interfaces and a coax or twinax interface. Print jobs can be sent to any connection, and the printer automatically switches between the active ports.

The twinax interface is compatible with the following IBM systems: AS-400, System 36, 5251 (model 12), System 34, System 38, and 5294. When equipped with the EPSON twinax interface, the printer can be used in place of the following IBM system printers: 4210, 5224 (models 1 and 2), 5256 (models 1, 2, and 3), 3218 (non IPDS), 4214 (model 2), 5225 (models 1, 2, 3, and 4), and 5219 D01, D02.

The coax interface allows the printer to be connected to the following IBM control units and mainframe systems: 3174, 3276, 4274, and 3270.

To add a direct connection to a Macintosh computer with the optional EPSONScript Level 2 Package, use the AppleTalk Interface Card (C82312]) or Ethernet Card (C82357]/C82362]/C82363]/C82364]).

Note:
If you reset the printer while it is receiving data through the AppleTalk Interface Card, you need to turn the printer off and then on again before it can communicate properly.

To add a direct connection to your GPIB network, use the GPIB Interface Card (C82313]).

Installing an Interface Card

Follow the steps below to install an optional interface card.

1. Turn off the printer.

2. Unplug the power cable from the electrical outlet.

3. Turn the printer so its back faces you.

4. Remove the two screws that secure the Type-B slot cover and remove the cover.
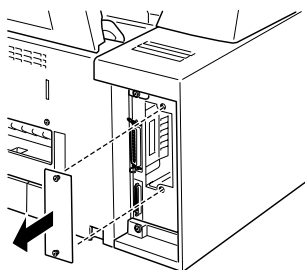
5. With the component side of the optional interface card facing the outside of the printer, slide the interface card into the grooves in the interface slot as shown below. Push it in firmly to lock the card into place.
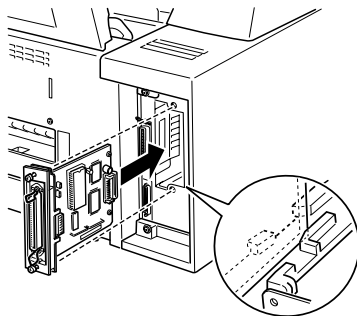
6. Secure the interface card with the two retaining screws.
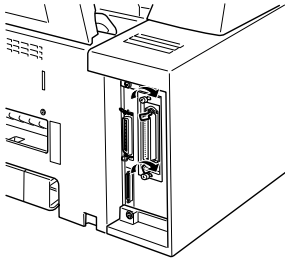
You can verify that the interface is correctly installed by printing a status sheet.

Chapter 4

EPSON Status Monitor Utility

4

EPSON Status Monitor Utility Overview

The EPSON Status Monitor is a utility program that monitors your printer and gives you information about the current status of the printer, including the amount of toner. If a print error occurs, the Status Monitor also provides you with a message describing the error.

You can use the EPSON Status Monitor utility to monitor a local printer from Microsoft Windows 3.1, Windows 95, Windows NT 3.51, or NT4.0.

This utility shows your printer status and allows you to change printer settings, such as print density.

Installing the Status Monitor Utility

1. Make sure Windows is running.

2. Insert the CD-ROM that comes with your printer into your CD-ROM drive (usually this will be drive D).

3. For Windows 95 and Windows NT 4.0 users: click Start, then choose Run.
   For Windows 3.1 and Windows NT 3.51 users: make sure the Program Manager window is open, and then choose Run on the File menu.

4. Type D:\EPSETUP (or E:\EPSETUP); then click OK.

5. In the dialog box that appears, double-click Install EPSON Status Monitor; or you can also install by selecting Install EPSON Status Monitor and then clicking the arrow on the top right.

6. In the dialog box that appears, select EPL-N1600 and click OK. The utility is installed automatically.

7. When installation is complete, click OK.

The Status Monitor utility is now installed on your computer.

Accessing the Status Monitor

From Windows 95 and Windows NT 4.0

1. Click Start, then point to Programs.

2. Point to EPSON Status Monitor, then click EPSON Status Monitor. The Status Monitor appears.

To close the Status Monitor, click the close button at the top right of the Status Monitor dialog box or right-click the EPSON Status Monitor icon in the tray icon area on the taskbar, then click Exit in the dialog box that appears.

From Windows NT 3.51 and Windows 3.1

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

2. Double-click the EPSON Status Monitor folder.

3. Double-click the EPSON Status Monitor icon. The Status Monitor appears.

To close the Status Monitor, click the Control-menu box to the left of the EPSON Status Monitor title bar, then choose Close. Click Exit in the dialog box that appears.

Accessing Online Help

For detailed information about the Status Monitor, refer to online help. To access online help, follow one of the procedures below.

❏ For Windows 95 and Windows NT 4.0 users: Click the ? button at the top right of the EPSON Status Monitor window, and the pointer will become a "?". Then move the ? over the term that you want to know more about and click.

❏ For Windows 95, NT 3.51, and NT 4.0 users: Click the ? button at the bottom left of the EPSON Status Monitor window.

❏ For Windows 3.1 users: Click the Help button at the bottom left of the EPSON Status Monitor window.

Chapter 5
SelecType

5

This section explains how to use the control panel; its display, its indicators and its buttons to make settings. In the later part of this section, there is an explanation of how to use the SelecType functions to make more advanced settings. There is also an explanation of the OneTouch settings which help you make the most common settings easily.

The Control Panel

Overview

The printer control panel gives you easy control over most common printer operations. The panel is made up of three elements: a liquid crystal display, indicator lights, and buttons. The display and indicator lights tell you the current status of the printer, and you can use the buttons to select printer settings and functions.

Display

The display shows the following:

❑ Status messages, such as Warming Up, which indicate the printer's current status.

❑ Error messages, such as Paper Out, which identify common maintenance procedures you should perform, or error conditions that you need to correct.

❑ SelecType options, such as Emulation, which allow you to control printer functions such as the printer mode, font selection, paper handling, and many other functions.

For the way to respond to error messages and maintenance information, see "Problems and Solutions", page 6-3, For full information on the SelecType options, including the OneTouch commands, see the appropriate sections later in this chapter.
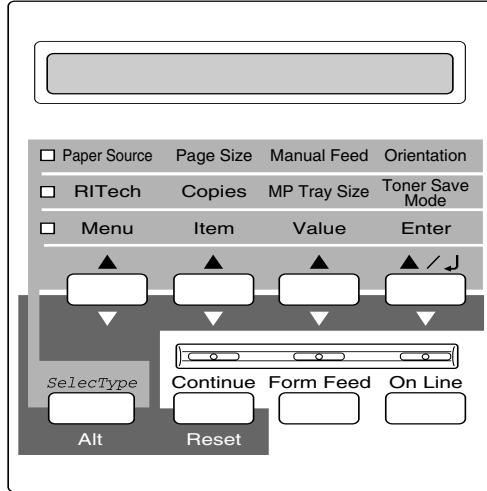
Indicator Lights

On Line	On when the printer is on line, indicating the printer can receive and print data. When the printer is off line, this light is off. The light flashes as the system switches between on-line and off-line status.
Form Feed	On when data is received and stored in the printer's buffer but not yet printed. Flashing indicates the printer is processing data. When no data remains in the printer buffer (the section of memory reserved for receiving data), this light is off.
Continue	Flashes when an error is detected or a maintenance procedure must be performed. At the same time, an error or maintenance message appears on the display.
OneTouch mode 1	On when the printer is in OneTouch mode 1. The following settings can be made in this mode: Paper Source, Page Size, Manual Feed, Orientation. For details of how to use this OneTouch mode, see "OneTouch mode 1", page 5-14.
OneTouch mode 2	On when the printer is in OneTouch mode 2. The following settings can be made in this mode: RITech, Copies, MP Tray Size, Toner Save.
SelecType	On when the printer is in SelecType mode. See "When to use SelecType", page 5-7, for details of how to use the SelecType menus, etc.

Buttons

On Line	Switches the printer between on line and off line status.
SelecType (ALT)	Selects a OneTouch mode or a SelecType mode. Press this button once to enter OneTouch mode 1. Press this button again to enter OneTouch mode 2. Press this button once more to enter SelecType mode. Pressing this button while in SelecType mode returns the printer to online status.
ALT + Menu, Item, Value, or Enter	Advances the parameter or setting shown to the next value in each group. If used in combination with the ALT button in SelecType mode, it returns the parameter or setting shown to its previous value.
Menu	Selects the corresponding OneTouch mode setting listed above this button, or selects the SelecType menu if in SelecType mode. Press this button when the printer is on line to enter SelecType mode.
Item	Selects the corresponding OneTouch mode option listed above this button, or selects the function available within the current menu, after entering the SelecType mode.
Value	Selects the corresponding OneTouch mode option listed above this button, or selects the parameter available within the current item, after entering the Item of the SelecType mode.

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Enter (Status Sheet)	Selects the corresponding OneTouch mode option listed above this button, or accepts the setting currently shown on the display as a new setting when in SelecType mode. Press this button two times when the printer is on line to print the status sheet.
Form Feed	When the printer is off line, and data remains in the printer's buffer memory (the Form Feed light is on), pressing this button prints out the data and clears the buffer.
Continue (Reset)	Enables the printer to resume printing after certain maintenance-required conditions or errors have been cleared. If the Continue light is flashing, read the status or error message on the display and correct the problem as described in Chapter 6. If used in combination with the ALT button, the printer is reset.

When to use SelecType

In general, use SelecType only for settings you cannot make in your software, including the following:

❏ Changing the emulation modes and selecting the IES (Intelligent Emulation Switching) mode

❏ Specifying the channel and configuring the interface

❏ Choosing the size of the memory buffer used to receive data

You should keep in mind the following points when using SelecType settings:

❏ A number of SelecType settings can also be made using the OneTouch modes and the printer driver.

❏ Application programs may send commands to the printer that override SelecType settings. If you are not getting the results you expect, check your application software settings.

❏ To see the current SelecType settings, print a status sheet.

5

SelecType

Before entering and using SelecType, you should understand how the buttons on the printer's control panel work.

Buttons

The functions of the control panel buttons on the printer change when in SelecType mode.
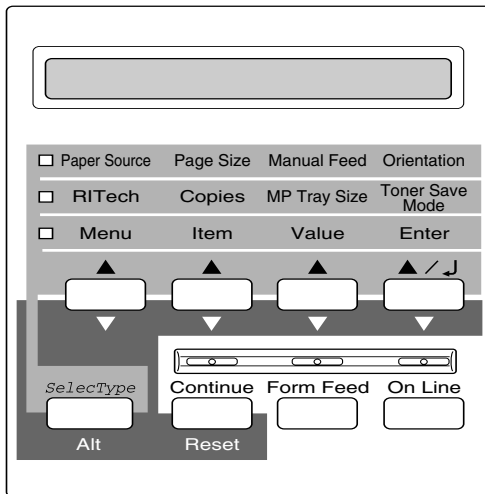
Using the buttons in SelecType Mode

Note:
You can directly access certain menu items using the OneTouch modes.
For more information, see "Using the OneTouch Modes", page 5-14.

1. To enter SelecType mode, press Menu while the printer is on line.

2. To change the settings, press Menu, Item or Value.

   ❏ To select a new menu (menu category), press Menu. Examples of menus are the Serial menu or the Config menu.

   ❏ To select an item (setting), press Item. Examples of items are Baud Rate (in the Serial menu) or Toner Save (in the Config menu).

   ❏ To select a value (parameter) for an item, press Value. Examples of values are 38400 (for Baud Rate) or On or Off (for Toner Save).

   ❏ To accept a new setting, press Enter.

   ❏ Press ALT to select the menus, items or parameters in reverse order (going back through the list). See Appendix A for a map showing the order in which SelecType menus, etc. are displayed.

3. To exit SelecType mode, press OnLine or SelecType.

5

SelecType menus

This section gives a brief description of the menus in SelecType and lists the item settings available on each menu.

Test Menu

These settings select and begin the printer's internal test print. You can obtain information on the printer's current settings, available fonts, and a brief summary of features. You should also see "Test menu", page 5-16 for further details.

Status Sheet, ESC/Page Font Sample, LJ4 Font Sample, FX Font Sample, I239X Font Sample, PS Status Sheet*, PS Font Sample*, PS Fact Sheet*

* Only available when the optional EPSONScript Level 2 is installed

Emulation Menu

These settings select the default emulation for each of the printer's interfaces. See "Emulation menu", page 5-17 for further details.

Parallel, Serial, Aux*

* Only available when the optional Type B interface is installed.

Printing Menu

These settings are the settings you will probably change most often in everyday use. Most can be set by software, and for that reason we advise you to check your software settings, because the software settings will override these Printing Menu settings. See "Printing menu", page 5-17 for further details.

Paper source, Page Size, Wide A4, Orientation, Out Bin, Copies, Manual Feed, Resolution, Skip Blank Page, Duplex*, Binding*, Start Page*

* Only available if the optional duplex unit has been installed.

Tray Size Menu

These settings display the paper size loaded in each paper tray. This paper size may be different from the size set in the Page Size menu, which specifies the size of the image that the printer produces. See "Tray Size menu", page 5-20 for further details.

MP Tray Size, LC1 Size, LC2 Size[*]

* Only available if the optional 500 sheet lower paper cassette has been installed.

Config Menu

These settings affect the performance of the printer. See "Config menu", page 5-21 for further details.

RITech, Toner Save, Density, Top Offset, Left Offset, Top offset B, Left offset B, Size Ignore, Auto Cont, Page Protect, Image Optimum

Setup Menu

These settings are used to provide the printer with information necessary for printing. See "Setup menu", page 5-24 for further details.

Interface, Time Out, Standby, Lang, Panel Lock, Printer Name, Toner, Toner Counter Clear, MP Init. Paper, LC1 Init Paper, LC2 Init Paper[*], Page Count, SelecType Init

* Only available if the optional 500 sheet lower paper cassette has been installed.

Parallel Menu

These settings control communication between the printer and the host computer when using a parallel interface. See "Parallel menu", page 5-27 for further details.

Speed, Bi-D, Buffer Size

Serial Menu

These settings control communication between the printer and the host computer when using a serial interface, and are necessary for correct communication between the two units. See "Serial Menu", page 5-28 for further details.

Word Length, Baud Rate, Parity, Stop Bit, DTR, Xon/Xoff, Buffer Size

AUX Menu

If the optional Type B interface has been installed, these settings control the communication between the two units using this interface. See the manual supplied with the interface for further details.

Buffer Size

LJ4 Menu

These settings control the fonts and symbol sets when the printer is in LJ4 emulation mode. See "LJ4 menu", page 5-30 for further details.

Font Source, Font Number, Pitch[*], Height[*], SymSet[**], Form, Source Symset[**], Dest Symset[**]

[*] Depending on the font selected
[**] These settings depend on the font set installed.

GL2 Menu

These settings control the behavior of the printer when in GL2 emulation mode. See "GL2 menu", page 5-32 for further details.

GL-Mode, Scale, Origin, Pen, End, Join, Pen0, Pen1[*], Pen 2[*], Pen3[*], Pen4[*], Pen5[*], Pen6[*]

[*] Available only when in GL-like mode,

PS Menu

These settings are available only if the optional EPSONScript Level 2 has been installed. See "PS menu", page 5-34 for further details.

Error Sheet, MicroGray, Protect Level

ESCP2 Menu

These settings control the behavior of the printer when in ESCP2 emulation mode. See "ESCP2 and FX menus", page 5-34 for further details.

Font, Pitch, Condensed, T. Margin, Text*, CG Table, Country, Auto CR, Auto LF, Bit Image, ZeroChar

* These settings depend on the font setinstalled.

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FX Menu

These settings control the behavior of the printer when in FX emulation mode. See "ESCP2 and FX menus", page 5-34 for further details.

Font, Pitch, Condensed, T. Margin, Text*, CG Table, Country, Auto CR, Auto LF, Bit Image, ZeroChar

* These settings depend on the font setinstalled.

I239X Menu

These settings control the behavior of the printer when in I329X emulation mode. See "I239X menu", page 5-38 for further details.,

Font, Pitch, Code Page, T. Margin, Text, Auto CR, Auto LF, Alt. Graphic, Bit Image, Zero Char, Character Set

Using the OneTouch Modes

The OneTouch modes are part of SelecType mode, but they are more limited and easier to use. The settings you make in the OneTouch modes and SelecType are reflected in each other.

OneTouch mode 1

To enter OneTouch mode 1, press the SelecType button (repeatedly if necessary) until the light next to Paper Source comes on, indicating the printer is now in OneTouch mode 1. The current OneTouch mode 1 settings for Paper Source, Page Size, Manual Feed and Orientation are shown on the display above the corresponding setting. For example, Port or Land is shown above Orientation.

Paper Source

Specifies whether paper feeds into the printer from the MP Tray, the paper cassette, or the optional 500 sheet lower paper cassette (if installed). If you select Auto, the paper source containing the paper that matches the setting in the Page Size menu will be used.

Page Size

Specifies the paper size.

Manual Feed

Turns Manual Feed on or off for the MP Tray. For details of how to use the Manual Feed mode, see "Selecting the MP tray as the paper source", page 2-2.

Orientation

Specifies whether the page is printed in portrait or landscape orientation. This page is printed in portrait orientation.

OneTouch mode 2

To enter OneTouch mode 2, press the SelecType button
(repeatedly if necessary) until the light next to RITech comes on,
indicating that the printer is in OneTouch mode 2. The current
OneTouch mode 2 settings for RITech, Copies, MP Tray Size, and
Toner Save are shown on the display above the corresponding
setting. For example, On or Off is shown above Toner Save mode.

RITech

Turns the RITech setting on or off. RITech produces smoother and
crisper lines, text and graphics. If you change this setting, you can
check the print quality with the RITech setting by printing a status
sheet from the SelecType Test Menu.

5

Copies

Selects the number of copies to be printed (up to 999).

MP Tray Size

Selects the paper size for the MP Tray.

Toner Save Mode

Turns the Toner Save mode on or off. When this mode is turned
on, the printer saves toner by substituting a gray shade for the
black inside of characters. The printer outlines the characters'
right and lower edges in black.

Understanding SelecType Settings

Read this section for a complete description of the settings at you can make using the SelecType menus.

Test menu

For all the settings below, you should press Enter to print the page. You cannot select any values by pressing Value.

> ⚠ *Caution:*
> *After you print these samples, user-defined data stored in the printer, such as downloaded fonts, may be erased, depending on which sample you printed.*

Status Sheet, PS Status Sheets*

Prints a sample printout describing the current printer features. Use these options to check whether your printer is working correctly.

*Only if the EPSONScript Level 2 option has been installed.

LJ4 Font Sample,ESCP2 Font Sample, FX Font Sample, I239X Font Sample, PS Font Sample*

Prints a sample of the fonts available for your selected printer emulation.

*Only if the EPSONScript Level 2 option has been installed.

Emulation menu

Use this menu to select the printer emulation mode. You can specify a different emulation for each interface fitted to the printer; in other words, for each computer that you connect to the printer. Since each emulation mode has its own specific set of options, you should make these settings in the LJ4, ESCP2, FX, GL2 or I239X menus as necessary.

The options available are the same for every interface.

Setting	Parameters
Parallel, Serial, AUX*	LJ4, ESCP2, FX, I239X, PS**, GL2, Auto

* If optional interface is installed
** If optional EPSONScript Level 2 is installed

Printing menu

The settings in the Printing Menu can be set from within your software. These settings made in software will override the settings made by SelecType.

Many items in the Printing Menu can be accessed directly with the OneTouch Modes. See "Using the OneTouch Modes", page 5-14 for further details.

Paper Source

Specifies whether paper feeds into the printer from the MP tray, from the standard lower paper cassette, or from the optional lower paper cassette.

If you select Auto, paper feeds from the tray containing the paper that matches the paper selected using the Page Size setting.

Page Size

Specifies the paper size.

Wide A4

This setting specifies whether the printer accepts wide A4 paper for printing or not.

Orientation

Specifies whether the page is printed in portrait or landscape orientation. This manual is printed in portrait orientation.

Out Bin

Specifies the output tray.

Copies

Selects the number of copies of each page to be printed, up to 999.

Manual Feed

This item selects manual feed mode. For further details about the manual feed mode, see section "Manually Loading Paper", page 2-8.

Resolution

Switches the resolution between 300 and 600 dpi.

Skip Blank Page

If the printer comes across a page in the job it is currently printing which is blank, it does not "print" the page, but goes on to print the next page.

Duplex

Turns duplex printing on or off. This item is available only when the Duplex Unit is installed.

Binding

Selects the binding direction of the printout. This item is available only when the Duplex Unit is installed.

Start Page

If the optional Duplex Unit is installed, you can choose whether the first page to be printed is a front page (for example, the cover page of a report) or a back page (the cover may be blank and printing may start on the inside cover).

Setting	Parameters
Paper Source	Auto, MP, LC1, LC2*
Page Size	A4, A5, B5, LT, HLT, LGL,GLT, GLG, EXE, F4, MON, C10, DL, C5, C6, IB5, CTM
Wide A4	Off, On
Orientation	Port, Land
Out Bin	Face Down, Face Up
Copies	1 – 999
Manual Feed	Off, On
Resolution	600, 300
Skip Blank Page	Off, On
Duplex**	Off, On
Binding	Long Edge, Short Edge
Start Page	Front, Back

* If Optional 500 Sheet Lower Paper Cassette has been installed
** If Optional Duplex Unit has been installed

Tray Size menu

Use this menu to make the MP Tray paper size setting and check the currently loaded paper size in the standard and optional paper cassettes, if installed.

MP Tray Size

Allows you to set the paper size for the MP Tray.

Note:
You can also make the MP Tray Size setting directly from OneTouch Mode 2.

LC1 Size

Allows you to view the currently loaded paper size in the standard lower cassette.

LC2 Size

This menu is only available if you have installed the optional 500 sheet lower paper cassette. It allows you to view the currently loaded paper size in the optional lower cassette.

Setting	Parameters
MP Tray Size	A4, A5, B5, LT, HLT, LGL, GLT, GLG, EXE, F4, MON, C10, DL, C5, C6, IB5
LC1 Size	A4, LT, LGL, GLG, B5, EXE
LC2 Size	A4, LT, LGL, GLG

Config menu

This menu allows you to make various settings which affect the operation of the printer.

RITech

Allows you to adjust the RITech setting. RITech produces smoother and crisper lines, text, and graphics.

Note:
You can also make the RITech setting directly from OneTouch Mode 2.

Toner Save

Turns the Toner Save mode on. When turned on, the printer saves toner by substituting a gray shade for the black inside part of printed characters. The characters are outlined in full black on their right and lower edges.

Note:
You can also make the Toner Save setting item directly from OneTouch Mode 2.

Density

Adjust the print density to make documents lighter or darker.

Note:
Increasing the print density increases toner consumption. If you select darker print, you may need to replace the imaging cartridge more often.

5

Top Offset

Makes fine adjustments to the vertical position of the printing on the page.

> ⚠ **Caution:**
> *Be sure that the printed image does not extend over the top edge of the paper. Otherwise, you may damage the printer.*

Left Offset

Use this option to make fine adjustments to the horizontal position of the printing on the page.

> ⚠ **Caution:**
> *Be sure that the printed image does not extend over the left edge of the paper. Otherwise, you may damage the printer.*

Top offset B

Adjust the vertical printing position on the back side when printing on both sides. Use this if the printout on the back side is not where you expected. This item is availble only when the Duplex Unit is installed.

Left offset B

Adjust the horizontal printing position on the back side when printing on both sides. Use this if the printout on the back side is not where you expected. This item is availble only when the Duplex Unit is installed.

Size Ignore

Selects whether a paper size error is ignored. Turning this item on causes the printer to print, even if the image size exceeds the printable area for the specified size of paper. This may cause smudges because of toner that is not properly transferred onto the paper. When this item is off, the printer stops printing if a paper size error occurs.

AutoCont

Permits the printer to continue printing automatically after a certain period of time when one of the following errors occurs: Paper Set, Print Overrun and Mem Overflow. When this option is off, you must press the Continue button to resume printing. In most cases, it is best to leave this option Off.

Page Protect

Allocates additional printer memory for printing data, as opposed to receiving it. You may need to use Page Protect if you are printing a highly complex page. If a Print Overrun error occurs, change the setting to ON and reprint your data. This reduces the amount of memory reserved for receiving data so your computer may take longer to send the print job, but it will allow you to print complex jobs. Page Protect usually works best if set to Auto. You will need to increase your printer's memory if memory errors continue to occur.

Note:
Changing the Page Protect setting reconfigures the printer's memory, which causes any downloaded fonts to be erased.

Image Optimum

Reduces the amount of graphics data when the data reaches the memory limit, allowing complex documents to be printed. When this mode is set to On, the graphics quality is reduced.

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Setting	Parameters
RITech	On, Off
Toner Save	Off, On
Density	1, 2, 3, 4, 5
Top Offset	-99.0 – 0.0 – 99.0 mm in 0.5 mm steps
Left Offset	-99.0 – 0.0 – 99.0 mm in 0.5 mm steps
Top offset B	-99.0 – 0.0 – 99.0 mm in 0.5 mm steps
Left offer B	-99.0 – 0.0 – 99.0 mm in 0.5 mm steps
Size Ignore	Off, On
Auto Cont	Off, On
Page Protect	Auto, On
Image Optimum	Auto, Off, On

Setup menu

This menu allows you to set up various parameters, mainly concerned with the printer hardware.

Interface

When this is set to Auto, the printer automatically receives data from any interface to which you have connected a computer. If set to any other value, the printer only accepts data from the interface which you have selected here.

Time Out

Sets the length of time that the printer waits when it is on line and no new data is received. When this time is up, the printer searches for new print data on other print channels (interfaces).

Standby

Save energy by reducing power to the fixing heater if the printer receives no data for 30 minutes. In this mode, the printer begins to warm up as soon as you start to send print data; it then warms up and is ready to print in about 30 seconds.

Lang

Specifies the language displayed on the control panel and printed the status sheet.

Printer Name

Displays the printer name instead of Ready when the printer is standing by.

Toner

Displays the amount of toner left in the imaging cartridge.

```
E****F      (100-75%)
E*** F      (75-50%)
E**  F      (50-25%)
E*   F      (25-0%)
E    F      (0%)
```

Toner Counter Clear

Resets the toner counter, wher you replace the imaging cartridge.

MP Init. Paper

Specifies the amount of paper that you load in the MP Tray.

LC1 Init. Paper

Specifies the amount of paper that you load in the lower paper cassette.

LC2 Init. Paper

Specifies the amount of paper that you load in the optional lower paper cassette.

Page Count

Displays the total number of sheets printed by this printer.

SelecType Init

Erases all the SelecType settings that you have made, and resets them all to the factory default settings.

Setting	Parameters
Interface	Auto, Parallel, Serial, AUX*
Time Out	0, 5 – 60 – 300
Standby	Enable, Disable
Lang	English, FranÁais, Deutsch, ITALIANO, ESPANOL, SVENSKA, DANSK, Nederl., SUOMI, PortuguÍ
Printer Name	Off, On
Toner	E****F
Toner Counter Clear	–
MP Init. Paper	100%, 75%, 50%, 25%
LC1 Init. Paper	100%, 75%, 50%, 25%
LC2 Init. Paper**	100%, 75%, 50%, 25%
Page Count	0 – 99, 999, 999
SelecType Init	–

* This setting is only available if the optional interface has been installed.
** This setting is only available if the optional lower paper cassette has been installed.

Parallel menu

This menu allows you to make settings which control the parallel interface.

Speed

Specifies the transfer speed between the computer and the printer. It does this by selecting the delay period between the STROBE and the ACKNLG signal. For more information concerning the signals of the parallel interface, see Appendix A.

Bi-D

Enables or disables bidirectional communication between the printer and the computer. Make the setting according to the parallel port on your computer.

Note:
Your computer's parallel interface must support bidirectional communication for this setting to have any effect.

Buffer Size

Determines the amount of memory to be used for receiving and printing data. If set to Maximum, more memory is allocated for receiving data. If set to Minimum, more memory is allocated for printing data. The factory default setting is Normal.

Setting	Parameters
Speed	Fast, Normal
Bi-D	Nibble, ECP, Off
Buffer Size	Normal, Maximum, Minimum

Serial Menu

Allows you to make various settings concerned with the serial interface.

Word Length

Selects the word length used in serial communication (either 8-bit or 7-bit). See your computer manual and software documentation for the proper setting. The factory setting is 8-bit.

Baud Rate

Use this option to set the data transfer rate (baud) for the serial interface. The baud rate is measured in bits per second (bps). See your computer and software documentation for the proper setting.

Parity

Selects the parity method used for data transfer using the serial interface. Parity is a basic error-checking method used in serial communications. Consult your computer manual and software documentation for the correct setting.

Stop Bit

Selects the number of stop bits for each character (byte) of information sent to the printer. Stop bits are used to mark the end of a character. Consult your computer manual and software documentation for the correct setting.

DTR

Selects DTR (Data Terminal Ready), sometimes known as "hardware handshaking", on or off. Consult your computer manual and software documentation for the correct setting.

XOn/XOff

Selects the communications protocol between the computer and the printer to On, Off, or Robust. XOn/XOff protocol is sometimes known as "software handshaking". The Robust setting automatically enables XOn/XOff handshaking together with hardware handshaking. Consult your computer manual and software documentation for the correct setting.

Buffer Size

Determines the amount of memory used for receiving and printing data received through the serial interface. If set to Maximum, more memory is allocated to receiving data. If set to Minimum, more memory is allocated to printing data. The factory default setting is Normal.

5

Setting	Parameters
Word Length	8, 7
Baud Rate	9600, 19200, 38400, 57600, 300, 600, 1200, 2400, 4800
Parity	None, Even, Odd
Stop Bit	1, 2
DTR	On, Off
XOn/XOff	On, Off, Robust
Buffer Size	Normal, Maximum, Minimum

AUX menu

This menu is only available if the optional interface has been installed.

Buffer Size

Determines the amount of memory used for receiving and printing data received through the optional interface. If set to Maximum, more memory is allocated to receiving data. If set to Minimum, more memory is allocated to printing data. The factory default setting is Normal.

Setting	Parameters
Buffer Size	Normal, Maximum, Minimum

LJ4 menu

This menu allows you to make various parameter settings while the printer is in LJ4 emulation mode.

Font Source

Chooses the source of the fonts used for printing: either the fonts which are pre-installed in the printer, the fonts which are in the memory, or fonts which are downloaded from the computer to the printer.

Font Number

Chooses the number of the font used in the print job. The number of the font can be determined from the font sample sheet.

Pitch

Chooses the pitch (the horizontal spacing) of the font used in the print job, if the font is scalable and is fixed-pitch. The font pitch is expressed in cpi (characters per inch).

Height

Chooses the height of the font used in the print job, if the font is a proportional scalable font. The height is expressed in points; one inch being approximately equal to 72 points.

SymSet

Chooses the symbol set of the font used in the print job. See Appendix?? for details of the different symbol sets available in this printer. If you select a symbol set which is not available for the font selected with the Font Source and Font Number settings, the printer uses the default symbol set.

Form

Selects the number of lines for the selected paper size and orientation. This causes a line spacing (VMI) change as well, and this new VMI value is stored in the printer. This means that any later changes in the Page Size or Orientation settings cause changes to this Form value, based on the VMI settings stored here.

Source SymSet

You can only make this setting if an optional font ROM has been installed.

Dest SymSet

You can only make this setting if an optional font ROM has been installed.

Setting	Parameters
Font Source	Resident, DIMM, Download
Font Number	From 0 upwards (maximum value = 65535)
Pitch	0.44 – 99.99 cpi in steps of 0.01 cpi
Height	4.00 – 999.75 pt in steps of 0.25 pt
SymSet	IBM-US, Roman-8, ECM94-1, 8859-2 ISO, 8859-9 ISO, IBM-DN, PcMultiling,PcE.Europe, PcTk437, WiAnsi, WiE.Europe, WiTurkish, DeskTop, PsText, VeInternati, VeUS, MsPublishin, Math-8, PsMath, VeMath, PiFont, Legal, UK, ANSI ASCII, Swedis2, Italian, Spanish, German, Norweg1, French2, Windows
Form	5 – 128
Source SymSet	0 – 3199
Dest SymSet	0 – 3199

GL2 menu

When using the printer in EPSON GL/2 mode, it emulates a plotter, allowing you to use software which requires a plotter for output. The mode is similar to the GL/2 mode which is supported in HP LaserJet 4 mode. The EPSON GL/2 mode emulates some of the HP-GL plotter commands and includes all the commands found in HP's GL/2 mode, as well as two additional commands.

GL-Mode

Selects whether the emulation is similar to the GL/2 or the HP LaserJet 4 emulation of the GL/2.

Scale

> Selects whether the output from the software is scaled, and if so, how the scale factor is calculated: based on the output paper size of the software application.

Origin

> Selects whether the logical origin of the "plotter" is from the corner or the center of the paper.

Pen

> Selects the logical "pen" which is used to "plot" the drawing.

End

> Selects the way in which lines end.

Join

> Selects the way in which lines are joined.

Pens 0 through 6

> Selects the thickness of the seven "pens" used to make the printout.

Setting	Parameters
GL-Mode	GLlike, LJ4GL2
Scale	Off, A0, A1, A2, A3
Origin	Corner, Center
Pen	Pen0, Pen1, Pen2, Pen3, Pen4, Pen5, Pen6
End	Butt, Square, Triangular, Round
Join	Mitered, Miteredbeveled, Triangular, Round, Beveled, None
Pen 0 through 6	0.05 – 5.00 mm in steps of 0.05 mm

Before you start printing in the GL/2 mode

You may need to change the printer settings, depending on your output needs. First, check the printer's settings to make sure they match the data you are trying to print. Check the following items; the information may be necessary later.

Paper size: Printer's paper size setting

Driver (plotter selection): HP-GL/2 or HP-GL plotters

Pen cofiguration: Pen number, pen width

Plot origin: Center or Corner

Orientation: GLlike, landscape only
                               LJ4GL2, landscape or portrait

If you need to configure the printer settings, first switch the emulation and then change the settings using he printer driver, or SelecType.

> **Caution:**
> *Settings or data saved in the printer RAM (such as downloaded fonts) may be erased when you change emulation mode.*

PS menu

This menu is only available if the optional EPSONScript Level 2 module has been installed.

ESCP2 and FX menus

This menu allows you to make settings which affect the printer when it is in ESCP2 or FX emulation mode. The same menu items are available for both emulation modes unless specifically mentioned otherwise.

Font

Selects the font which is used for printing.

Pitch

Selects the pitch (the horizontal spacing) of the font in fixed pitch, measured in cpi (characters per inch), or you can choose proportional spacing.

Condensed

Turns condensed printing on or off.

T. Margin

Sets the distance from the top of the page to the baseline of the first printable line. The distance is measured in inches.

Text

Sets the page length in lines. For this option, a line is assumed to be 1 pica (1/6 inch). If you change the Orientation, Page Size, or T. Margin settings, the page length setting automatically returns to the default setting for each paper size.

CG Table

Use the character generator table option to select the graphics character table or the italics table. The graphics table contains graphic characters for printing lines, corners, shaded areas, international characters, Greek characters, and mathematical symbols. If you select the italics table, the upper half of the character table is defined as italic characters.

Country

Use this option to select one of the fifteen international symbol sets. See "Symbol Sets" in Appendix B for samples of the characters in each country's symbol set.

5

Auto CR

This selects whether the printer performs a carriage-return/line-feed (CR-LF) operation whenever the printer position goes beyond the right margin. If this setting is Off, the printer does not print any characters beyond the right margin and does not perform any line wrapping until it receives a carriage-return character. This function is handled automatically by most software applications.

Auto LF

If you set this option to Off, the printer does not send an automatic line-feed (LF) command with each carriage-return (CR). If this is set to On, a line-feed command is sent with each carriage-return. You should set this to On if your text lines overprint each other.

Bit Image

If you set this parameter to Dark or Light, the printer is able to emulate the graphics densities set with the printer commands. If you select Dark, the bit image density is high, and if you select Light, the bit image density is low.

If you select the BarCode setting, the printer converts bit images to bar codes by automatically filling in any vertical gaps between dots. This produces unbroken vertical lines that can be read by a bar code reader. This mode will reduce the size of the image been printed, and may also cause some distortion when printing bit image graphics.

ZeroChar

Selects whether the printer prints a slashed or unslashed zero. This is useful for distinguishing between an uppercase O and a numeric 0 when printing program listings, for example.

Setting	Parameters
Font	Courier, Prestige, Roman, Sans Serif, Roman T, Orator S, Sans H, Script, OCR A, OCR Be
Pitch	10, 12, 15, Prop. (cpi)
Condensed	Off, On
T. Margin	0.40 – 1.50 inch in 0.05 inch steps
Text	1 – 62/66[*] (maximum of 81 lines)
CGTable	PcUSA, Italic, PcMultilin, PcPortugue, PcCanFrenc, PcNordic, PcTurkish2,PcE.Europe, BpBRASCII, BpAbicomp
Country	USA, France, Germany, UK, Denmark, Sweden, Italy, Spain1, Japan, Norway, Denmark2, Spain2,LatinAmeric, Korea, Legal
Auto CR	On, Off
Auto LF	Off, On
Bit Image	Dark, Light, BarCode
ZeroChar	O, Ø

* Depending on whether Letter (62) or A4 (66) paper has been selected

I239X menu

I239X mode emulates IBM 2390/2391 Plus commands. For detailed information on most of the settings and parameters in the table below, refer to the previous section.

Setting	Parameters
Font	Courier, Prestige, Gothic, Orator, Script, Presentor, Sans Serif
Pitch	10, 12, 15, 17, 20, 24, Prop. (all fixed pitches are in cpi)
Code Page	437, 850, 860, 863, 865
T. Margin	0.30 – 1.50 inch in 0.05 inch steps
Text	1 – 63/67* lines (maximum of 81)
Auto CR	Off, On
Auto LF	Off, On
Alt. Graphic	Off, On
Bit Image	Dark, Light
ZeroChar	O, Ø
CharacterSet	1, 2

* Depending on whether Letter (63) or A4 (67) paper has been selected
** The page length will vary, according to whether Letter or A4 size paper has been selected.

Code Page

Selects the character tables. Character tables contain the characters and symbols used by different languages. The printer prints text based in the selected character table.

Alt.Graphic

Turns the Alternate Graphics option on or off. The default setting is OFF.

Character Set

Selects character table 1 or 2.

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Chapter 6

Troubleshooting and Maintenance

6

This chapter provides information on keeping the printer in optimum condition and tells you how to:

❏ Solve printer problems

❏ Replace the Imaging Cartridge

❏ Clean the printer

❏ Transport the printer.

Also included is a complete list of error messages you may encounter. There are a number of ways to find out what error has occurred:

❏ use the EPSON Status Monitor utility

❏ print a status sheet

❏ check the printer control panel display

When using the printer's control panel to check the status of the printer, you can get a quick overview of the printer status by looking at the indicators, as described in "Understanding Your Printer".

The LCD display also provides messages which indicate the current printer status, both errors and warnings. A list of these messages is provided later in this chapter ("Error Messages", on page 6-20)

Problems and Solutions

Most printer problems have simple solutions. Look through this section to find the kind of problem you have, then try the recommended solutions in the order they are presented until your problem is solved.

Note:
If the problem remains after you work through the suggestions in this section, contact your dealer for assistance.

Paper jams

The printer stops and an error message is shown

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Note:
The following steps describe how to remove paper when it is jammed in the manner shown. Other types of paper jams are described later in the chapter.

Preventing paper feed and paper jam problems

If you have frequentl paper feed or paper jam problems, use this check list of corrective measures:

❏ Use a higher-quality paper that is not too thin or rough.

❏ Fan the stack of paper or media and then tap its edges to align it before you load it.

❏ Be sure that you do not load too much paper in the tray.

❏ Be sure to adjust the paper guides so that the paper feeds freely.

❏ Never let more than 250 (or 40, if you use the optional face up tray) sheets accumulate on the paper support.

❏ Try turning over the stack of paper in the paper tray. Most paper packages indicate the best side for printing.

❏ The paper or media has not been loaded correctly into the printer. Read the section on loading paper to ensure that you are loading the paper correctly.

Paper jams, may occur in a number of different places: before reaching the Imaging Cartridge, between the Imaging Cartridge and the paper exit, at the paper exit itself, at the entrance to the optional duplex unit, in the vertical unit of the duplex unit, or in the duplex tray. The control panel display will inform you of the location where any jams occur.

Clearing a paper jam

After clearing a paper jam, the jammed page will automatically be reprinted.

 Warning:
When clearing paper jams, remember that the fuser unit inside the printer becomes very hot when printing. Never touch the fuser unit. Read and take careful note of the label attached to the fuser unit.

Paper jammed before reaching the Imaging Cartridge

If paper jams in the printer before reaching the Imaging Cartridge, the display shows Feed Jam.

1. Open the printer cover, and remove the Imaging Cartridge..

2. You should look for a sheet of paper sticking out, probably about two to four centimeters (about 1 to 1.5 inches) from underneath the movable metal plate.
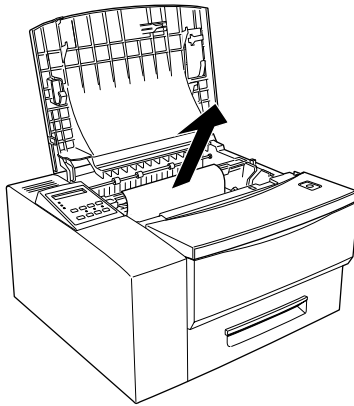
3. Lift up the movable metal plate, and gently but firmly pull the sheet of paper out of the printer. If the paper tears when you remove it, make sure you remove any pieces remaining in the printer.

4. Reinstall the Imaging Cartridge and close the printer cover.

5. Open the cassette tray (if you are using the optional lower paper cassette, open it) and remove any jammed sheets or sheets which have been partially fed into the printer. Remove the paper stack from the tray.
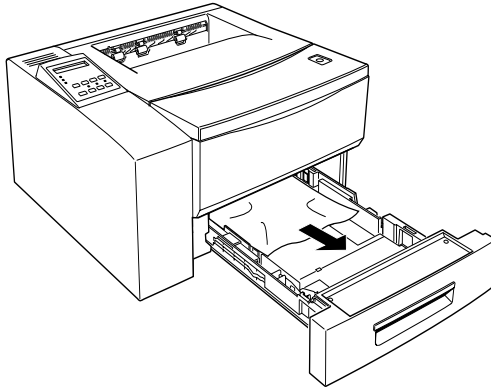
6. If you are using the MP tray, remove all media from the MP tray, including any jammed or partially-fed sheets of media. Replace the media in the MP tray.

7. Tap the edges of the paper or media stack on a flat surface and carefully reload it into the paper tray. Do not reload curled or wrinkled sheets.

8. Replace any paper cassettes before starting to print again.

Paper jammed between the Imaging Cartridge and the paper exit

If paper is jammed between the Imaging Cartridge and the paper exit, the display shows Paper Jam.

1. Open the printer cover and remove the Imaging Cartridge.

2. You should see a sheet of paper sticking out from the fuser unit.

    Warning:
    Opening the printer cover exposes the fuser, which is marked CAUTION HIGH TEMPERATURE. Be careful not to touch the fuser.

3. Carefully but firmly remove the paper from the fuser and take it out of the printer. If the paper tears when you remove it, make sure you remove any pieces remaining in the printer.

4. Reinstall the Imaging Cartridge and close the printer cover.

5. As previously described, remove any jammed or partially-fed sheets of paper or other media from the cassette tray or the MP tray.

6. Replace the cassette tray or MP tray media before continuing with the print job.

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Paper jammed at the paper exit

If paper is jammed at the paper exit, the display shows Exiting
Paper Jam.

1. If you have fitted the optional duplex unit, unfasten and tilt
   back the vertical component of the duplex unit so that you can
   access the paper exit.

2. If you have fitted the optional face up tray, remove the face
   up tray so that you can access the paper exit.

3. Look for a sheet of paper protruding from the paper exit.

4. Carefully but firmly pull the sheet of paper from the exit. If
   the paper tears when you try to remove it, make sure you
   remove any pieces remaining in the printer.

5. If you opened the optional duplex unit or removed the
   optional face up tray, close and re-fasten the duplex unit or
   replace the face up tray.

6. As previously described, remove any jammed or partially-fed
   sheets of paper or other media from the cassette tray or the
   MP tray.

7. Replace the cassette tray or MP tray media before continuing
   with the print job.

Paper jammed at the entrance to the duplex unit

If paper is jammed as it enters the optional duplex, the display shows Paper Jam in Duplex.

1. Unfasten the catch of the duplex unit's vertical unit and tilt it back so that you can access the printer exit opening.
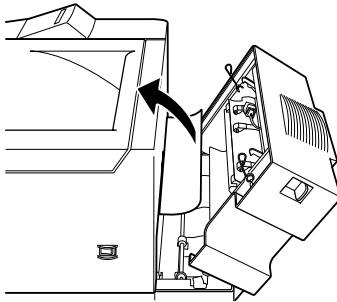
2. Open the printer cover.

3. Look for a sheet of paper protruding from the paper exit opening, as shown in the illustration above.

4. Carefully but firmly, pull the sheet of paper out of the exit opening. If the paper tears when you remove it, make sure you remove any pieces remaining the printer.

5. Close and re-fasten the duplex unit and the printer cover.

6. As previously described, remove any jammed or partially-fed sheets of paper or other media from the cassette tray or the MP tray.

7. Replace the cassette tray or MP tray media before continuing with the print job.

Paper jammed in the vertical unit of the duplex unit

If paper jams in the vertical unit of the duplex unit, the display shows Jam in Duplex Cover.

1. Unfasten the catch of the duplex unit's vertical unit and tilt it back so that you can access the interior of the duplex unit.
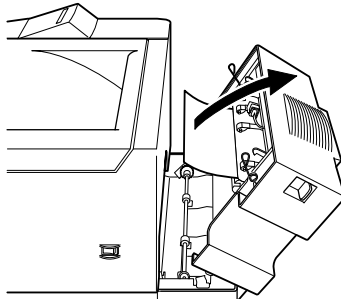
2. Look for a sheet of paper protruding from the rubber rollers in the duplex unit.

3. Push back on the metal bracket cassette to free the rollers, and carefully but firmly remove the sheet of paper from the duplex unit. If the paper tears when you try to remove it, make sure you remove any pieces remaining in the printer.

4. If you opened the optional duplex unit or removed the optional face up tray, close and re-fasten the duplex unit or replace the face up tray.

5. As previously described, remove any jammed or partially-fed sheets of paper or other media from the cassette tray or the MP tray.

6. Replace the cassette tray or MP tray media before continuing with the print job.

Paper Jammed in the duplex unit

If paper jams in the duplex unit, the display shows Jam in Duplex Tray.

1. Unfasten the catch of the duplex unit's vertical unit and tilt it back so that you can access the interior of the duplex unit.

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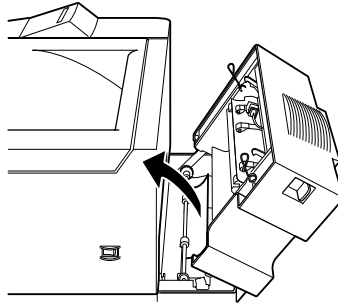
2. Inspect the rubber rollers located at the base of the duplex tray.

3. Firmly but carefully pull any paper out of base rollers.

4. Open the duplex tray and remove any paper remaining in the tray.

5. Close the duplex tray.

6. Close and lock the vertical unit.

7. Open the paper cassettes and remove any jammed or partially fed paper.

8. Replace the cassette tray or MP Tray media before continuing with the print job.

Printing automatically restarts from the page that jammed. If the paper light stays on after removing all jammed paper, open and close the printer cover to clear the error.

Operational problems

The On Line light does not turn on when you turn the printer on.

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, make sure the switch is turned on or plug another electrical device into the outlet to check whether the outlet is operating properly.

The printer does not print and the On Line light is off.

Press On Line once to put the printer on line (the On Line light comes on).

The On Line light is on but nothing prints.

Your computer may not be properly connected to the printer. Perform the procedure described in "Connecting the printer to the computer" in the *Getting Ready!* booklet.

The interface cable may not be plugged in securely. Check both ends of the cable between the printer and the computer. Be sure to secure the connector using the wire retaining clips.

Make sure that if you are using a parallel interface, the cable is a double-shielded, twisted-pair interface cable no longer than six feet in length.

If you are using a serial interface, set the parity, baud rate, number of data bits, and number of stop bits to match the computer.

The Imaging Cartridge may be empty. Replace the cartridge as described on page 6-31.

Printout problems

The font selected with software commands won't print.

The selected font is not supported by your printer. Be sure you have installed the correct font. See Appendix D for more information.

Some or all of the printout is garbled or printed as asterisks

Make sure that both ends of the interface cable are plugged in securely.

Make sure you use a double-shielded, twisted-pair parallel interface cable no longer than six feet in length.

If you are using a serial interface, set the parity, baud rate, number of data bits, and number of stop bits to match the computer.

The emulation setting for the port may not be correct. Specify the emulation mode with the SelecType.

If the printer still does not print correctly, contact your dealer or a qualified service person.

Position of the printout is not correct

Make sure that you are using the correct page length and margin settings in your software 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 LJ4 emulation mode, be sure that your software program is set to use a LaserJet 4 printer.

If you are using a serial interface, make sure that you set the parity, baud rate, number of data bits, and number of stop bits to match the computer.

Graphics require large amounts of memory; see "Memory Problems" in this chapter for more help.

Print quality problems

The background is dark or dirty.

Lighten the Density setting on the Panel menu of your printer driver.

Turn off the printer. Clean the paper path inside the printer using a soft, dry cloth.

Clean internal printer components by printing three pages with only one character per page.

You may not be using the correct type of paper for your printer. If the surface of your paper is too rough, printed characters may appear distorted or broken. Smooth, high-quality copier paper is recommended for best results. See Chapter 2, "Paper Handling", for information on choosing paper.

There may be a problem with the Imaging Cartridge. Remove the cartridge, shake it gently from side to side, and then reinstall it. If this does not solve the problem, replace the Imaging Cartridge (see "Replacing the Imaging Cartridge", on page 6-31).

Black or white bands appear in the printout.

Turn off the printer. Clean the paper path inside the printer using a soft, dry cloth.

Clean internal printer components by printing three pages with only one character per page.

There may be a problem with the Imaging Cartridge. Remove the cartridge, shake it gently from side to side, and then reinstall it. If this does not solve the problem, replace the Imaging Cartridge. See "Replacing the Imaging Cartridge", on page 6-31

Uneven print quality on the page

Your paper may be moist or damp. Do not store your paper in a humid or damp environment.

Turn off the printer. Take out the Imaging Cartridge, shake it gently from side to side, and then reinstall it.

If this does not solve the problem, install a new cartridge as described on page 6-31. Then print several pages to check the print quality.

Toner smudges

Your paper may be moist or damp. Do not store your paper in a humid or damp environment.

You may not be using the correct type of paper for your printer. If the surface of your paper is too rough, printed characters may appear distorted or broken. Smooth, high-quality copier paper is recommended for best results. See "Paper Specifications" in Appendix A for information on choosing paper.

Turn off the printer. Remove the Imaging Cartridge, shake it from side to side to distribute the toner, and wipe the bottom of it with a clean, dry cloth.

Clean the paper path inside the printer using a clean, soft, dry cloth.

Clean internal printer components by printing three pages with only one character per page.

If the problem remains, replace the Imaging Cartridge. See "Replacing the Imaging Cartridge", on page 6-31

Missing areas on printed image

Your paper may be moist or damp. Printing is sensitive to moisture absorbed by the paper. The higher the moisture content in the paper, the lighter the printed output. Do not store your paper in a humid or damp environment.

You may not be using the correct type of paper for your printer. If the surface of your paper is too rough, printed characters may appear distorted or broken. Smooth, high-quality copier paper is recommended for best results. See "Paper Specifications" in Appendix A for information on choosing paper.

Completely blank pages

If, after checking the Toner status in the EPSON Status Monitor, the Toner message indicates that the amount of toner is low, read "Replacing the Imaging Cartridge" starting on page 6-31.

Check that the Imaging cartridge is installed as described in "Replacing the Imaging Cartridge", on page 6-31.

The problem may be with your software program or interface cable. Print out a status sheet by pressing the control panel button. If blank pages continue to print, the problem may be with the printer. Turn off the printer and contact your dealer.

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The printed image is light or faint

Darken the Density setting on the Panel menu of your printer driver.

Your paper may be moist or damp. The higher the moisture content in the paper, the lighter the printed output. Do not store your paper in a humid or damp environment.

Take out the Imaging Cartridge, shake it gently from side to side to distribute the toner, and then reinstall it. If the problem persists, replace the cartridge as described on page 6-31.

The Toner Save mode may be on. Turn off the Toner Save mode using the printer driver.

The image is too dark

Lighten the Density setting on the Panel menu of your printer driver.

If the problem persists, replace the cartridge as described on page 6-31.

Non-printed side of the page is dirty

Toner may have spilled in the paper feed path. Turn off the printer. Remove the Imaging Cartridge and then clean the paper path of the printer using a clean, soft, lint-free cloth.

Warning:
Opening the printer exposes the fuser, which is marked by a label with the words CAUTION HIGH TEMPERATURE. Be careful not to touch the fuser.

Memory problems

Mem Overflow

The printer has insufficient memory available for the current task. To correct the error, press the Continue button on the control panel. If the message remains, reset the printer as described on page 6-30. You can also clear this message by turning the printer off, waiting 10 seconds, and then turning it back on.

You may also need to increase the amount of printer memory. see chapter 3 for more informaiton on adding memory.

Image Optimum

The printer has insufficient memory to print the page using the specified print quality. The printer automatically reduces the print quality so it can continue printing. If the printout is not acceptable, try simplifying the page by limiting the number of graphics or reducing the number of fonts or font sizes.

Lower the Resolution setting to 300 dpi.

Option problems

Paper does not feed from the optional lower paper cassette

Be sure you have selected the proper paper tray in your software.

There may be no paper in the lower paper cassette. Load it with paper.

Be sure that the lower paper cassette is properly installed and that you have not tried to load it with too many sheets of paper. The cassette can hold a maximum of 500 sheets of $75g/m^2$ (20lb) paper.

The lower paper cassette may not be installed properly. See Chapter 3 for instructions on installing the lower paper cassette.

Feed Jam when using the optional lower paper cassette

See "Clearing a paper jam", on page 6-4

Error Messages

This section contains a list of the messages shown on the display, giving a brief description of each message and suggestions for correcting the problem. You should realize that not every message shown on the display indicates a problem, however.

Check Duplex P-Size

The paper size setting is different from the size loaded in the printer. Check to see if the correct size of paper is loaded in the tray. Open the printer cover or Duplex Unit cover, then pull out the paper and close the cover. Then press the Continue button. The print data is automatically reprinted.

Check Paper Size

The paper size setting is different from the size loaded in the printer. Check to see if the correct size of paper is loaded in the tray; then press the Continue button.

If you turn on Size Ignore in the printer driver, this massage does not appear.

Duplex Cover Open

The vertical segment of the duplex unit is not latched shut. Close and latch it.

Duplex Mem Overflow

There is not enough memory to print both sides of the document using the duplex unit. To correct the error, press the Continue button on the control panel. If the message remains, reset the printer as described in "Reset", on page 6-30. You may also be able to clear this message by turning the printer off, waiting 10 seconds, and then turning it back on.

If you continue to receive this message when printing a particular page, try simplifying the page by limiting the number of graphics or reducing the number and size of fonts.

You can also add more memory to the printer as described in Chapter 3, "Options".

Duplex print was off

An attempt has been made to use the duplex unit, but the correct setting has not been made..

Duplex Unit Fail

The duplex unit is not working correctly. Check the installation of the unit.

Exiting Paper Jam

Paper is jammed in the printer. See "Paper jammed at the paper exit", on page 6-8 for details about removing jams from in the printer.

Feed Jam

Paper is not feeding properly from the tray (or optional paper cassette) or has jammed on its way into the printer. Remove the jammed paper. See "Paper jammed before reaching the Imaging Cartridge", on page 6-5 for feed jams in the printer. See "Preventing paper feed and paper jam problems", on page 6-3 for advice on preventing this problem.

Form Feed

Feeding paper (this message will blink when a test page is being printed).

Format Error DIMM x

An unformatted DIMM has been inserted. If the DIMM has been formatted, but is unreadable, format the DIMM again. If, after reformatting, the DIMM is still unreadable, take it to your dealer for repair or replacement.

To clear this error either press the Continue button or turn off the printer and remove the DIMM.

Illegal Aux I/F Card

This message means that the printer cannot communicate with the installed optional interface card. Turn off the printer and remove the card, then reinstall it.

Illegal DIMM x

The printer cannot read the installed optional DIMM. Turn off the printer and remove the DIMM.

Image Optimum

There is insufficient memory to print the page using the specified print quality. The printer automatically reduces the print quality so it can continue printing. If the printout is not acceptable, try simplifying the page by limiting the number of graphics or reducing the number of fonts or font sizes.

Turn off the printer then resend the print data.

Turn the Image Optimum setting off on the Printer Setup menu in the printer driver or SelecType.

You may also need to increase the amount of printer memory. See Chapter 3, "Options" for more information on adding memory.

Insert Duplex Tray

The duplex tray is not properly inserted. Re-insert the duplex tray.

There is no Imaging Cartridge inserted in the printer. Install a

Insert Imaging Crtg

Imaging Cartridge (see "Replacing the Imaging Cartridge", on page 6-31).

Insert LC1

The cassette tray is not inserted properly. Insert the tray.

Jam in Duplex Tray

A paper jam has occurred inside the duplex unit (see "Paper jammed in the vertical unit of the duplex unit", on page 6-10).

Jam in Duplex Cover

A paper jam has occurred inside the duplex unit (see "Paper Jammed in the duplex unit", on page 6-11).

Manual Feed xxx yyyy

The printer is waiting for media to be inserted manually. The xxx and yyyy refer to the paper source and the paper size.

Mem Overflow

The printer has insufficient memory available for the current task. To correct the error, press the Continue button on the control panel. If the message remains, reset the printer as described on page 6-26. You can also clear this message by turning the printer off, waiting 10 seconds, and then turning it back on.

Menus Locked

This message appears if you try to change a printer setting when the buttons have been locked.

Need Memory

The printer has insufficient memory available for the current task. Add more memory to your printer as described in "Memory Modules", on page 3-31.

Paper Jam

Paper is jammed in the paper path. Open the printer cover and clear the jammed paper as described in this chapter. After the jam is cleared, the jammed page's print data is automatically reprinted.

Opening the printer cover exposes the fuser, which is marked by a CAUTION HIGH TEMPERATURE label. Be careful not to touch the fuser.

Paper Jam in Duplex

A paper jam has occurred inside the duplex unit (see "Paper jammed at the entrance to the duplex unit", on page 6-9).

Paper Out XXXXX YYYY

There is no paper in the specified paper source (XXXXX). Load paper of the indicated size (YYYY) into the source. See the appropriate sections of the manual (*Getting Started!* and Chapter 2, "Paper Handling"for details of how to load paper and media.

Paper Set XXXXX YYYY

The paper loaded in the specified paper source (XXXXX) does not match the required paper size (YYYY). Replace the loaded paper with the correct size and press Continue.

Print Overrun

The required time to process the print data exceeds the print engine speed because the current page is too complex. Press the control panel button to resume printing. If this message appears again, turn on Page Protect in the Printer Setting dialog of the Panel menu of your printer driver to change this setting.

If you continue to receive this message when printing a particular page, try simplifying the page by limiting the number of graphics or reducing the number and size of fonts.

You can also add more memory to the printer as described in Chapter 3, "Options".

Printer Open

The printer cover is open. Close the printer cover to continue printing.

RAM check

The printer is checking its RAM memory.

Ready

The printer is ready to print.

Reset

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

Reset All

All printer settings have been reset to the user default configuration, the last settings that were saved.

Reset to Save

You should reset the printer to save the current settings.

ROM check

The printer is making a check of its ROM memory.

Self Test

The printer is running a self-diagnostic program.

Service Req. eXXX

A controller error or a print engine error has been detected. Write down the error number listed on the display and turn off the printer. Wait at least 10 seconds and then turn it back on. If this error still occurs, turn off the printer, unplug the power cord, and contact a qualified service person.

Standby

The printer is turned on, but is in energy-saving mode.

Toner Low

The printer is almost out of toner. You should prepare a new cartridge; the toner will be out soon.

Warming Up

The printer is warming up.

Write Error DIMM A

This message indicates an internal error in the printer. Reset the printer. If this error persists, consult your EPSON dealer.

Writing DIMM A

The printer is writing the settings to ROM module A.

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Resetting the printer

There are two ways to reset the printer.

Reset

Resetting the printer stops printing and clears the current print job received from the active interface. You may want to reset the printer when there is a problem with the print job itself and the printer cannot print successfully.

To reset the printer, hold down the Alt and the Reset button until Reset appears on the display. Your printer is now reset and ready to receive a new print job.

Reset all

Reset all stops printing, clears the printer memory, and returns the printer settings to the default values. The print jobs received in printer memory from all interfaces are erased. Current settings and downloaded fonts are also erased.

To perform reset all, hold down the Alt and the Reset button until Reset All appears on the display. Your printer is now reset and ready to receive a new print job.

You can also perform reset all by turning off the printer.

Note:
Performing reset all clears print jobs received from all interfaces, so be careful not to of interrupt someone else's job.

Replacing the Imaging Cartridge

The Imaging Cartridge prints up to 8,500 pages depending upon the complexity of your print jobs.

If your printed images become faint, enter the SelecType Setup menu to use the Toner function to find out approximately how much toner remains in the Imaging Cartridge.

Simply count the asterisks between E (empty) and F (full) on the display. Each asterisk represents about 25 % of the total toner capacity. If you see only one asterisk on the display indicating that there is less than 25% toner left, you should prepare a replacement Imaging Cartridge.

When replacing a cartridge, be sure to use the S050012 Imaging Cartridge.

1. Open the printer cover by pressing the latch on the top right of the printer and lifting the cover up all the way.

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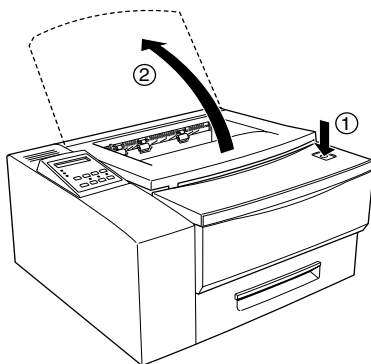
2. Grasp the Imaging Cartridge as shown in the illustration, and pull it upward to remove it. Store the used cartridge in its original packing or in an empty box.
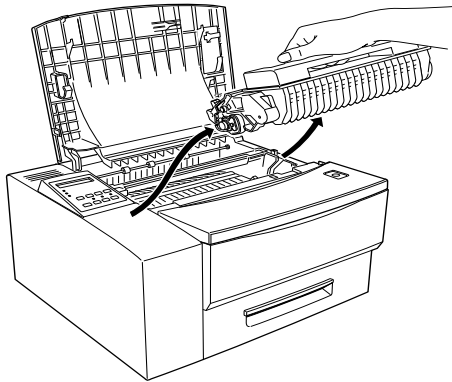
 Warning:
Do not touch the fuser, which is marked CAUTION HIGH TEMPERATURE.

3. Dispose of the used cartridge properly.

4. Remove the new Imaging Cartridge from its packing.
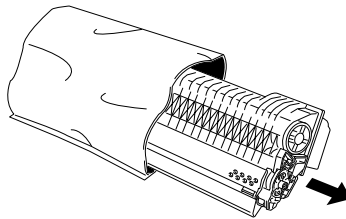
Note:
❏ *Save the aluminized bag in which the toner cartridge was packed, in case you need to store the cartridge after removing it (for instance, if you move the printer).*

❏ *Do not expose the toner cartridge to direct sunlight or strong light of any kind. You should install the toner cartridge as soon as possible after removing it from its aluminized bag to avoid damage to the cartridge.*

5. Hold the Imaging Cartridge as shown in the illustration below, and shake it gently seven or eight times to mix and distribute the toner inside the cartridge evenly.
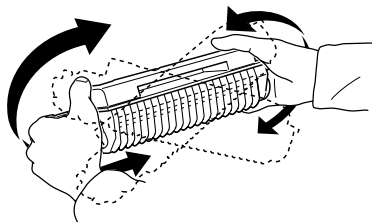
6
6. Set the cartridge on a clean, flat surface. Hold it down with one hand. Use the other hand to grasp the end tab of the sealing tape, and pull the tape out horizontally.
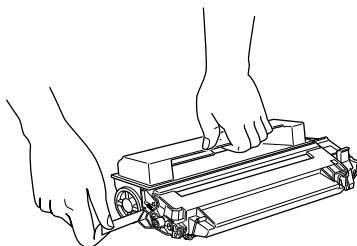
Note:
❏ *Always pull the tab horizontally. It may break if you pull it at an angle.*

❏ *Always make sure that the top of the cartridge is uppermost when you do this; if the cartridge is on its side, or upside-down, you may cause serious damage to the cartridge.*

7. Hold the cartridge as shown below, and locate it into the guide channels inside the printer body. Insert it into the printer until it clicks into place. You should use the colored markers on the cartridge and inside the printer to align the cartridge correctly.
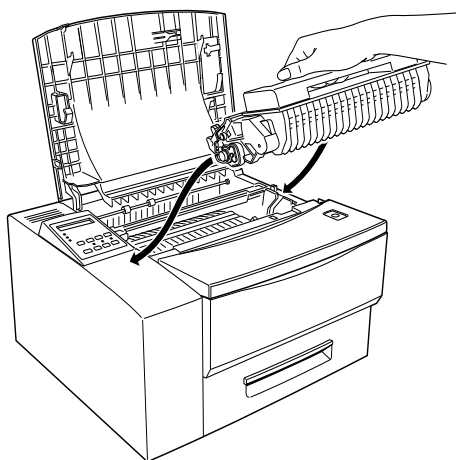
8. Close the printer cover.

9. After turning on the printer, make sure the printer is on line. Press the Menu button on the printer's control panel until the Setup menu displays on the display. Then press the Item button several times until to the Toner Count Clear menu displays and press the Enter button. Your printer's toner counter is now reset.

Cleaning the Printer

The printer needs only minimal cleaning. If you notice a decline in print quality, clean the inside of the printer as described in this section.

You should also clean the paper cassette and the printer cover every few months.

Cleaning the outside of the printer

If the printer's outer case is dirty or dusty, turn off the printer and clean it with a soft, clean cloth dampened with a mild detergent.

> **Caution:**
> *Never use alcohol or thinner to clean the printer cover; these chemicals can damage the components and the case. Be careful not to get water on the printer mechanism or any electronic components.*

Cleaning the inside mirror of the printer

Fine particles of dust can collect inside the printer. Follow the steps below to clean the inside of the printer, especially the mirror inside the printer.

When you see white strips on your printouts, this is a sign that you need to clean the mirror.

1. Make sure the printer is turned off.

2. Open the printer cover.

3. Remove the Imaging Cartridge, as explained above.

4. As shown in the illustration below, pinch the cleaning brush and slide it gently once across the surface of the mirror.
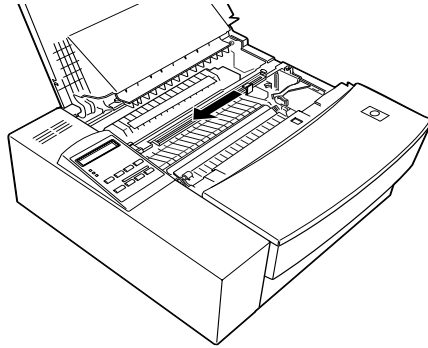
Note:
❏ *Do not press down when cleaning the mirror. If you use too much pressure, you may scratch and damage the mirror.*

❏ *If you still see white streaks on your printouts after cleaning the mirror, you may need to replace the Imaging Cartridge.*

5. Replace the Imaging Cartridge, close the top cover of the printer, and reconnect it to the power supply before turning it on again.

Cleaning the inside of the printer

❏ Remove any dirt inside the printer with a clean cloth.

❏ Do not use compressed air.

❏ If you have paper feed problems which persist even after following all the steps described in this section, clean the paper roller by opening the roller cover, then clean the roller.

❏ After cleaning the inside of the printer, remove all the paper from the paper tray and clean the tray with a soft cloth.

Removing spilled toner

If toner spills inside the printer, do not use the printer until you remove all the spilled toner.

If only a small amount of toner is present, carefully wipe out the inside of the printer with a clean, dry cloth.

If a large amount of toner is present, use a small vacuum cleaner (available from computer supply stores) to remove it. Then carefully wipe with a clean, dry cloth.

c *Caution:*
Toner and other fine powders can damage some vacuum cleaners. Be sure to read the instructions for your vacuum cleaner before you use it on spilled toner.

Note:
If you spill toner on your clothing, rinse it off with cold water. Do not use hot water as it may cause the toner to leave a permanent stain.

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Transporting the Printer

If you need to transport your printer, carefully repack it using the original box and packing materials as follows:

1. Turn off the printer, remove the power cord from the power outlet and the printer, and disconnect the interface cable.

2. Open the printer cover, remove the Imaging Cartridge, and replace the cartridge in the aluminized bag. Do not expose the cartridge to bright light. Close the printer cover.

3. Pull out the cassette tray and remove all paper from it. If there is any media in the MP tray, remove that as well.

4. Push in the cassette tray to replace it, and fold and put the MP tray back in face.

5. If you have fitted the optional face-up tray, remove it, as described in Chapter 3, "Options".

6. If you have fitted the optional 500 sheet lower paper cassette and/or the duplex unit, remove them as described in Chapter 3, "Options".

7. Replace the printer's protective materials, then repack the printer in its original box.

Appendix A

Technical Specifications

A

Paper

Specifications

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.

Plain Types	Plain paper, recycled paper, labels, envelopes, transparencies, colored paper, card stock, letterhead

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

Paper weight:

for cassette tray	60 to 105 g/m^2, 16 to 28 lb
for MP tray	60 to 157 g/m^2, 16 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)
	Legal (8.5 × 14 inches)
	Half-Letter (5.5 × 8.5 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 to 216 mm × 148 to 355.6 mm)
Envelopes:	Monarch (3 7/8 × 7 1/2 inches)
	Commercial 10 (4 1/8 × 9 1/2 inches)
	DL (110 mm × 220 mm)
	C5 (162 mm × 229 mm)
	International B5 (176 mm × 250 mm)
	C6 (114 mm × 162 mm)

Caution:
Only load paper sizes that are listed above.

Printable area: 4 mm minimum margin on all sides

Note:
The printable area varies, depending on the emulation mode currently in use.

Printer

General

Printing method:	Laser beam scanning and dry eletrophotographic process
Resolution:	$600 \text{ dpi} \times 600 \text{ dpi}$
Continuous Printing speed:	Up to 16 pages per minute with A4 depending on the font and the quantity of data.
First print:	Less than 14.4 seconds with A4/letter
Warm-up time:	About 45 seconds at normal temperature
Paper feed:	Automatic or manual feed
Paper feed alignment:	Left alignment for all size
Input paper supply ($75g/m^2$ paper):	Up to 80 sheets in the MP tray
	Up to 250 sheets in the paper cassette tray
	Up to 500 sheets in the optional lower paper cassette unit
Paper eject:	Face down or face up (optional) selection
Paper eject capacity ($75g/m^2$ paper):	Up to 250 sheets

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Internal emulation:	HP listed LaserJet 4 emulation (LJ4 mode)	
	HP-GL/2 emulations (GL2 mode)	
	ESC/P2 24-pin printer emulation (ESC/P2 mode)	
	ESC/P 9-pin printer emulation (FX mode)	
	IBM Proprinter emulation (I 239Xmode)	
Optional emulation:	EPSONScript Level 2	
Resident fonts:	45 scalable fonts, and one bitmap font (in LJ4 mode)	
RAM:	8MB, expandable up to 40MB	

Environmental

Temperature:	Operation:	10 to 32 deg. C (50 to 90 deg. F)
	Storage:	0 to 35 deg. C (32 to 95 deg. F)
Humidity:	Operation:	20 to 80% RH
	Storage:	20 to 80% RH
Altitude:	2,500 meters (8200 feet) maximum	

Mechanical

Dimensions and weight:	Height:	264 mm (10.4 inches)
	Width:	421 mm (16.6 inches)
	Depth:	420 mm (16.5 inches)
	Weight:	12 kg (about 26 lbs.) excluding options
Durability:	5 years or 180,000 sheets, whichever comes first	

Electrical

	110 V model	230 V model
Voltage	90 V to 132 V	198 V to 264 V
Rated frequency	50 Hz to 60 Hz ± 3 Hz	50 Hz to 60 Hz ± 3 Hz
Rated current	6.5 A	3.5 A
Power consumption	Less than 720 W	Less than 720 W
Power consumption in standby mode	45 W	45 W

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Interfaces

Parallel interface

The parallel (IEEE 1284-I compliant) interface connector pin assignments are shown in the table below. The column heading "Direction" refers to the direction of signal flow as viewed from the printer.

Pin No.	Direction	IEEE 1284-B connector		
		Compatibility	Nibble	ECP
1	IN	nStorbe	HostClk	
2	IN/OUT	DATA1		
3	IN/OUT	DATA2		
4	IN/OUT	DATA3		
5	IN/OUT	DATA4		
6	IN/OUT	DATA5		
7	IN/OUT	DATA6		
8	IN/OUT	DATA7		
9	IN/OUT	DATA8		
10	OUT	nACK	PtrClk	PeriphClk
11	OUT	Busy	PrtBusy	PeriphAck
12	OUT	PError	AckDataReq	nAckReverse
13	OUT	Select	Xflag	
14	IN	nAutoFd	HostBusy	HostAck
15		NC		
16		GND		
17		CG		
18	OUT	PeripheralLogic High		

Pin No.	Direction	IEEE 1284-B connector		
		Compatibility	Nibble	ECP
19 - 30		GND		
31	IN	nInit		nReverse Request
32	OUT	nFault	nDataAvail	nPeriphRequest
33		GND		
34		NC		
35	OUT	+5V		
36	IN	nSelectIn	IEEE1284 Active	

nstrobe/HostClk

Compatibility mode:	Latch pulse used to read in print data. When low, DATA is valid.
Negotiation phase:	Latch pulse used to read in extensibility request values.
Nibble mode:	Always high.
ECP mode:	Used to transfer data and addresses from the host to the printer with handshaking via PeriphAck (Busy).

DATA 1 to DATA 8 (bidirectional, but may always be an input if ECP or EPP mode is not supported)

Compatibility mode:	Forward channel data.
Negotiation phase:	Extensibility request value.
Nibble mode:	Not used.
ECP mode:	Bidirectional data.

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nACK/PtrClk/PeriphClk

All modes:	DATA 8 is the MSB, DATA 1 is the LSB.
Compatibility mode:	Acknowledgment low pulse in order to indicate that data was transferred from the host.
Negotiation phase:	Low signal indicates IEEE 1284 is supported; set to high afterwards to indicate that theXflag and "data available" flag are valid.
transfer phase:	Reverse data In nibble mode, a low signal indicates that the nibble data is valid.
Reverse idle phase:	When switched from low to high, generates an interrupt that notifies the host that there is data available.
ECP mode:	Used to transfer data from the printer to the host with handshaking via HostAck (nAutoFd).

Busy/PtrBusy/PeriphClk

Compatibility mode:	High signal indicates that the printer is not ready to receive data.
Negotiation phase:	Reflects the BUSY status of the forward channel.
Reverse data transfer phase:	In nibble mode, this signal serves as nibble data bit 3 and then 7.
Reverse idle phase:	Reflects the BUSY status of the forward channel.
ECP mode:	Used for forward direction flow control. In reverse direction, this signal is used as a ninth data bit that indicates whether the data signals indicate a command or data.

PError/AckDataReq/nAckReverse

Compatibility mode:	High signal indicates that a feed jam occurred in the paper supply section, or that there is no paper in the paper tray.
Negotiation phase:	High signal indicates whether or not IEEE 1284 is supported or not. Afterwards, this signal conforms with NDataAvail (nFault).
Reverse data transfer phase:	In nibble mode, this signal serves as nibble data bit 2 and then 6.
Reverse final phase:	High until the host requests a data transfer. Afterwards, this signal conforms with NDataAvail (nFault).
ECP mode:	Low signal authorizes nReverseRequest. The host looks at this signal in order to determine whether or not it as permission to drive the data signals.

Set/Xflag

Compatibility mode:	Always high.
Negotiation phase:	Xflag indicates the extensibility flag. Used to respond to the extensibility request value sent from the host.
Reverse data transfer phase:	In nibble mode, this signal serves as nibble data bit 1 and then 5.
Reverse idle phase:	Same as negotiation phase.
ECP mode:	Same as negotiation phase.

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nAutoFd/HostBusy/HostAck

Compatibility mode:	Not used.
Negotiation phase:	In order to request 1284 mode, this signal is set low and IEEE 1284active (nSelectIn) is set high. Afterwards, this signal is set high whenPtrClk (nAck) is set low.
Reverse data transfer phase:	In nibble mode, setting this signal low indicates to the printer that the host is ready to receive data. When this signal is subsequently set high, it indicates that the host received the data.
Reverse idle phase:	This signal is set high in response to a PtrClk (nAck) low pulse in order to return to be reverse data phase. If this signal is set high at the same time that IEEE 1284active (nSelectIn) is set low, the IEEE 1284 idle phase is aborted and the interface returns to compatibility mode.
ECP mode:	Used for reverse direction flow control. Also used for handshaking via PeriphClk (nAck).

NC

Not used.

PeripheralLogicHigh

Pull up to + 5 V with 3.9 kΩ.

nInit/nReverseRequest

Compatibility mode:	When a low signal is detected, the printer is deemed to be BUSY until the low signal is released.
Negotiation phase:	Always high.
Reverse data transfer phase:	Always high.
ECP mode:	Low when switching to reverse direction. The peripheral device has permission to drive the data signal only when this signal is low and 1284active is high.

nFault/DataAvail/nPeriphRequest

Compatibility mode:	Low signal indicates that an error occurred.
Negotiation phase:	This signal is set high in order to authorize 1284 compatibility. In nibble mode, after the host sets HostBusy (nAutoFd) high, this signal is set low in order to indicate that the transmission data is ready.
Reverse data transfer phase:	This signal is set low in order to indicate to a nibble mode host that the transmission data is ready. Afterwards, this signal serves as nibble data bit 0 and then 4.
Reverse final phase:	Indicates whether or not the data is valid.
ECP mode:	This signal is set low to request communications with the host. Valid in both forward and reverse direction.

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nSelectIn/IEEE1284active

Compatibility mode:	Always low.
Negotiation phase:	This signal is set high at the same time that HostBusy is low in order to request 1284 mode.
Reverse data transfer phase:	This signal is set high to indicate that the bus direction is from the printer to the host. This signal is set low to terminate 1284 mode, setting the bus direction from the host to the printer.
Reverse idle phase:	Same as reverse data transfer phase.
ECP mode:	Always high. This signal is set low to terminate ECP mode and return to compatibility mode.

GND

Twisted pair return signal.

CG

Connected to the printer chassis. This signal and GND are connected.

+5V

Pull up to + 5 V with 1 kΩ.

Using the ECP mode in Windows 95

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

Note:
The ECP mode is not available with Windows 3.1, 3.11 for workgroups, Windows NT 3.51 and NT 4.0.

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 how to use the program, consult your computer's documentation).

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, consult your computer's documentation.

8. Click OK to save the settings.

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Serial Interface

The printer's serial interface has the following characteristics:

Data format

Word length:	7 or 8 bits
Parity:	None, odd or even
Stop bits:	1 or 2
Printer ready (handshaking) protocol:	Enabled (XON/XOFF protocol set to ON)

Use the SelecType mode to set the data format.

Baud rate (approximately equal to bits/second):	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600
Signal level:	RS-232C – conforms to EIA
Connector:	D-sub 25-pin or 9-pin connector (computer)/D-sub 25-pin (printer)

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

Pin assignments

The serial interface connector pin assignments and a description of the interface signals are shown in the table below. The direction of signals is given as viewed from the printer.

Signal pin	RS-232C	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
17		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			Received data. This pin transmits serial data from the computer to the printer.
24			Transmits data. This pin transmits serial data from the printer to the computer.
25		IN	Received data. This pin transmits serial data from the computer to the printer.

Note:
The column heading "Direction" refers to the direction of signal flow as viewed from the printer.

A

Using the Serial Interface

If you use a serial interface, you need to confirm that the printer and the computer are using the same serial settings. If the serial settings do not match, you must change the appropriate settings. The settings can be changed either at the printer or computer.

The default serial settings for the serial interface are listed below. To change the serial settings, use the Remote Control Panel utility. For information about your computer's serial settings, see your computer manual.

Serial type:	RS-232C
Word length:	8
Baud rate:	9600
Parity:	NONE
Stop bit:	1
XON/XOFF:	ON
DSR:	OFF

You also need to change your computer's port setting if it is not already set to the serial port. The following procedure describes how to change the port setting in Windows. To change the setting using non-Windows software, see your software manual.

For Windows 3.1, Windows 3.11 for Workgroups, and Windows NT 3.51

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

2. Double-click the Printers icon.

3. In the Printers dialog box that appears, click the Connect button.

4. Select a COM (serial) port.

5. Click the OK button.

6. Close the Printers dialog box.

For Windows 95 and Windows NT 4.0

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

2. Right-click the EPSON EPL-5700 icon, and click Properties in the menu that appears. Be sure to right-click your printer.

3. Select the Details tab.

4. Click the arrow next to the Printer Port drop-down list. Then select a COM (serial) port.

5. Click OK to save this setting.

Using the serial interface utility

You can use the serial interface utility that comes with your printer to specify the port and the baud rate of your computer for the serial interface connection.

Your printer supports the following serial interface baud rates: 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, and 57600. If you want to use your printer with a higher baud rate that is not supported by your computer system, you can use the utility to match the baud rate between the computer and the printer.

Note:
This utility may not work with all computer systems.

1. Type HSERIAL at the DOS prompt and press Enter. To bring up the list of parameters for the port and the baud rate selection.

        C:\HSERIAL

2. Select the parameters referring to the list and type the following:

        C:\HSERIAL /P=n /B=m
                n = parameter for the port selection
                m = parameter for the baud rate selection

    For example, if you would like to use the COM1 port at the 57600 baud rate, type the following:

        C:\HSERIAL /P=1 /B=576

    If you need help, type the following:

        C:\HSERIAL /?

Options and Consumables

500 Sheet Lower Paper Cassette Unit - Universal (C81290])

Paper size:	A4, Letter, Legal, B5, Executive
Paper weight:	60 to 105 g/m^2 (16 to 28 lb)
Paper feed:	Automatic feed delivery system Tray capacity up to 500 sheets (75 g/m^2 or 20 lb paper)
Paper feed speed:	For the first sheet, 15 seconds or less; subsequent sheets, 16 pages per minute
Paper types:	Plain paper, such as copier paper, and recycled paper
Power supply:	DC 5 V supplied by the printer

Dimensions and weight:

Height	114 mm (4.7 inches)
Width	396 mm (15.4 inches)
Depth	389 mm (18.6 inches) including the tray
Weight	4.6 kg (9.3 lb) including the tray

Face Up Tray (C81294])

Dimensions(including printer) and weight:

Height	54 mm (2.1 inches)
Width	251 mm (9.9 inches)
Depth	123 mm (4.8 inches)
Weight	0.3 kg (0.7 lb)

Paper eject capacity:	40 sheets (75 g/m^2 or 20 lb paper)

Duplex Unit (C81293])

Paper size:	A4, Letter, Legal
Paper weight:	64 to 105 g/m^2 (16 to 24 lb)

Dimensions and weight:

Height	254 mm (9.6 inches)
Width	396 mm (16.7 inches)
Depth	517 mm (2.8 inches)
Weight	6.5 kg (4.4 lb)

Imaging cartridge (S050012)

Storage temperature:	0 to 35°C (32 to 95°F)
Storage humidity:	20 to 80% RH
Shelf life:	18 months after production
Life:	Up to 8500 pages under the following conditions: Letter or A4-size paper, continuous printing, and 5% print ratio

The number of pages you can print with a 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, the cartridge may print fewer pages. The 5% print ratio is equivalent to printing double-spaced standard text.

A

Appendix B

Symbol Sets

B

Introduction to Symbol Sets

Your printer can access a variety of symbol sets. Many of these symbol sets differ only in the international characters specific to each language.

Note:
Normally, your software handles fonts and symbols, so you probably never need to adjust the printer's settings. If you are writing your own printer control programs, or if you are using older software that cannot control fonts, refer to the following sections for symbol set details.

When you are considering which font to use, you should also consider which symbol set to combine with the font. Available symbol sets vary depending on which emulation mode you use and which font you choose.

In LJ4 Emulation Mode

The following table lists the symbol sets available in LJ4 emulation mode. A table of the characters for each set is included later in this chapter.

Symbol set name	Symbol set ID for ESC (	Available typefaces (see next page)
Roman-8* (includes another 19 sets)	8U	43 typefaces + bitmap**
Roman Extension	0E	bitmap
ECM94-1	0N	43 typefaces + bitmap
Legal	1U	43 typefaces + bitmap
8859-2 ISO	2N	43 typefaces + bitmap
PsMath	5M	35 typefaces
8859-9 ISO	5N	43 typefaces + bitmap
WiTurkish	5T	43 typefaces
MsPublishing	6J	35 typefaces
VeMath	6M	35 typefaces
DeskTop	7J	43 typefaces
Math-8	8M	35 typefaces
WiE.Europe	9E	43 typefaces
PcTk437	9T	43 typefaces
Windows	9U	43 typefaces
PsText	10J	43 typefaces
IBM-US	10U	43 typefaces + bitmap
IBM-DN	11U	43 typefaces + bitmap
McText	12J	43 typefaces
PcMultilingual	12U	43 typefaces + bitmap
VeInternational	13J	43 typefaces
VeUS	14J	43 typefaces
PiFont	15U	35 typefaces
PcE.Europe	17U	43 typefaces
Symbol	19M	Symbol Set SWA
WiAnsi	19U	43 typefaces
Wingdings	579L	More WingBats SWM
OCR A	0O	OCR A
OCR B	1O	OCR B
OCR B Extension	3Q	OCR B
Code 3-9	0Y	Code 3-9 (2 types)
EAN/UPC	8Y	EAN/UPC (2 types)

  * The other 19 sets are the following: Norweg1, Italian, Swedish, ANSI ASCII, UK, French, German, Spanish, Norweg2, French2, HP German, JIS ASCII, HP Spanish, Chinese, IRV, Swedis2, Portuguese, IBM Portuguese, and IBM Spanish. These are partial variations of the Roman-8 set.

**"Bitmap" means the "Line Printer" typeface.

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The 35 and 43 typefaces refer to those shown in the table below:

	Typefaces	
	35	**43**
Flareserif 821 SWC Incised 901 SWC Clarendon Condensed SWC Ribbon 131 SWC Original Garamond SWC Audrey Two SWC Zapf Humanist 601 SWC Swiss 742 Condensed SWC	○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○
Swiss 721 SWM Dutch 801 SWM	- -	○ ○
Courier SWC Letter Gothic SWC Dutch 801 SWC Swiss 742 SWC	○ ○ ○ ○	○ ○ ○ ○

Roman-8 (8U)

Roman Extension (0E)

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ECM94-1 (0N)

Legal (1U)

8859-2 ISO (2N)

PsMath (5M)

B

8859-9 ISO(5N)

WiTurkish (5T)

MsPublishing (6J)

VeMath (6M)

B

DeskTop (7J)

Math-8 (8M)

WiE.Europe (9E)

PcTk437 (9T)

B

Windows (9U)

PsText (10J)

IBM-US (10U)

IBM-DN (11U)

B

McText (12J)

PcMultilingual (12U)

VeInternational (13J)

VeUS (14J)

B

PiFont (15U)

PcE.Europe (17U)

B-16   *Symbol Sets*

Symbol (19M)

WiAnsi (19U)

B

Wingdings (579L)

OCR A (0O)

OCR B (1O)

OCR B Extension (3Q)

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Code 3-9 (0Y)

EAN/UPC (8Y)

International Set for ISO sets

To obtain the symbol sets listed below, substitute the characters in the ANSI ASCII sets with the characters in the table below.

Iso set	ASCII code hex											
	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
ANSI ASCII (0U)												
Norweg 1 (0D)												
French (0F)												
HP German (0G)												
Italian (0I)												
JIS ASCII (0K)												
Swedis 2 (0S)												
Norweg 2 (1D)												
UK (1E)												
French 2 (1F)												
German (1G)												
HP Spanish (1S)												
Chinese (2K)												
Spanish (2S)												
IRV (2U)												
Swedish (3S)												
Portuguese (4S)												
IBM Portuguese (5S)												
IBM Spanish (6S)												

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In ESC/P 2 or FX Modes

	PC 437, 850, 860, 863, 865	857, 852, BRASCII, Abicamp	PC 437	OCR A
EPSON Roman	○	×	×	×
Courier SWC	○	○	×	×
EPSON Sans serif	○	×	×	×
EPSON Prestige	○	×	×	×
EPSON Script	○	×	×	×
Letter Gothic SWC	○	○	×	×
Swiss 721 SWM*	○	○	×	×
Dutch 801 SWM*	○	○	×	×
OCR B	×	×	○	×
OCR A	×	×	×	○

*Available only in ESC/P 2 mode.

PC437 (U.S./Standard Europe)

PC850 (Multilingual)   ### PC860 (Portuguese)

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PC863 (Canadian-French)

PC865 (Norwegian)

PC857 (PcTurk2)

PC852 (East Europe)

BRASCII   **Abicomp**

Italic

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

International Character Sets

You can select one of the following international character sets using either SelecType or the ESC R command. For example, when you select "Italic France" in SelecType, the characters in the "France" row in the table below are used in the italic character table.

Country	ASCII code hex											
	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
USA												
France												
Germany												
UK												
Denmark												
Sweden												
Italy												
Spain												
Japan												
Norway												
DenmarkII												
Spain II												
Latin America												
Korea*												
Legal*												

* Available for ESC/P 2 emulation only

Characters available with the ESC (^ command

To print the characters in the table below, use the ESC (^ command.

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In I239X Emulation Mode

Available symbol sets in I239X mode are PC437, PC850, PC860, PC863, and PC865.

Refer to "ESC/P 2 or FX modes" in the previous section.

Available fonts are EPSON Sans Serif, Courier SWC, EPSON Prestige, EPSON Gothic, EPSON Presentor, EPSON Orator, and EPSON Script.

In EPSON GL/2 Mode

Available symbol sets in EPSON GL/2 mode are the same as those in LaserJet 4 emulation mode. Refer to the section on LaserJet 4 mode.

Appendix C

Command Summary

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Your printer has the ability to emulate the following printers in each printer mode:

LJ-4   Hewlett-Packard LaserJet 4 (PCL5e)

ESC/P2   EPSON LQ-570 (24-pin)

FX   EPSON FX-870/1170, or LX-100 (9-pin)

GL/2   Hewlett-Packard GL/2 graphics language

In addition, the following printer control languages are supported:

PJL   Printer Job Language

EJL   EPSON Job Control Language

This appendix lists the printer commands for these modes. Most of the commands closely emulate the original printer or the control language; however, some have operational differences because the printers use different technologies. Additional information is provided in the descriptions of control commands with these differences.

LaserJet 4 (LJ4) Emulation Commands

This section lists the printer commands supported in the LJ4 emulation mode. For more information on printer commands, see Hewlett- Packard's LaserJet 4 reference manual.

Job control

Reset	ESC E
Number of copies	ESC &l#X
Universal exit language	ESC%#X
Long-edge (left) offset registration	ESC &l#U
Short-edge (right) offset registration	ESC &l#Z
Unit of measure	ESC &u#D

Page control

Paper source	ESC &l#H
Page size	ESC &l#A
Page length	ESC &l#P
Orientation	ESC &l#O
Print direction	ESC &a#P
Top margin	ESC &l#E
Text length	ESC &l#F
Left margin	ESC &a#L
Right margin	ESC &a#M
Clear horizontal margins	ESC 9
Perforation skip	ESC &l#L
Horizontal Motion Index (HMI)	ESC &k#H
Vertical Motion Index (VMI)	ESC &l#C
Line spacing	ESC &l#D

Cursor positioning

Vertical position	ESC &a#R
	ESC *p#Y
	ESC &a#V
Horizontal position	ESC &a#C
	ESC *p#X
	ESC &a#H
Half line feed	ESC =
Line termination	ESC &k#G
Push/pop position	ESC &f#S

C

Font selection

Primary symbol set	ESC (id
Secondary symbol set	ESC)id
Primary spacing	ESC (s#P
Secondary spacing	ESC)s#P
Primary pitch	ESC (s#H
Secondary pitch	ESC)s#H
Set pitch mode	ESC &k#S
Primary height	ESC (s#V
Secondary height	ESC)s#V
Primary style	ESC (s#S
Secondary style	ESC)s#S
Primary font stroke weight	ESC (s#B
Secondary font stroke weight	ESC)s#B
Primary typeface family	ESC (s#T
Secondary typeface family	ESC)s#T
Primary font default	ESC (3@
Secondary font default	ESC)3@
Enable underline	ESC &d#D
Disable underline	ESC &d@
Transparent print data	ESC &p#X[data]

Font management

Assign font ID	ESC *c#D
Font and character control	ESC *c#F
Set symbol set	ESC *c#R
Define symbol set	ESC (f#W[data]
Symbol set control	ESC *c#S
Select primary font with ID#	ESC (#X
Select secondary font with ID#	ESC)#X

Soft font creation

Font descriptor	ESC)s#W[data]
Download character	ESC (s#W[data]
Character code	ESC *c#E

Raster Graphics

Raster resolutions	ESC *t#R
Raster graphics presentations	ESC *r#F
Start raster graphics	ESC *r#A
Raster Y offset	ESC *b#Y
Set raster compression mode	ESC *b#M
Transfer raster data by row	ESC *b#W[data]
End raster graphics (version B)	ESC *rB
End raster graphics (version C)	ESC *rC
Raster height	ESC *r#T
Raster width	ESC *r#S

Print model

Select current pattern	ESC *v#T
Select source transparency mode	ESC *v#N
Select pattern transparency mode	ESC *v#O
Rectangle width (PCL unit)	ESC *c#A
Rectangle width (decipoints)	ESC *c#H
Rectangle height (PCL unit)	ESC *c#B
Rectangle height (decipoints)	ESC *c#V
Fill rectangular area	ESC *cP

User-defined pattern management/creation

Pattern ID	ESC *c#G
Define pattern	ESC *c#W[data]
User-defined pattern control	ESC *c#Q
Set pattern reference point	ESC *p#R

Macros

Macro ID	ESC &f#Y
Macro control	ESC &f#X

Status readback

Set status readback location type	ESC *s#T
Set status readback location unit	ESC *s#U
Inquire status readback entity	ESC *s#I
Flush all pages	ESC &r#F
Free memory space	ESC *s1M
Echo	ESC *s#X

C

Programming hints

End-of-line wrap	ESC &s#C
Enable display functions	ESC Y
Disable display functions	ESC Z

PCL vector graphics switching / set-up picture frame

Enter PCL mode	ESC %#A
Enter GL/2 mode	ESC %#B
GL/2 plot horizontal size	ESC*c#K
GL/2 plot vertical size	ESC*c#L
Set picture frame anchor point	ESC*c0T
Picture frame horizontal size	ESC*c#X
Picture frame vertical size	ESC*c#Y

GL/2 context commands

Dual context extensions

Enter PCL mode	ESC %#A
Reset	ESC E
Primary font	FI
Secondary font	FN
Scalable or bitmapped fonts	SB

Palette extensions

Transparency mode	TR
Screened vectors	SV
Number of Pens	NP

Vector Group

Arc absolute	AA
Arc relative	AR
Absolute arc three point	AT
Bezier absolute	BZ
Bezier relative	BR
Plot absolute	PA
Plot relative	PR
Pen down	PD
Pen up	PU
Relative arc three point	RT
Polyline encoded	PE

Polygon Group

Circle	CI
Fill rectangle absolute	RA
Fill rectangle relative	RR
Edge rectangle absolute	EA
Edge rectangle relative	ER
Fill wedge	WG
Edge wedge	EW
Polygon mode	PM
Fill polygon	FP
Edge polygon	EP

Character Group

Select standard font	SS
Select alternate font	SA
Absolute direction	DI
Relative direction	DR
Absolute character size	SI
Relative character size	SR
Character slant	SL
Extra space	ES
Standard font definition	SD
Alternate font definition	AD
Character fill mode	CF
Label origin	LO
Label	LB
Define label terminator	DT
Character plot	CP
Transparent data	TD
Define variable text path	DV

Line and fill attribute group

Line type	LT
Line attribute	LA
Pen width	PW
Pen width unit selection	WU
Select pen	SP
Symbol mode	SM
Fill type	FT
Anchor corner	AC
Raster fill definition	RF
User defined line type	UL

C

Configuration and status group

Scale	SC
Input window	IW
Input P1 and P2	IP
Input relative P1 and P2	IR
Default values	DF
Initialize	IN
Rotate coordinate system	RO
Comment	CO

ESC/P 2 and FX Commands

This section lists the printer commands supported in the ESC/P 2 and FX emulation modes.

ESC/P 2 mode

General operation

Initialize printer	ESC @
Control paper loading/ejecting	ESC EM *n*

Paper feeding

Carriage return	CR
Form feed	FF
Line feed	LF
Select 1/8-inch line spacing	ESC 0
Select 1/6-inch line spacing	ESC 2
Set n/180-inch line spacing	ESC 3 *n*
Set n/360-inch line spacing	ESC + *n*

Page format

Set page format	ESC (c *nn*
Set page length in defined units	ESC (C *nn*
Set page length in lines	ESC C *n*
Set page length in inches	ESC C 0 *n*
Set bottom margin for continuous paper	ESC N *n*
Cancel top/bottom margin for continuous paper	ESC O
Set left margin	ESC l *n*
Set right margin	ESC Q *n*

C

Print position motion

Set absolute horizontal print position	ESC $ *n1 n2*
Set relative horizontal print position	ESC \ *n1 n2*
Set absolute vertical print position	ESC (V *nn*
Set relative vertical print position	ESC (v *nn*
Set horizontal tabs	ESC D *nn*
Tab horizontally	HT
Set vertical tabs	ESC B *nn*
Tab vertically	VT
Advance paper n/180 inch	ESC J *n*
Reverse paper n/180 inch	ESC j *n*

Font selection

Select typeface	ESC k *n*
Select font by pitch and point	ESC X *nn*
Select 10.5 point, 10 cpi	ESC P
Select 10.5 point, 12 cpi	ESC M
Select 10.5 point, 15 cpi	ESC g
Turn proportional mode on/off	ESC p 1/0
Select LQ or draft	ESC x *n*
Select italic font	ESC 4
Cancel italic font	ESC 5
Select bold font	ESC E
Cancel bold font	ESC F
Master select	ESC ! *n*
Control code set/clear	ESC I 1/0
Select print Pitch	ESC c

Font enhancement

Select condensed printing	SI
Cancel condensed printing	DC2
Select double-width printing (one line)	SO
Turn double-width printing on/off	ESC W 1/0
Cancel double-width printing (one line)	DC4
Turn double-height printing on/off	ESC w 1/0
Select double-strike printing	ESC G
Cancel double-strike printing	ESC H
Select superscript printing	ESC S 0
Select subscript printing	ESC S 1
Cancel superscript/subscript printing	ESC T
Select line/score	ESC (- *nn*
Turn underline on/off	ESC - 1/0
Select character style	ESC q *n*

Spacing

Set intercharacter space	ESC SP *n*
Define unit	ESC (U *nn*

Character handling

Assign character table	ESC (t *nn*
Select character table	ESC t *n*
Select an international character set	ESC R *n*
Define download character	ESC & *nn*
Copy ROM to RAM	ESC : 0 *n* 0
Select user-defined set	ESC % *n*
Enable printing of upper control codes	ESC 6
Enable upper control codes	ESC 7
Print data as characters	ESC (^ *nn*

Bit image

Selection and printing of bit image	ESC * *nn*
Select graphic mode	ESC (G *nn*
Print raster graphics	ESC . c v hm
8-bit single density bit image	ESC K
8-bit double density mit image	ESC L
8-bit double speed double density bit image	ESC Y
8-bin double speed quad density bit image	ESC Z

C

FX mode

Printer commands arranged by topic

The following section lists and describes all FX and LQ commands by topic.

Printer operation

Initialize printer	ESC @
Control paper loading/ejecting	ESC EM *n*

Data control

Carriage return	CR

Vertical motion

Form feed	FF
Set page length in lines	ESC C *n*
Set page length in inches	ESC C 0 *n*
Set skip over perforation	ESC N *n*
Cancel skip over perforation	ESC O
Line feed	LF
Select 1/8-inch line spacing	ESC 0
Select 7/72-inch line spacing	ESC 1
Select 1/6-inch line spacing	ESC 2
Select n/216-inch line spacing	ESC 3 *n*
Perform n/216-inch line spacing	ESC J
Tab vertically	VT
Set vertical tabs	ESC B *nn*

Note:
Your printer will not print characters beyond one page length (set with the ESC C or ESC C0 commands), while an FX printer might print them.

Horizontal motion

Set absolute horizontal print position	ESC $ *n1 n2*
Set relative horizontal print position	ESC*n1 n2*
Set left margin	ESC l *n*
Set right margin	ESC Q *n*
Tab horizontally	HT
Set horizontal tabs	ESC D *nn*

Overall printing style

Select letter quality or draft	ESC x *n*

Note:
The print quality and speed cannot be changed even if you send the ESC x command.

Select typeface family	ESC k *n*
Master select	ESC ! *n*

Print size and character width

Select 10 cpi	ESC P
Select 12 cpi	ESC M
Turn proportional mode on/off	ESC p 1/0
Select condensed mode	SI
Cancel condensed mode	DC2
Select double-width mode (one line)	SO
Cancel double-width mode (one line)	DC4
Turn double-width mode on/off	ESC W 1/0
Turn double-height printing on/off	ESC w 1/0

Font enhancement

Select emphasized mode	ESC E
Cancel emphasized mode	ESC F
Select double-strike mode	ESC G
Cancel double-strike mode	ESC H

Note:
The ESC G and ESC E commands produce identical effects, so you cannot obtain
darker print by combining the two.

C

Select superscript/subscript mode	ESC S 0/1
Cancel superscript/subscript mode	ESC T
Select italic mode	ESC 4
Cancel italic mode	ESC 5
Turn underline mode on/off	ESC - 1/0

Word processing

Set intercharacter space	ESC SP *n*
Select character tables	ESC t *n*
Assign character tables	ESC (t *nn*
Select international character set	ESC R *n*
Printable code area expansion	ESC 6
Enable upper control codes	ESC 7

User Defined Characters

Define user-defined characters	ESC & *nn*

Note:
The appearance of characters defined using ESC & may differ slightly from an actual FX printer.

Copy ROM to RAM	ESC : 0 *n* 0
Select user-defined set	ESC % *n*
Printable code area expansion	ESC I *n*

Bit image

Select graphics mode	ESC * m *n*
Selection and printing of bit image	ESC ^ m *n*
8-bit single density bit image	ESC K
8-bit double density mit image	ESC L
8-bit double speed double density bit image	ESC Y
8-bin double speed quad density bit image	ESC Z

PJL Commands

This section lists the available commands for printer job language mode (PJL). For more information on PJL, refer to the Printer Job Language Technical Reference Manual from Hewlett-Packard.

COMMENT	@PJL COMMENT [words] [<CR>] <LF>
DEFAULT	@PJL DEFAULT [LPARM: ***] variable = value [<CR>] <LF>
DINQUIRE	@PJL DINQUIRE [LPARM: ***] variable [<CR>] <LF>
ECHO	@PJL ECHO [Words] [<CR>] <LF>
ENTER	@PJL ENTER LANGUAGE = *** [<CR>] <LF>
EOJ	@PJL EOJ [NAME= ***] [<CR>] <LF>
INFO	@PJL INFO read only variable [<CR>] <LF>
INITIALIZE	@PJL INITIALIZE [<CR>] <LF>
INQUIRE	@PJL INQUIRE [LPARM: ***] variable [<CR>] <LF>
JOB	@PJL JOB [NAME = ***][START = ***][END = ***][<CR>] <LF>
OPMSG	@PJL OPMSG DISPLAY = *** [<CR>] <LF>
RDYMSG	@PJL RDYMSG DISPLAY = *** [<CR>] <LF>
RESET	@PJL RESET [<CR>] <LF>
SET	@PJL SET [LPARM: ***] variable = value [<CR>] <LF>
STMSG	@PJL STMSG DISPLAY = *** [<CR>] <LF>
UEL	<ESC>%-12345X
USTATUS	@PJL USTATUS variable = value [<CR>] <LF>
USTATUSOFF	@PJL USTATUSOFF [<CR>] <LF>
PJL	@PJL [<CR>] <LF>

C

I239X Emulation Commands

This section lists the printer commands supported in the I239X emulation mode. For more information on these commands, see IBM's 2390/2391 reference manual.

Page format

Printable area

Set page length in lines	ESC C n
Set page length in inches	ESC C NUL n
Set skip perforation	ESC N n
Cancel skip perforation	ESC O
Set horizontal margins	ESC X

Line spacing

Set line space to 1/8-inch	ESC 0
Set line space to 7/72-inch	ESC 1
Activate line spacing for text	ESC 2
Set line spacing for graphics (n/180, n/216, or n/360 inch)	ESC 3 n
Set line spacing for text (n/72 inch)	ESC A n

Unit definition

Set vertical units (1/180, 1/216, or 1/360 inch)	ESC [\

Tab

Set vertical tab stops	ESC B
Set default tab stops	ESC R
Set horizontal tab stops	ESC D

Paper feeding/print position motion

Carriage return	CR
Line feed	LF
Form feed	FF
Move paper vertically (n/180, n/216, or n/360 inch)	ESC J
Automatic line feed	ESC 5
Reverse line feed	ESC]
Back space	BS
Space	SP
Horizontal tab	HT
Vertical tab	VT
Move current print position (1/120 inch)	ESC d
Set top of form	ESC 4

Text

Font selection

Select 10 pitch font	DC2
Select 12 pitch font	ESC:
Start 17 cpi printing	SI
Start 17 cpi printing	ESC SI
Proportional spacing	ESC P
Begin subscript/superscript	ESC S
End subscript/superscript	ESC T
Select font and pitch	ESC[I
Select print or font	ESC I
Select character set 2	ESC 6
Select character set 1	ESC 7
Select page code	ESC[T
Print one character	ESC ^
Print character from A Code Page	ESC \

C

Font enhancement

Continuous overscore	ESC_
Continuous underline	ESC-
Score select	ESC[-
Select print type style	ESC[@
Begin double-width printing by line	SO
Begin double-width printing by line	ESC SO
End double-width printing by line	DC4
Double-width printing	ESC W
Begin empahsized (bold) print	ESC E
End empahsized (bold) print	ESC F
Begin double-strike print	ESC G
End double-strike print	ESC H

Bit image

Normal density bit image graphics	ESC K
Double-density bit image graphics (half speed)	ESC L
Double-density bit image graphics (normal speed)	ESC Y
High-density bit image graphics	ESC Z
Graphic print mode	ESC [g

Bar code

Bar code set up	ESC [f
Bar code transfer	ESC [P-

Auxiliary Functions

Initialize

Set initial conditions	ESC [K

Data input control

Cancel 1 line	CAN

Auxiliary function

Select paper tray	ESC [F

AGM Mode

Line spacing

Set line spacing for graphics
(n/180, n/216, or n/360 inch)   ESC 3
Set line spacing for text (n/60 inch)   ESC A

Paper feeding/print position motion

Move paper vertically
(n/180, n/216, or n/360 inch)   ESC J
Line feed   LF

Bit image

Normal-density bit image graphics   ESC K
Double-density bit image graphics
(half speed)   ESC L
Double-density bit image graphics
(normal speed)   ESC Y
High-density bit image graphics   ESC Z
Graphic print mode   ESC [g
Select graphic mode   ESC *

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Appendix D
Working with Fonts

D

Read this section if you would like to know more about fonts and see samples of the installed fonts.

To select a font, use your application program.

Font problems are uncommon but some may occur, such as:

❏ The printer substitutes a font other than the one you selected with your software.

❏ The printed page does not exactly match what is on screen.

These kinds of problems usually occur if you use an emulation other than LJ4 or when you are trying to print fonts that are not installed in the printer. If you have font problems, read "Printer and Screen Fonts," below, to find out how to fix them.
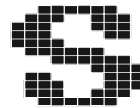
Printer and Screen Fonts

Fonts are installed on both the printer and the computer. The printer fonts, which reside in printer memory, are used by
the printer to print text. Screen fonts, which are stored on
your computer's media, are used to display text on screen to represent the fonts that will print.

Two separate sets of fonts are needed because the monitor
and printer have different requirements for producing fonts. The monitor normally uses bitmap fonts that are specially designed for the screen's resolution. A bitmap is a dot-by-dot representation of an image or character. The printer, however, uses an outline font that is created from a mathematical formula that describes the outline of each character. Using outline fonts allows the printer to render any character in the requested size.
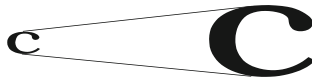
printer font   screen font

Note:
The distinction between printer and screen fonts is not as important when you are using TrueType fonts, which are included with Windows. TrueType is an outline font format that can be used by both the printer and the screen.

Available Fonts

The following table lists the fonts that are installed on your printer. The names of all the fonts appear in your software's font list if you are using the driver provided with the printer. (If you are using a different driver, all of these fonts may not be available.)

The fonts provided with the printer are shown in the following table.

LJ4/GL2 mode

Font name	Scalable font	HP equivalent
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	-	Claredon 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

D

Font name	Scalable font	HP equivalent
Courier SWC	Medium, Bold, Italic, Bold Italic	Courier
Letter Gothic SWC	Roman, Bold, Italic	Letter Gothic

Font name	Bitmap font	HP equivalent
Line Printer	–	Line Printer

When selecting fonts in your software program, choose the font name listed in the HP equivalent column.

ESC/P 2 and FX modes

Font name	Scalable font
EPSON Roman	-
EPSON Sans serif	-
Courier SWC	Medium, Bold
EPSON Prestige	-
EPSON Script	-
Swiss 721 SWM*	Roman, Bold
Dutch 801 SWM*	Roman, Bold
Letter Gothic SWC	Roman, Bold

* Available only in ESC/P 2 mode.

Font name	Bitmap font
OCR B	-
OCR A	-

I239X mode

Font name	Scalable font
EPSON Sans serif	-
Courier SWC	Medium, Bold
EPSON Prestige	-
EPSON Gothic	-
EPSON Presentor	-
EPSON Orator	-
EPSON Script	-

Font name	Bitmap font
OCR B	-

To see the font samples, use the Test Menu in SelecType.

1. Make sure that paper is loaded.

2. Press Menu while the printer is on line.

3. Press Item until the font sample you want appears.

4. Press Enter, a Font Sample sheet is printed.

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Adding More Fonts

Fonts that reside on your computer's hard disk can be downloaded, or transferred, to the printer so they can be printed. Downloaded fonts, also called soft fonts, remain in printer memory until you turn off the printer or otherwise reinitialize it. If you plan on downloading many fonts, make sure your printer has sufficient memory.

Downloading fonts

Most font packages make it easy to install fonts by providing their own installer. The installer gives you the option of having the fonts automatically downloaded whenever you start your computer or having fonts downloaded only when you need to print a particular font.

If you're running Windows, you can also install fonts by clicking on the Fonts icon in the Control Panel. Once installed, the fonts are available in all your Windows applications.

Selecting Fonts

Whenever possible select fonts from the font list in your software application. See your software documentation for instructions.

If you are sending unformatted text to the printer directly from DOS or if you are using a simple software package that does not include font selection, you can select fonts with the Remote Control Panel utility. For instructions, see Chapter 5.

Note:
Selecting a font using the Remote Control Panel utility is not recommended. Selecting fonts from your software program is easier, and any font selection you make from your software overrides the selection you make from the Remote Control Panel.

Appendix E

Contacting Customer Support

E

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

We will be able to help you much more quickly if you are able to give the exact information indicated below.

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

Printer model:

Brand and model of your computer:

Printer software version:
(Click About on the printer driver's Main menu.)

Windows version (95, 3.1, NT, etc.) you are using:

Version of software applications you normally use with your printer:

For United Kingdom and the Republic of Ireland users

If you purchased your printer in the UK or the Republic of Ireland, EPSON (UK) LTD provides a range of customer services and technical support:

❏ World Wide Web

❏ Faxon EPSON Faxback

❏ Bulletin Board Service

❏ Customer and Warranty Support

❏ Pre Sales Enquiry Desk

See the following sections for details.

World Wide Web

If you can connect to the Internet and have a Web browser, you can access our Web site at http://www.epson.co.uk. Here you will find information on the latest EPSON products, software drivers, on-line user guides, and answers to frequently asked questions.

Faxon EPSON

Contact Faxon EPSON faxback service for support information including troubleshooting tips, switch settings, and driver information.

To use Faxon EPSON, call 01442 227332 in the UK or 0044 1442 227332 from the Republic of Ireland using a touch-tone phone. You will be asked to follow a simple routine to register your document request. Once you have entered your telephone and fax numbers, Faxon EPSON will fax a copy of the document catalogue to your fax machine.

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

Bulletin Board Service for latest drivers and utilities

You can call the EPSON Bulletin Board Service on 01442 227479 in the UK or 0044 1442 227479 from the Republic of Ireland. No membership is required. Make sure that your communications software is set to 8 data bits, 1 stop bit, no parity bit, ANSI terminal mode emulation, and a modem speed of up to 28.8 Kbps. Downloading protocols supported include Xmodem, Ymodem, and Zmodem. See the documentation that came with your communications software and modem for more information.

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

Customer and Warranty Support

Our Customer and Warranty Support teams can be contacted by calling 0870 163 7766 in the UK or 0044 0870 163 7766 from the Republic of Ireland. They can provide the following services:

❏ Technical information on installing, configuring, and operating your EPSON products

❏ Arranging for faulty EPSON products to be repaired within the warranty period

A full list of EPSON Customer and Warranty Support services is available on the technical support section of our world wide web pages at http://www.epson.co.uk/support/ and on Faxon EPSON faxback service in document number 5085.

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Pre Sales Enquiry Desk

The Enquiry Desk team can be contacted by calling 0800 220546 in the UK or 1 800 409132 from the Republic of Ireland, by faxing 01442 227271 in the UK or 0044 1442 227271 from the Republic of Ireland, and via Email at info@epson.co.uk. They can provide the following information:

❏ Pre Sales information and literature on new EPSON products (also available via our world wide web site at http://www.epson.co.uk)

❏ Where to purchase genuine EPSON consumables, accessories, and options

For Australian users

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

EPSON FAXBACK

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

EPSON Bulletin Board System

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

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

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

Your Dealer

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

EPSON Helpdesk

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

The Helpdesk numbers are:

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

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

For Singapore users

Contact the telephone and fax numbers below:

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

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For Hong Kong users

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

Internet home page

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

❏ Product information

❏ Answers to Frequently Asked Questions (FAQs)

❏ Latest versions of EPSON printer drivers

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

Electronic bulletin board system

An electronic bulletin board system (BBS) is also available to obtain printer information and the latest versions of printer drivers. You can log on to the following number for the BBS service:

BBS: (852) 2827-4244

Technical Support Hotline

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

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

For Philippines users

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

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

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❏   Product information

❏   Answers to Frequently Asked Questions (FAQs)

❏   Latest versions of EPSON scanner drivers

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Appendix F

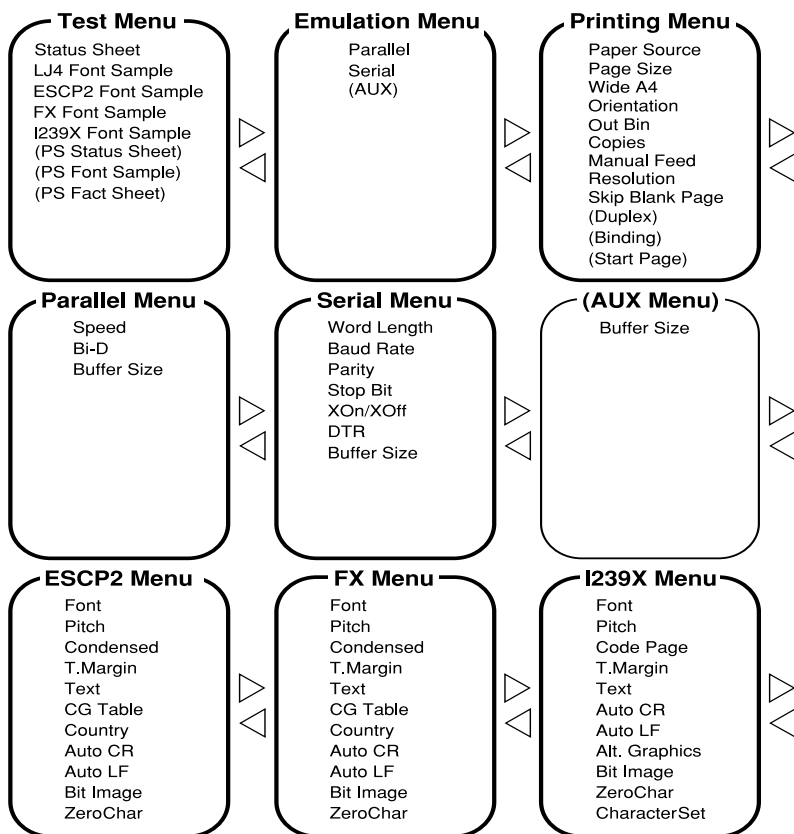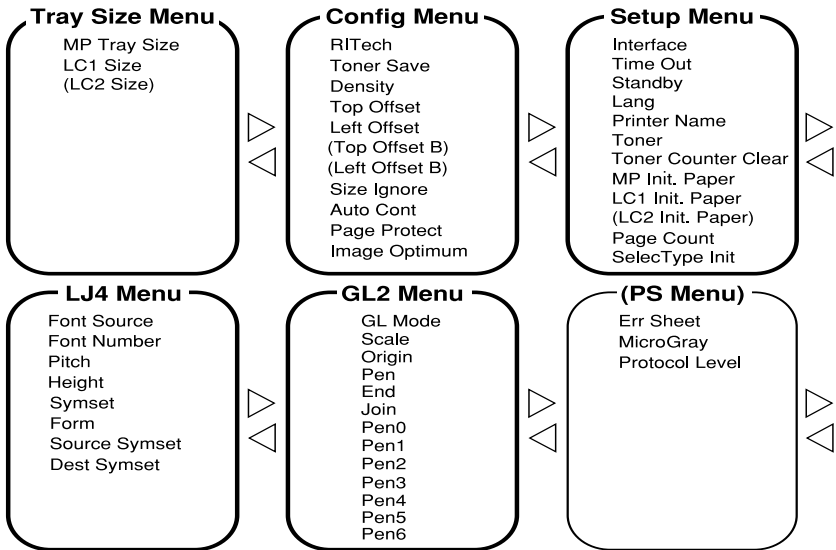# Map of SelecType Menus

F

Switching between SelecType Menus

The following menu maps show the possible menus and options in SelecType.

KEY

▷   Pressing the Menu button displays the next menu.

◁   Pressing the Alt + Menu buttons displays the prior menu.

(   )   This is only available with option.

Test Menu
Status Sheet
LJ4 Font Sample
ESCP2 Font Sample
FX Font Sample
I239X Font Sample
(PS Status Sheet)
(PS Font Sample)
(PS Fact Sheet)

Emulation Menu
Parallel
Serial
(AUX)

Printing Menu
Paper Source
Page Size
Wide A4
Orientation
Out Bin
Copies
Manual Feed
Resolution
Skip Blank Page
(Duplex)
(Binding)
(Start Page)

Parallel Menu
Speed
Bi-D
Buffer Size

Serial Menu
Word Length
Baud Rate
Parity
Stop Bit
XOn/XOff
DTR
Buffer Size

(AUX Menu)
Buffer Size

ESCP2 Menu
Font
Pitch
Condensed
T.Margin
Text
CG Table
Country
Auto CR
Auto LF
Bit Image
ZeroChar

FX Menu
Font
Pitch
Condensed
T.Margin
Text
CG Table
Country
Auto CR
Auto LF
Bit Image
ZeroChar

I239X Menu
Font
Pitch
Code Page
T.Margin
Text
Auto CR
Auto LF
Alt. Graphics
Bit Image
ZeroChar
CharacterSet

Tray Size Menu

MP Tray Size
LC1 Size
(LC2 Size)

▷
◁

Config Menu

RITech
Toner Save
Density
Top Offset
Left Offset
(Top Offset B)
(Left Offset B)
Size Ignore
Auto Cont
Page Protect
Image Optimum

▷
◁

Setup Menu

Interface
Time Out
Standby
Lang
Printer Name
Toner
Toner Counter Clear
MP Init. Paper
LC1 Init. Paper
(LC2 Init. Paper)
Page Count
SelecType Init

▷
◁

LJ4 Menu

Font Source
Font Number
Pitch
Height
Symset
Form
Source Symset
Dest Symset

▷
◁

GL2 Menu

GL Mode
Scale
Origin
Pen
End
Join
Pen0
Pen1
Pen2
Pen3
Pen4
Pen5
Pen6

▷
◁

(PS Menu)

Err Sheet
MicroGray
Protocol Level

▷
◁

F

Glossary

ASCII
American Standard Code for Information Interchange. A standardized way of assigning codes to characters and control codes. The system is widely used by manufacturers of computers, printers, and software.

auto line feed
A printer feature in which each carriage return code (CR) is automatically accompanied by a line feed (LF) code.

bitmap font
The dot-by-dot representation of a font. Bitmap fonts are displayed on computer screens and printed on dot matrix printers. See *outline font*.

buffer
See *memory*.

character set
A collection of letters, numbers, and symbols used in a particular language.

cpi (characters per inch)
A measure of the size of fixed-width text characters.

default
A value or setting that takes effect when the printer is turned on, reset, or initialized.

dots per inch (dpi)
The number of dots per inch is a measure of printer resolution. The higher the number of dots, the higher the resolution.

download
To transfer information from the computer to the printer.

download font
A font that is loaded into the printer's memory from an outside source, such as a computer. Also called soft font.

dpi
See *dots per inch.*

driver
The part of a software program that converts commands from the program into commands used by the printer. Also known as the printer driver.

drum
The part of the printer mechanism where the image is formed and transferred to the paper.

emulation

See *printer emulation*.

fixed-width font

A font whose characters are allotted the same amount of horizontal space, no matter the width of the character. Thus the uppercase M receives the same amount of space as the letter l.

font

A set of characters and symbols that share a common typographic design and style.

font family

The collection of all sizes and styles of a font.

halftone

A grayscale image that is composed of small dots. The dots can be close together to create black or more widely spaced to create gray or white areas in the image. Newspaper photographs are common examples of halftones.

initialization

The act of returning the printer to its defaults (fixed set of conditions).

interface

The connection between the printer and the computer. A parallel interface transmits data one character or code at a time, and a serial interface transmits data one bit at a time.

landscape

Printing that is oriented sideways on the page. This orientation gives you a page that is wider than it is high and is useful for printing spreadsheets.

memory

The part of the printer's electronic system that is used to store information. Some information is fixed and is used to control how the printer operates. Information that is sent to the printer from the computer (such as downloaded fonts) is stored in memory temporarily. See also *RAM* and *ROM*.

orientation

Refers to the direction in which characters are printed on a page. This direction is either portrait, like this page, or landscape with the text printed on a page turned sideways.

outline font

A font whose outline is described mathematically, allowing it to be rendered (printed or drawn) smoothly at any size.

PCL

The command language built into the Hewlett-Packard LaserJet series printers.

photoconductor unit

A component of the printer that contains a photosensitive print drum.

pitch
A measure of the number of *characters per inch* (cpi) for fixed-width fonts.

point size
The height of a particular font as measured from the top of the tallest character to the bottom of the lowest. A point is a typographic unit of measure equivalent to 1/72 of an inch.

portrait
Printing that is oriented upright on the page (as opposed to landscape, in which printing is oriented sideways on the page). This is the standard orientation for printing letters or documents.

printer driver
See *driver*.

printer emulation
A set of operating commands that determines how data sent from the computer is interpreted and acted upon. Printer emulations replicate existing printers, such as the HP LaserJet 4.

proportional font
A font whose characters have varying amounts of horizontal space depending on the width of the character. Thus the uppercase M takes up more horizontal space than the lowercase l.

RAM
Random Access Memory (RAM) is where temporary information is stored.

Remote Control Panel
A software utility used to make changes to printer settings, including print quality, paper size, and RITech.

reset
To refresh the printer's memory and erase the current print jobs.

resident font
A font that is stored permanently in the printer's memory.

resolution
A measure of the fineness and clarity of images produced by the printer or monitor. Printer resolution is measured in dots per inch. Monitor resolution is measured in pixels.

RITech
Resolution Improvement Technology. A feature that smooths the jagged edges of printed lines or shapes.

ROM
Read Only Memory (ROM) is where permanent information is stored.

sans serif font
A font lacking serifs.

scalable font
See *outline font*.

serif
The small decorative strokes that come off the main lines of a character.

status sheet
A report that lists the printer settings and other printer information.

symbol set
A collection of symbols and special characters. Symbols are assigned to specific codes in a character table.

TrueType
An outline font format that was developed jointly by Apple Computer and Microsoft Corporation. TrueType fonts are outline fonts that can be easily resized for screen display or for printing.

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EPSON

Page Printer

EPL-N1600

Reference Guide