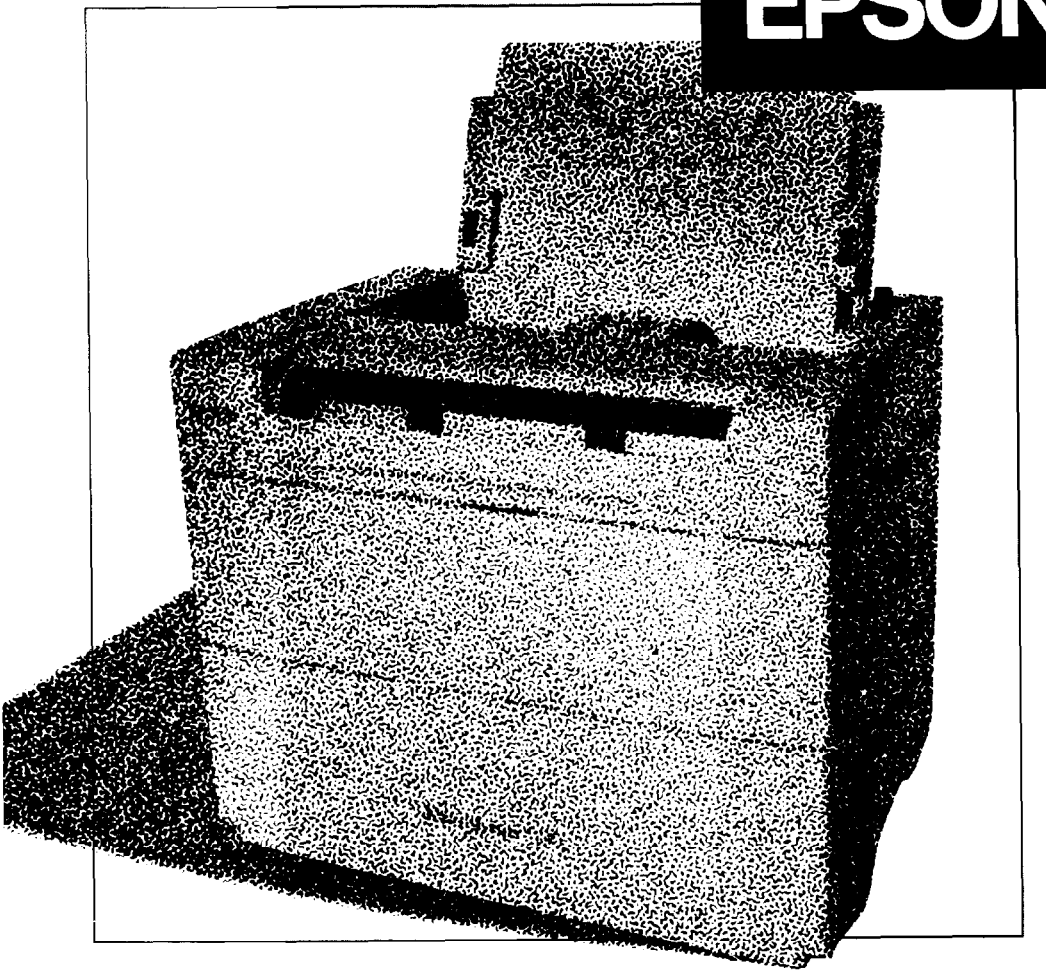
EPSON



ActionLaser™ 1100

EFERENCE GUIDE

FCC COMPLIANCE STATEMENT FOR AMERICAN USERS

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

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

WARNING

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

Changes or modifications not expressly approved by Epson America, Inc., could void the user's authority to operate the equipment.

FOR CANADIAN USERS

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

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

EPSON®
ActionLaser™ 1100

Reference Guide

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Getting Started

The EPSON® ActionLaser™ 1100 printer combines high performance and reliability with a wide range of features.

To get started with your ActionLaser printer, please:

- ❑ Read the safety information, laser printer precautions, and important safety instructions in this introduction.
- ❑ Use your Read This First guide to set up and test your new printer.
- ❑ Refer to this Reference Guide for detailed information about your printer.

Where to Get *Help for* U.S. *and* Canadian Users

Epson America provides local customer support and service through a nationwide network of authorized EPSON dealers and Service Centers.

If you need to call for technical assistance, please print a test sheet and have it handy. To print a test sheet, turn the printer on and then briefly press the reset button on the back of the **printer. (Make sure the Error light is not on.)**

EPSON also provides the support services listed below through EPSON Connections.℠ U.S. users can call (800) 922-8911; Canadian users can call (800) GO-EPSON.

- ❑ Assistance in locating your nearest Authorized EPSON Reseller or Service Center
- ❑ Technical assistance with the installation, configuration, and operation of EPSON products

- ❑ EPSON technical information library fax service
- ❑ Product literature with technical specifications on EPSON's current and new products
- ❑ Customer Relations

You can purchase supplies, parts, documentation, and accessories by calling EPSON Accessories at (800) 873-7766 (U.S. only).

CompuServe@ On-line Support

The fastest way to access helpful tips, specifications, drivers, application notes, and bulletins is through the Epson America Forum on CompuServe.

If you are not currently a member of CompuServe, you are eligible for a free introductory membership as an owner of an EPSON product. This membership entitles you to:

- ❑ An introductory $15 credit on CompuServe
- ❑ Your own user ID and password
- ❑ A complimentary subscription to *CompuServe Magazine*, CompuServe's monthly publication

To take advantage of this offer, call (800) 848-8199 in the United States and Canada and ask for representative #529. In other countries, call (614) 529-1611 or your local CompuServe access number.

If you are already a CompuServe member, simply type GO EPSON at the menu prompt to reach the Epson America Forum.

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.

CDRH regulations

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

This Product complies with regulations 21 CFR Chapter 1, Subchapter J, section 1010, 1040.
Epson America, Inc.
20770 Madrona Ave.
Tonance, CA 90503 USA

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.

Internal laser radiation

Max. Radiation Power	5mW
Wavelength	***780 nm***

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

Ozone emission

During printer operation, a small amount of ozone is released. This amount is not large enough to affect human beings adversely.

However, it is best to make sure the room where you are using the printer has adequate circulation, especially when you are printing a high volume of materials or using the printer continuously over a long period of time.

Laser Printer Precautions

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

- **Avoid touching the components inside the printer unless instructed to do so in this guide.**
- **When you open the printer or remove the toner cartridge, you expose components inside the printer that can be very hot. Avoid touching the fuser area, which is located immediately above the toner cartridge when you open the front cover, and the motor, which is further inside the printer.**
- **Do not scratch the surface of the drum, which is the green cylinder that can be seen through an opening of the toner cartridge. Avoid touching the drum, since oils from your skin can permanently damage its surface and may affect print quality.**
- **Avoid pressing on the top of the toner cartridge. Pressing directly on the cartridge may cause toner to spill into the printer. If there is a spill, see Chapter 3 for cleaning** instructions.
- **Never force the printer's components into place. Although the printer is designed to be sturdy, rough handling can damage it.**

The toner cartridge is the part of the printer mechanism that forms the image and transfers it onto the paper. Keep the **following guidelines in mind whenever you handle the toner cartridge:**

- ❑ When removing the toner cartridge, avoid exposing it to room light any longer than necessary. Exposure to light can damage the drum, causing dark or light areas to appear on the printed page and reducing the service life of the drum. If you need to keep the cartridge out of the printer for long periods, cover it with a cloth.

- ❑ Do not turn the cartridge upside down or stand it on its sides.

- ❑ 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 from your toner cartridge, do not store the cartridge in locations that are subject to direct sunlight, dust, salty air, or corrosive gasses (such as ammonia). **Also avoid locations subject to high temperatures or humidity or abrupt changes in temperature or humidity.**

Important Safety Instructions

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

- ❑ Unplug the printer before cleaning. Clean with a damp cloth only. Do not spill liquid on the printer.
- ❑ Do not place the printer on an unstable surface or near a radiator or heat register.
- ❑ Do not block or cover the openings in the printer's cabinet. Do not insert objects through the slots.
- ❑ Use only the type of power source indicated on the printer's label.
- ❑ Connect all equipment to properly grounded power outlets. Avoid using outlets on the same circuit as photocopiers or air control systems that regularly switch on and off.
- ❑ Do not let the power cord become damaged or frayed.
- ❑ If you use an extension cord with the printer, make sure the total ampere rating of the devices plugged into the extension cord does not exceed the cord's ampere rating. Also, make sure the total of all devices plugged into the wall outlet does not exceed 15 amperes.
- ❑ **Except *as* specifically explained *in this Reference Guide,* do not attempt to service the printer yourself.**
- ❑ Unplug the printer and refer servicing to qualified service personnel under the following conditions:

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

About this Guide

This guide contains information for operating and maintaining the printer once you have installed it. For information about installing and setting up the printer, ***see Read This First.***

Chapter 1, "Using Your Printer," lists the printer's features and describes how to control the printer and load paper.

Chapter 2, "Changing the Printer Settings," describes how to change printer settings using the Windows" printer driver. Printer driver settings allow you to do such things as change the toner density, turn on toner saving mode, and specify how long the printer is idle before it enters power save mode.

Chapter 3, "Troubleshooting," gives helpful information for avoiding printer errors, optimizing print quality, and solving any problems you may encounter.

Appendix A contains the technical specifications about the printer.

Appendix B describes how to use the EPSON Control Panel for DOS to control the printer. This appendix is intended for users who do not have Microsoft' Windows.

Appendix C lists the commands that can be used to control the printer. This appendix is intended for advanced users only.

Appendix D gives step-by-step instructions for installing a Single In-Line Memory Module (SIMM) so you can increase printer memory up to 5MB.

Chapter 1
Using Your Printer

1

About Your Printer

The ActionLaser 1100 is the latest in EPSON's advanced line of laser printers. It emulates the Hewlett-Packard® LaserJet® III (LJ3) printer, allowing you to print using the wide variety of software programs that support HP® printers. You can control the printer from either the Windows or the MS-DOS® environment.

The printer gives you the ability to produce good-looking, professional documents and publications. Its 300-dpi resolution is enhanced by the edge smoothing feature, which smoothes jagged edges of diagonal lines in text and graphics and gives your document a clean crisp appearance.

The ActionLaser 1100 is quiet and is easy to install and use. You simply set it up and connect it to your computer as **described in *Read This First*. To use the printer, just bring up** your software program and use the Print menu option under your File menu. From the Print menu, you can access the settings that allow you to control the print job and the printer itself.

Features

The ActionLaser 1100 comes equipped with a built-in bidirectional parallel interface and with 1MB of memory, which can be expanded up to 5MB. See Appendix D for more information about installing additional memory.

The other main features are described below.

Toner saving mode

The toner saving mode allows you to reduce the amount of toner used in printing draft documents. When you turn on toner saving mode, the printer applies less toner to each page, causing text and graphics to appear gray rather than black. The toner saving mode settings allow you to control how light or dark you want the toner to be applied.

EPSON Control Panel utility

The EPSON Control Panel for Windows keeps you informed of the printer's status and notifies you of printing errors. Each time the printer status changes, such as when the paper tray is empty or an error occurs, a message automatically appears on screen. In case of an error, the message informs you of what steps to take to clear the error.

Note:
If you are not using the printer in a Windows environment, the Reporter, which is included with the EPSON Control Panel for DOS, keeps you informed of the printer status.

Energy Star compliant

Your EPSON printer complies with the U.S. Environmental Protection Agency's Energy Star program, which promotes the manufacture of energy-efficient printers, computers, and monitors. The printer conserves electricity by automatically entering a low-power, standby mode when not in use for a specified period of time (default is 15 minutes).

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

All of EPSON's dot matrix and ink jet printers conform to Energy Star standards, as do all ActionLaser printers produced after June, 1993.

The Energy Star emblem dues not represent EPA endorsement of any product or service.

Optional PostScript® emulation

Optional software is available that allows you to print documents formatted for PostScript Level 2. Call your dealer or EPSON Accessories for more information.

Adjusting the Power Save Mode

In compliance with the Energy Star program, the printer enters power save mode when it is idle for a specified length of time (15 minutes by default). While in this mode, the printer conserves energy by using less electricity.

Power save mode is automatically interrupted whenever you send a print job or press the reset button at the back of the printer. It takes approximately 45 seconds for the printer to warm up when it is in power save mode.

You can specify how long the printer is idle before power save mode comes on or turn off power save mode. For more information, see Chapter 2.

Monitoring the Printer Status

If you are running Windows, the printer keeps you informed of its status in two ways:

- The Ready and Error lights on the front panel come on or flash depending on the current status. For example, the Ready light begins to flash as data is sent from your computer to the printer.

- The EPSON Control Panel for Windows automatically presents screens to keep you informed of the printer status or notify you of an error. For example, each time the paper tray is empty, a screen automatically appears to inform you of the change in status.

Note:
If you are running the EPSON Control Panel for DOS, the Reporter provides ***onscreen status and error messages to keep you informed of the printer status.***

Front panel lights

The two lights on the front panel allow you to monitor the status of the printer. The green Ready light is on when the printer is on and is ready to receive print data. As data is received from the computer, the Ready light flashes.

The orange Error light indicates an error condition. If the Error light is on continuously, it indicates that no paper is loaded or that there is a paper feed jam. A flashing Error light indicates one of the following: an internal paper jam has occurred, the front cover is open, or the toner cartridge is not installed.

Other status conditions are indicated by the combination of the Ready and Error lights. The following table describes all status conditions that can be indicated by the printer's Ready and Error lights:

Ready	Error	Printer status
off	**Off**	Printer is off.
Slow flashing	Off	Printer is in power save mode.
Flashing	Off	Print data is being received at the printer or has already been received.
On	off	Printer is ready to receive print data.
off	On	Either the paper tray is empty or there is a paper feed problem.
off	Flashing	One of the following errors has occurred: • Paper has jammed inside the printer. • The front cover is open. • The toner cartridge is not installed.
Flashing	On	One of the following errors has occurred: • Insufficient memory to print job. • Printer is In manual feed mode and is waiting for the next sheet. • There is a printer overrun error.
Flashing	Flashing	The printer is warming up.
On	On	A printer engine or controller error has occurred. Contact your dealer or a qualified service person.

The EPSON Control Panel provides more precise information about the printer status or any errors that occur. See the next section.

EPSON Control Panel for Windows

The EPSON Control Panel for Windows consists of a series of screens that appear automatically whenever the printer status changes and whenever the printer encounters an error. For example, EPSON Control Panel messages appear in the following cases:

- ❑ The paper tray is empty.
- ❑ The printer is warming up.
- ❑ A print error has occurred. For each error, an EPSON Control Panel message informs you of what you can do to correct the problem.

The message remains open on top of your software program until you minimize the screen by clicking the Minimize button (▼) in the upper right comer of the message window. To make the EPSON Control Panel message window reappear, double-click the EPSON Control Panel icon at the bottom left comer of your screen.

Note:
If you are using the EPSON Control Panel for DOS, the Reporter provides on screen status and error messages to keep you informed of the printer status.

Paper Handling

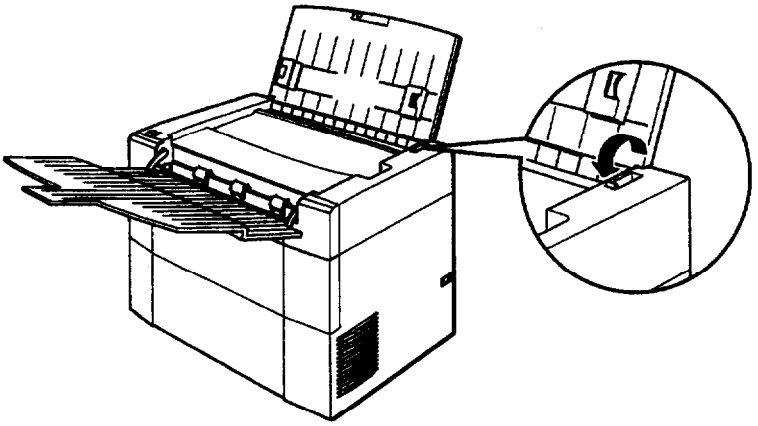
The paper tray holds up to 100 sheets of various standard-size papers, including letter and legal. For other sizes and exact specifications, see Appendix A.

Loading paper

To load a stack of paper in the printer's paper tray:

1. Remove any paper remaining in the paper tray. Do not add paper to a partial stack.

2. Pull the paper release lever toward the front of the printer.



3. Fan a stack of paper and load the paper in the paper tray. Place the paper side you want printed face down in the paper tray. Up to 100 sheets can fit in the paper tray.

4. Slide the paper guides against the paper stack so the paper fits loosely between them. The paper guides should not fit too tightly against the paper.

5. Push the paper release lever toward the back of the printer.

   This places the feed roll in contact with the paper stack. Paper will not feed properly if the paper release lever is not in the feed position.

For information about loading heavy paper, envelopes, labels, or transparencies, see “Printing on special paper” later in this chapter.

Choosing paper

For best results, use paper made especially for laser printers or plain-paper copiers. Paper should be of good quality and relatively smooth with a weight between 16 and 24 lb (60 and 90 g/m²). Because the printer is sensitive to moisture, always store paper in a dry place.

You may use colored paper but not paper to which a clear or colored coating has been added. For preprinted paper stock such as letterheads, use papers and inks designed for laser printers. Ordinary inks or dyes may smear or come off when subjected to the high temperature of the fuser. Always test samples of paper stock before purchasing large amounts.

Note:
The ***quality*** *of* ***any particular brand or type*** *of* ***paper may be*** changed ***by the manufacturer at any time, so EPSON cannot guarantee any particular one.***

In addition, you can print on special stock such as heavy paper (greater than 24 lb or 90 g/m²), envelopes, labels, or transparencies. To do so, you need to feed single sheets one at a time. See the next section "printing on special paper.”

Printing on special paper

You can print on special paper stock such as heavy paper (over 24 lb or 90 g/m^2), envelopes, labels, and transparencies. When selecting special types of paper or other stock, follow the recommendations given below.

For printing on special paper, it is usually easier to use manual feed and feed a single sheet at a time. To use manual feed, select the printer driver's Manual Feed option and turn off Auto Continue (see Chapter 2 for information on printer driver settings). Then send your print job. The printer prints the page and then waits for you to press the reset button at the rear of the printer before it prints the next sheet.

Envelopes

Toad envelopes with the flap-side up and to the left. 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 in Chapter 3.

Do not use envelopes with metal clasps or fastenings. Also do not use window envelopes unless they are specially designed for laser printers. The plastic on most window envelopes can melt when it comes in contact with the hot fuser.

Labels

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, do not use the labels.

Transparencies

You can use overhead projector transparencies and adhesive drafting film if they are made for use with laser printers or plain-paper copiers. Normally you should use manual feed when printing transparencies.

Fonts

The printer comes with a set of 14 bitmap and 8 scalable resident fonts. The resident bitmap fonts include Courier and Line Printer in various sizes and orientations. The resident fonts, stored permanently in memory, are these:

CG Times Medium	Univers Medium
CG Times Bold	Univers Bold
CG Times Italics	Univers Italics
CG Times Bold Italic	Univers Bold Italic

All other Windows fonts are automatically transferred, or downloaded, from the computer to the printer when you send a print job. For other types of fonts to be downloaded, you need the appropriate screen font software. For example, to download Adobe® fonts, you need Adobe Type Manager™ (ATM); to download Intellifont® Scalable Typefaces from Agfa,® you need Intellifont for Windows." If you don't have the appropriate screen font software for a particular font, the font will not be downloaded and the printer will substitute one of the resident fonts.

Downloaded fonts remain in printer memory only until the print job is completed. When the print job is completed or you turn off the printer, downloaded fonts are flushed from memory. Downloaded fonts, which must first be transferred from the computer, do not print as fast as resident fonts.

If you are printing a page that consists mainly of graphics but not a lot of TrueType text, you might want to print TrueType as graphics as described in Chapter 2. Printing TrueType fonts as graphics requires less printer memory and may speed up printing because the fonts don't need to be downloaded. Printing TrueType as graphics is also useful if you want to print graphics over text so that only a portion of the text is visible.

Chapter 2

Changing the Printer Settings

2

Changing the Printer Settings

In Windows-based software programs, you use the Print dialog box, which is accessible through the File menu, to specify the most common printer settings, including the number of copies, print range, and orientation.

Note:
If you are not running Windows, you control printer setting through the EPSON Control Panel** for **DOS. See Appendix B** for **more information.

The printer driver that comes with the ActionLaser 1100 allows you to control additional settings to do the following:

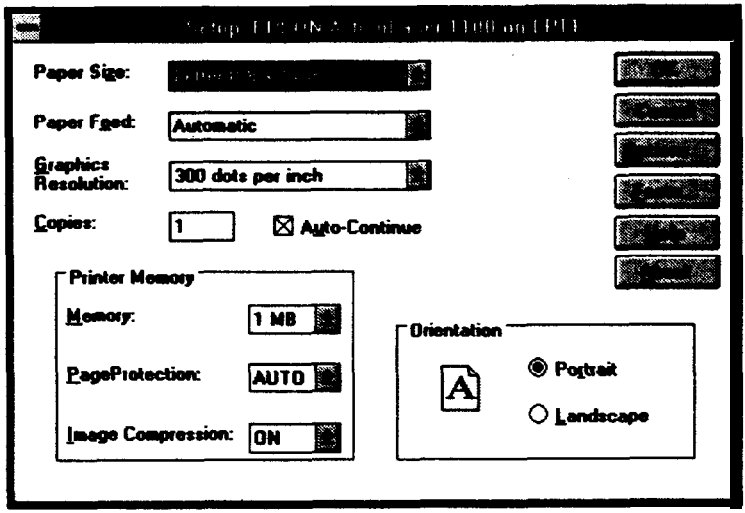
- Turn power save mode on and off and specify how long the printer is idle before entering power save mode
- Turn on toner saving mode and specify what level of toner saving to use
- Adjust the edge smoothing feature
- Control the toner density

Other settings are described later in this chapter.

Note:
If ***you are using Microsoft Windows, you can also control the printer through the Printers icon in the*** Control ***Panel. Double-clicking on the Printers icon brings up a dialog box that allows you to install and select*** the ***printer driver,*** change ***the printer's interface port,*** and ***control the printing of your files. Normally you need to use the Printers icon only when you first set up the printer. See your Windows manual for more information.***

Accessing Printer Driver Settings in Windows

If you're using a Windows-based software program, you access the printer driver settings through the Setup dialog box.



The way in which you access the Setup dialog box for the ActionLaser 1100 differs slightly, depending on your software program.

First choose Print or Page Setup in the File menu of your software program. This opens a dialog box.

You now need to select another option. Depending on your software program, you need to choose the Setup, Options, or Printer button Some programs then prompt you to select the ActionLaser 1100 before the Setup screen appears.

Printer Driver Settings

The printer driver settings fall into three categories:

- Print settings that determine how your print job is printed. These settings, which are included on the Setup dialog box, include the number of copies, orientation, and resolution used for printing graphics. The way in which printer memory is allocated can also be specified.

- Option settings that include toner saving and power save modes, the edge smoothing setting, and the type of halftone pattern to apply to grayscale images. Option settings are accessible by choosing the **Options** button in the setup dialog box.

- Font Manager settings that allow you to copy PCL® fonts to your computer's hard disk. The Font Manager is accessible by choosing the **Fonts** button in the Setup dialog box.

Print settings

The Setup dialog box contains the settings described below.

Auto Continue

Permits the printer to automatically recover from printer overrun and memory overflow errors and continue printing. By default, Auto Continue is on. To use manual feed, turn Auto Continue off. If a printer overrun or memory overflow error occurs while Auto Continue is off; press the reset button to resume.

Paper Size

Specifies the size of paper loaded in the paper tray. Select one of the following paper or envelope sizes:

Letter (default)	8.5 x 11 inches
Legal	8.5 x 14 inches
A4	210 x 297 mm
Executive	***7.25 x 10.5 inches***
COM-10 envelope	***4 1/8*** x 9.5 inches
Monarch envelope	***3 7/8 x 7.5*** inches
DL envelope	110 x 220 mm
C5 envelope	l62 x 229 mm
B5 envelope	176 x 250 mm

Paper Feed

Specifies whether paper or envelopes are fed automatically from the paper tray or whether paper is fed manually. The options for Paper Feed are Automatic (default), Manual, and Envelope.

By default, Automatic is selected and the printer uses the paper in the paper tray and prints pages continuously as long as print data is received from the computer.

Use the Manual setting when you want to feed a single sheet at a time, such as when you are printing on heavy paper, labels, or transparencies. See "Printing on special paper" in Chapter 1 for more information about manual feed. Use the Envelope setting if you are printing on envelopes; when using Envelope feed, be sure to specify the appropriate Paper Size setting for the type of envelope (COM-10 is the default).

Manual and Envelope stay active only until you exit Windows. Each time you start Windows, the paper feed is reset to the default (Automatic).

Graphics Resolution

Specifies what resolution to use to print graphics. Note that Graphics Resolution does not affect text. The options for Graphics Resolution are 300 dpi (default), 150 dpi, and 75 dpi.

Normally you should print at 300 dpi, which produces the best looking graphics. The output quality decreases for the 150- and 75-dpi resolutions.

However, if the printer does not print the entire graphic on one page and you receive a memory overflow message, reduce the graphics resolution to 150 or 75 dpi. Printing at a lower resolution is also faster than printing at 300 dpi.

If you often encounter memory overflow problems, you should also turn on Image Compression, which is described later in this chapter, or add more memory to your printer. See Appendix D for more information about adding memory.

Copies

Specifies how many uncollated copies to print. This option is provided in case your software program does not allow you to specify the number of copies. Normally you should use the Copies command from the Print menu to specify the number of copies.

You can enter any number from 1 to 999. The default is 1.

Memory

Defines the amount of memory installed in the printer. Windows uses this information to determine the amount of memory you have available for printing.

The Memory setting should exactly match the total amount of memory in your printer. If you add more memory to the printer, you need to change the Memory setting to match the amount of printer memory. The additional memory will not be available unless the Memory setting is correct.

If you are unsure how much memory is installed in your printer, print a test page by pressing the reset button at the back of the printer. (Pressing the reset button prints a test page only if the Ready light is on and the Error light is off.) The amount of memory (RAM) is stated in KB on the test page.

Memory can be 1,2,3,4, or 5MB. The default is 1MB.

Page Protection

When Page protection is enabled, the printer reserves additional memory and does not print a page until the entire page is fully composed. This allows the printer to print complex pages that can otherwise cause printer overrun errors.

The settings for Page Protection are Off, On, and Automatic (default).

You do not normally need Page Protection However, if the printer receives an unusually complicated page that contains a complex image or layout, it might start to print the page before the processor can finish imaging it, resulting in the page printing incorrectly.

If you turn on Page Protection, the printer reserves printer memory and does not begin printing until the processor has finished imaging the entire page. The page then prints correctly, although it takes slightly longer to print.

When Auto is selected, the printer first analyzes each page. If a page is complex, Page Protection is turned on automatically; otherwise, it is not used.

If you continue to encounter page overrun errors even when Page Protection is on, you might want to add more printer memory. See Appendix D for more information.

image Compression

Specifies that the printer first compress raster images before printing them. This allows you to print graphics-intensive pages using less memory.

Turn Image Compression on if you receive memory overflow errors and are not able to print pages that contain a lot of graphics. Graphics require more memory than text; for large or complex graphics, the printer might not have enough memory to correctly print the page. Image Compression compresses the image into a small amount of printer memory. The tradeoff is that your page may not look as detailed as it would when printed without image compression.

If you continue to encounter memory overflow errors even when Image Compression is on, you might want to add more printer memory. See Appendix D.

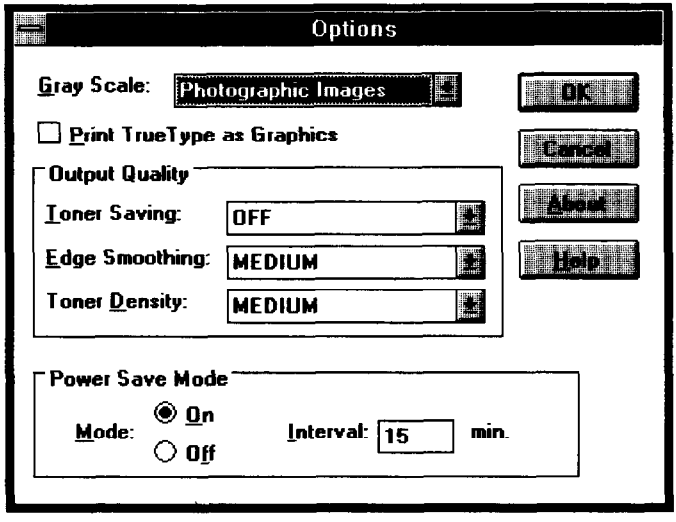
Orientation

Specifies whether the page is printed in portrait or landscape orientation. In portrait orientation, the top of the page is parallel to the short edge of the page. In landscape orientation, the top of the page is parallel to the long edge.

Normally you should select print orientation from the Print dialog box.

Option settings

When you choose the Options button of the Setup dialog box, the following dialog box appears:



Gray Scale

Specifies what halftone pattern to apply to grayscale images. The options are Photographic Images (default), Line Art Images, and Scanned Images. Each option is described below. The best way to choose a setting for your images is to experiment. Print a grayscale image at each setting and choose the one you like best.

Choose Photographic Images for images that you want to have a smooth, realistic appearance. This setting provides soft contrasts between shades of gray and works well for images originally designed with color. When Photographic Images is selected, the printer uses an 8 bit-by-8 bit "clustered dot" method to emulate 64 levels of gray.

Choose Line Art Images for images with intricate lines and fine detail, such as clip art images. This setting provides solid lines and sharp contrasts between shaded areas. When Line Art Images is selected, the printer uses 8 bit-by-8 bit "dispersed dot" patterns to produce 32 gray tones.

Choose Scanned Images for images that were originally scanned. In this setting, the printer uses a variation of the 8 bit-by-8 bit "clustered dot" method used in the Photographic Images setting. This method also produces 64 different levels of gray.

Print TrueType as Graphics

Specifies that TrueType fonts be printed as graphics.

You might want to print TrueType fonts as graphics if your document contains a lot of graphics but not a lot of TrueType text. In this case, printing TrueType fonts as graphics requires less printer memory and may speed up printing.

This setting is also useful if you want to overlay graphics on top of text.

Toner Saving

Allows you to use less toner when printing draft documents. This can reduce your printing costs because you need to replace toner cartridges less often. Toner Saving can be one of the following: Light, Medium, Dark, or Off (default).

The Light setting uses the least amount of toner, and the Dark setting produces the most legible output while still saving toner.

Setting Toner Saving to Off results in normal output and toner usage.

Edge Smoothing

Allows you to adjust the edge smoothing feature or turn it off. Edge smoothing improves the appearance of text and graphics by smoothing the jagged edges of characters and line art, resulting in higher quality output. For more information about edge smoothing, see chapter 3.

The settings for Edge Smoothing are Light, Medium (default), and Dark Normally you should not have to adjust Edge Smoothing.

However, because edge smoothing modifies the size of dots along the edges of text, lines, and graphics, the edges might appear too dark or too light To adjust for this, use the Light setting if the edges appear dark, and use the Dark setting if the edges appear too light.

Toner Density

Specifies the density of the toner applied to the page. Normally, you should not need to adjust this setting. It is provided to allow you to compensate for variations among toner cartridges.

The settings for Toner Density are Extra Light, Light, Medium (default), Dark, and Extra Dark

Note:
Increasing **the** *density increases the rate of toner consumption.*

Power Save Mode

Specifies whether power save mode is on or off.

When Power Save Mode is on, the printer uses less electricity by entering a low-power state when the printer is idle for the length of time specified by Power Save Interval. When the printer is in the low-power state, it takes approximately 45 seconds for the printer to warm up once it receives data.

In compliance with the Energy Star program, Power Save Mode is factory-set to on.

Power Save Interval

Specifies how long the printer is idle before it enters power save mode. Power Save Interval can be any value from 1 to 999 minutes. The default is 15 minutes.

Power Save Interval is valid only when Power Save Mode is on.

Font Manager

The Font Manager, accessible by choosing the Fonts button of the Setup dialog box, allows you to install XL-compatible fonts to your hard disk. You need to use Font Manager only to install PCL-compatible fonts.

Chapter 3

Troubleshooting

Resetting the Printer

In many cases, you can recover from a problem, such as a print overrun or a memory overflow, by briefly pressing the reset button at the rear of the printer. This clears the error so the printer can resume printing.

You can also reset the printer to clear its memory of any print jobs currently in memory and to return to the factory defaults. To reset the printer, hold down the reset button at the back of the printer for five seconds. Be aware that your software settings override the default settings.

General Problems

This section describes some general problems you may encounter and gives some suggestions on how to avoid them.

Preventing paper feed and paper jam problems

If you have frequent paper feed or paper jam problems, use this checklist of corrective measures:

- ❑ Use a higher-quality paper that is not too thin or rough. Some types of paper require single-sheet feeding. See "Paper Handling" in Chapter 1.
- ❑ Be sure to pull the paper release lever toward the front of the printer before installing paper. After paper is installed, push the lever back.
- ❑ Always remove any paper remaining in the paper tray before you load paper. Do not add more paper when paper is already loaded.
- ❑ Fan the stack of paper and then tap it on the edge to align it before loading.

- ❑ Be sure the printer is level.
- ❑ Do not load more than 100 sheets of paper in the tray.
- ❑ Be sure to adjust the paper guides so that the paper can slide in and out freely.
- ❑ Never let more than 50 sheets accumulate in the exit tray.
- ❑ Try turning over the stack of paper in the tray. Most paper packages indicate which side should be face up.
- ❑ Do not load paper while the printer is operating.

The Ready light does not turn on when you turn the printer on

Open the printer's front cover and make sure the toner cartridge is installed securely.

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 make sure the outlet is operating properly.

The Ready light is on but nothing prints

Your computer may not be properly connected to the printer. Perform the procedure "Testing the computer-toprinter connection" ***in the Read This First*** guide.

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 your interface cable is shielded.

The toner cartridge may be empty. Replace the toner cartridge as described ***in the Read This First*** guide.

A single sheet or the last sheet doesn't print

The file you sent might not contain a form feed command. (The printer won't print a single page or the last page of a multi-page document unless the file ends in a form feed command.) To print the single sheet or the last sheet, briefly press the reset button at the back of the printer.

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

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

Make sure your interface cable is shielded.

If the printer still does not print correctly, call 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 supports the LJ3 emulation.

Graphics require large amounts of memory; if you are encountering problems because of insufficient memory, simplify your graphics or use fewer graphics on a page. If you often print graphics-intensive pages, you may want to add more memory as described in Appendix D.

The font you selected in your software program doesn't print

The font you selected in your software program is not a Windows font and cannot be downloaded. To download non-Windows fonts, you need to obtain the font screen software appropriate for the type of font (e.g., ATM, Intellifont for Windows).

Print Quality Problems

Dark or dirty background

Turn off the printer. 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.

There may be a problem with the toner cartridge. Remove the cartridge, shake it gently from side to side, and then reinstall it. If this does not solve the problem, replace the toner cartridge as described in ***the Read This First*** guide.

Change the Density setting to light print. See "Adjusting print density" later in this chapter.

Vertical black or white bands or lines

Install a new toner cartridge as described ***in the Read This First*** guide and print several pages to check the print quality.

Horizontal black or white bands or black page

Install a new toner cartridge *as* described *in the Read This First* guide.

Uneven darkness

Your paper may be moist or damp. Printing is sensitive to moisture absorbed by the paper. Do not store your paper in a humid or damp environment.

Take out the toner cartridge, shake it gently from side to side, and then reinstall it.

If this does not solve the problem, install a new toner cartridge as described in the Read This *First* guide. Then print several pages to check the print quality.

Toner smudges

Remove the toner cartridge, shake it from side to side to distribute the toner, and wipe the bottom of it with a clean, dry cloth.

Turn off the printer. With the toner cartridge removed, clean the paper path inside the printer using a clean, soft, dry cloth. Be sure to clean the laser scanner window, which is located immediately in front of the orange strip at the bottom of the printer interior.

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

If the problem remains, replace the toner cartridge as described *in the Read This First* guide.

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 appear distorted or broken. Smooth, high-quality copier paper is recommended for best results. See Chapter 1 for information on choosing paper.

Completely blank pages

Check to be sure the toner cartridge is installed as described in ***the Read This First*** guide.

The toner cartridge may be empty. Replace the cartridge.

The problem may be with your software program or interface cable. Print out a test sheet by briefly pressing the reset button on the back of the printer (make sure the Error light is not on). If the test page is blank, the problem is with the printer. Call your dealer or a qualified service person.

Printed image is light or faint

The toner cartridge is probably empty. Replace the toner cartridge as described in ***the Read This First*** guide.

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.

Take out the toner cartridge, shake it gently from side to side to distribute the toner, and then reinstall it. If the problem persists, replace the toner cartridge as described in Read This *First.*

Use the printer driver's Density item for darker print. See "Adjusting print density" later in this chapter.

Image is too dark

Use the printer driver's Density item for lighter print. See "Adjusting print density" later in this chapter. If the problem persists, replace the toner cartridge as described in Read This First.

Non-printed side of the page is dirty

Toner may have spilled in the paper feed path. Turn off the printer. Remove the toner cartridge and then clean the paper path of the printer using a clean, soft, lint-free cloth. Be sure to clean the laser scanner window, which is located immediately in front of the orange strip at the bottom of the printer interior.

Optimizing Print Quality

If the quality of your printouts is not good, read the following sections for information on enhancing the print quality.

Adjusting edge smoothing

The edge smoothing feature improves the appearance of text and graphics by smoothing the jagged edges of characters and line art, resulting in higher quality output.

The settings for the printer driver's Edge Smoothing setting are Light, Medium (default), and Dark

Normally you should not have to adjust the Edge Smoothing setting. However, because Edge Smoothing modifies the size of dots along the edges of text, lines, and graphics, the edges might appear too dark or too light relative to the area inside the edges.

To adjust for this, use the Light setting if the edges appear dark, and use the Dark setting if the edges appear too light.

To change the Edge Smoothing setting:

1. From your software program, choose Print or Print Setup in the File menu.

2. Then choose the Setup option (Depending on your software program, you might need to select Options or Printer.)

3. If necessary, select the ActionLaser 1100 in the list of printers. (Not all software programs prompt you to select the printer.)

4. In the Setup dialog box for the ActionLaser 1100, choose the Options button.

5. Change the Edge Smoothing setting as appropriate.

6. Choose OK. Then close all screens by choosing OK or Close as appropriate.

If your printed images still need to be improved, you probably need to change the print density setting. For a darker edge smoothing setting, make the print density lighter and vice versa. See the next section, "Adjusting print density."

Note:
Edge smoothing may not improve graphics that include gray shading or a screen pattern. If you are printing gray shading or screen patterns, you might want to change the Edge Smoothing setting to off.

Adjusting print density

Note:
Do not change the print density unless it is necessary. Changing the *print density affects all text* **and graphics, so** *check the* **new setting by** *printing several pages with various kinds of text and graphics.*

If your printed pages are too light or too dark, adjust the print density as follows:

1. **From your software program, choose Print or Print Setup in the File menu.**
2. **Then choose the Setup option. (Depending on your software program, you might need to select** Options **or Printer.)**
3. **If necessary, select the ActionLaser 1100 in the list of printers (Not all software programs prompt you to select the printer.)**
4. **In the Setup dialog box for the ActionLaser 1100, choose the Options button.**
5. **Change the Toner Density setting as appropriate.**
6. **Choose OK. Then close all screens by choosing OK or Close as appropriate.**

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

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 printer's outer case every few months.

Whenever you clean the printer or replace the components, print a test sheet by pressing the reset button at the back of the printer.

Cleaning the inside of the printer

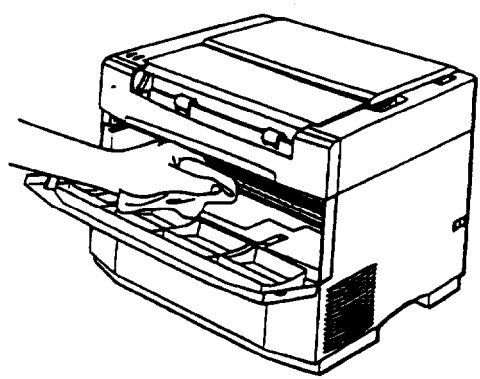
Fine particles of paper dust and ordinary dust can collect inside the printer. Follow the steps below to clean the inside of the printer:

1. Make sure the printer is turned off.

2. Open the printer's front cover.

3. Remove the toner cartridge.

4. Remove any dirt inside the printer with a soft, clean cloth. Do not use compressed air.



Be sure to clean the laser scanner window at the bottom area inside the printer. This window is located immediately in front of the orange strip at the bottom of the printer interior.

5. **Reinstall the toner cartridge.**

6. **Close the front cover.**

7. **Remove any pages and clean the paper 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. Follow these steps:

1. **If only a small amount of toner is present, carefully wipe out the inside of the printer with a clean, dry cloth. Be sure to clean the laser scanner window, which is located immediately in front of an orange strip at the bottom of the printer interior.**

2. **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.**

Caution:

Toner or any other fine powder 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; it may cause the toner to leave a permanent stain.

Cleaning the printer case

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's outer case; these chemicals can damage the components and case. Be careful not to get water on the printer mechanism or any electronic components.

Deleting the EPSON Control Panel for Windows

If you need to delete the EPSON Control Panel for Windows, do the following:

1. **Turn on the computer and start Windows.**
2. **From the Program Manager, choose Run in the File menu. This brings up the Run dialog box.**
3. **In the Command Line text box, type C:\EPPRT\EPDELETE.**

   Note:
   If the EPSON Control Panel is in a directory other than the default EPPRT directory, be sure to specify the correct pathname.

4. **When you are asked if you want to delete the EPSON Control Panel, choose OK.**
5. **Once the EPSON Control Panel is deleted, a message appears telling you to delete EPDELETE.EXE. Choose OK.**
6. **Use the File Manager to delete EPDELETE.EXE from the C:\EPPRT directory. Then delete the EPPRT directory.**

A

Appendix A
Technical Specifications

Paper

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 use of any particular brand or type of paper. Always test samples of paper *stock before purchasing large quantities or printing large jobs.*

Paper types:
- ❑ Plain paper
- ❑ Special paper
- ❑ Labels
- ❑ Envelopes
- ❑ Transparencies
- ❑ Colored paper

Paper weight:

Plain paper:	16 to 24 lb, 60 to 90 g/m^2
Card stock:	24 to 32 lb, 90 to 120 g/m^2 (single-sheet feed only)

Paper size:

	Type	Size
Paper:	Letter	8.5 x 11 inches
	Legal	8.5 x 14 inches
	Executive	7.25 x 10.5 inches
	A4	210 mm x 297 mm
Envelope:	B5	176 mm x 250 mm
	Monarch	3 7/8 x 7 1/2 inches
	Commercial 10	4 1/8 X 9 1/2 inches
	DL	110 mm x 220 mm
	C5	162 mm x 229 mm

Caution:
Do not load any size of paper other than *those listed above.*

Printable area: 4 mm from paper edge

Paper feed

Paper feed alignment and direction:	Center alignment for all sizes
Paper feed:	Automatic or manual feed
Input paper supply (20 lb paper):	100 sheets 5-10 envelopes, depending on thickness
Paper eject:	Face down
Output tray capacity (20 lb paper):	50 sheets

Printer

General

Printing method:	Laser beam scanning and dry electrophotographic process
Resolution:	300 x 300 dpi
Printing speed:	Up to 4 pages per minute depending on the font and quantity of data
Warm-up time:	Approximately 45 seconds
Internal emulation:	HP LaserJet III emulation
Resident fonts:	14 bitmap and 8 scalable fonts (See Chapter 1 for a list of resident printer fonts.)
CPU:	68HC000, 16 MHz
RAM:	1MB, expandable up to 5MB

Environmental

Temperature:	**operatim: 5 to 35°C (42 to 95°F)** **Storage: -20 to 40°C (-4 to 104°F)**
Humidity:	**Operation: 15 to 85% RH** **storage: 5 to 95% RH**
Altitude:	**2500 meters (8200 feet) maximum**

Mechanical

Dimensions ***weight:***	**Height: 10.5 inches (265 mm)** **Width: 13 inches (330 mm)** **Depth 9-25 inches (235 mm)** **Weight: Approx. 11 lb (5 kg) including the toner cartridge.**
Durability:	**5 years or 100,000 sheets, whichever comes first**

Electrical

Voltage!:	**90 V to 132 V**
Rated frequency:	**50 Hz to 60 Hz ± 3 Hz**
Rated current:	**Approximately 3.2 amps**
Power:	**Approximately 400W** **Powers down to less than 30W in power save mode**
Safety standards:	**UL 1950** **CSA 22.2 No. 950 Deviation 3**
Laser radiation regulations:	**FDA (NCDRH) Class 1**
EMI:	FCC Part 15 Subpart B, Class B

Toner cartridge

Model number:	**S051023**
Storage temperature:	**0 to 35°C (32 to 95°F)**
Storage humidity:	**15 to 85%RH**
shelf life:	**24 months after production**
Life:	**Up to 4000 pages under the following conditions Letter-size paper, continuous printing, and 5% print ratio.**

The number of pages you can print with a toner cartridge varies depending on the type of printing. If you print a few pages at a time or print dense text exceeding the 5% print ratio, your cartridge may print fewer pages. The 5% print ratio is equivalent to double-spaced standard text.

You can increase the life of the toner cartridge by using toner saving mode.

Inferface

The parallel interface connector pin assignments and a description of the interface signals are shown in the table below.

Signal Pin	Return Pin	Signal	Direction	Description
1	19	STROBE	IN	STROBE pulse to read data. Pulse width must be at least 0.5 µs at the receiving terminal.
2	20	DATA 1	IN	These signals represent parallel data bits 1 to 8, respectively. Each signal is at HIGH level when data is logical 1 and LOW when it is logical 0.
3	21	DATA 2	IN	
4	22	DATA 3	IN	
5	23	DATA 4	IN	
6	24	DATA 5	IN	
7	25	DATA 6	IN	
8	26	DATA 7	IN	
9	27	DATA 8	IN	
10	28	ACKNLG	OUT	About a 1-10-µs pulse width. LOW indicates data has been received and the printer is ready to accept more data.
11	29	BUSY	OUT	A HIGH signal indicates that the printer cannot receive data. The signal goes HIGH in the following cases. 1. During printing 2. During a printer-error state
12	30	PE	OUT	A HIGH signal indicates the printer is out of paper
13	—	SLCT	OUT	Pulled up to +5v through 3.3 KΩ resistance.
14	–	AUTO FEED	IN	Not used
15	—	NC	–	Not used
16	–	G N D	—	Logic ground level
17		CHASSIS GND	—	Printer's chassis ground, which is connected to the signal ground.
18	—	N C	—	Not used

Signal Pin	Return Pin	Signal	Direction	Description
19-30	-	GND	-	Twisted-pair return signal ground level.
31	-	NC	-	Not used
32	-	$\overline{\text{ERROR}}$	OUT	This signal level goes LOW when the printer is: 1, Out of paper 2. In on error state
33	-	GND	-	Some as for Pins 19-30
34	-	NC	-	Not used
35	-	+5v	-	Pulled up to +5 V through 3.3 KΩ resistance.
36	-	$\overline{\text{SLCTIN}}$	IN	Available only for bidirectional use.

Note:

- *All* interface conditions are based on TTL level. Both *the rise and fall times of each signal must be less than 0.2 microseconds.*
- *Data transfer* must be *carried out by observing the* $\overline{\text{ACKNLG}}$ *or* BUSY *signal. (Data transfer to this printer can be carried out only after receipt of the* $\overline{\text{ACKNLG}}$ *signal or when the level* of the *BUSY signal is* LOW.)
- The *column heading "Direction" refers to the direction of signal flow as viewed from* the printer.
- *Return denotes the twisted-pair return to be connected at signal ground level. For* the *interface wiring, be* sure to *use a twisted-pair cable for each signal and to complete the connection on the return side.*
- *The* $\overline{\text{ACKNLG}}$ *puke width varies.*

Appendix B

Controlling Printer Settings from MS-DOS

B

EPSON Control Panel for DOS

If you are not running Microsoft Windows, you can control printer settings through the EPSON Control Panel for DOS. This onscreen utility consists of five screens that allow you to do the following:

- Change page setup settings, such as the number of copies, orientation, and page size.
- Select a font, point size, or symbol set.
- Control the print quality by specifying the edge smoothing, toner saving, and toner density settings.
- Control how printer memory is used by turning page protection or image compression on or off.
- Turn the power save option on or off and specify how long the printer is idle before power save mode turns on.

Most of the settings available in the EPSON Control Panel for DOS are the same as the printer driver settings available for Windows. For a description of the individual printer settings, see Chapter 2.

Some settings, such as those for page setup and font selection, are also available through your software program. Whenever possible, change settings in your software program rather than in the EPSON Control Panel for DOS. Not only is it more convenient but the settings in your software program override settings in the EPSON Control Panel for DOS.

Note:
You cannot run the EPSON Control Pane for DOS from Windows.

Installation

1. Insert the EPSON Control Panel for DOS disk in a floppy drive.
2. From a DOS prompt, change to the floppy drive by typing A: or B: as appropriate. Press Enter.
3. Type SETUP and press Enter. After a few moments, the initial setup screen appears.
4. Read the information on the setup screen. Then press Enter to continue.

5. The screen displays the default setup parameters that are designed to be used for most computer environments. If the default parameters are acceptable and you don't need to make any changes, press Enter.

   If you need to make changes, tab to NO and press Enter. This brings up a series of screens, each of which prompts you to change a setting. For each setting, press Enter to accept the default or change the setting and press Enter. The setup program begins uncompressing files and copying them to your hard disk.

6. When a message appears telling you that installation was successful, press Enter to exit the setup program.

This completes installation of the EPSON Control Panel for DOS.

To print using your printer, you need to select the HP LaserJet III printer driver in your software program If the LaserJet III driver is not available, contact your software manufacturer for an updated version of the software program Until you receive the new version, you can use any LaserJet II driver or any driver that uses HP PCL.

See your software manual for specific information on how to select a printer driver.

Bringing up the EPSON Control Panel for DOS

To bring up the EPSON Control Panel for DOS, do the following

1. At a C: prompt, change to the PANEL directory by typing CD \PANEL. Then press Enter.

   Note:
   If you installed the EPSON Control Panel to a different directory than the default, be sure to specify the correct *pathname.*

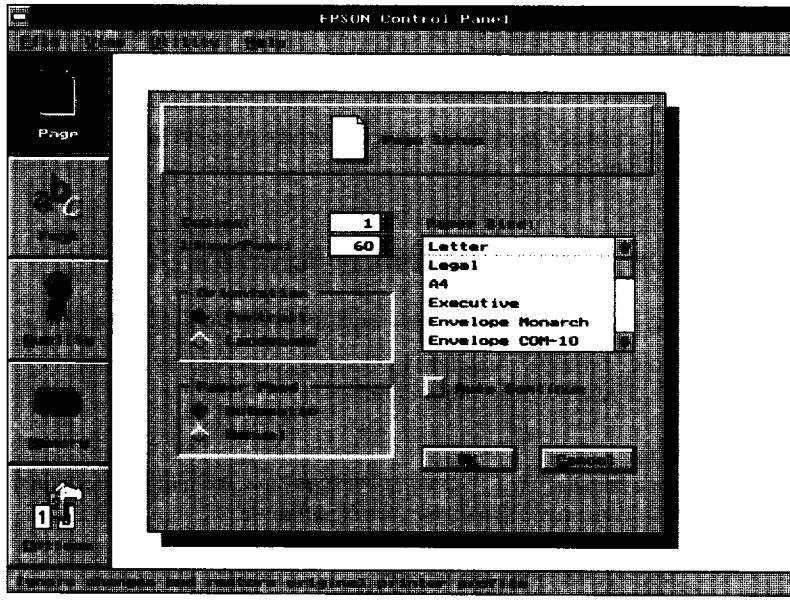
2. Type PANEL and press Enter.

Using the EPSON Control Panel *for DOS*

The interface for the EPSON Control Panel for DOS consists of three parts: the current screen, a menu bar, and screen buttons for accessing other screens.

EPSON Control Panel screens

The EPSON Control Panel for DOS consists of five screens: Page Setup, Font, Quality, Memory, and Options. One screen is displayed at a time, and the other screens are represented by buttons to the left of the current screen.



The five screens are listed below, along with the items available on each.

Menu	item
Page Setup	copies Lines per Page Orientation Paper Feed Paper Size Auto Continue
Font	Typeface Point Symbol Set
Quality	Toner Saving Edge Smoothing Toner Density
Memory	Page Protection Image Compression
Options	Power Save Mode Power Save Interval

Moving within and between screens

When you first bring up EPSON Control Panel for DOS, the Page getup screen is displayed. If you want to change an item in the current screen, use the Tab key to move to the item you want to change. Then use the up and down arrows to select a new setting for the item. Press Tab to apply the new setting and move to the next item.

To access another screen, hold down the Alt key and press the letter that is underlined on the screen button. For example, to open the Font screen, press Alt + N. To move from the screen button to the currently displayed screen, press Tab.

Once you make changes to the settings, choose OK to save the changes and update the printer. To cancel your changes and return to the original settings, choose Cancel. (If you exit the screen without choosing OK or Cancel, you are prompted to save or to cancel changes when you exit the EPSON Control Panel.)

Menu bar

The menu bar contains the following four menus:

File	The File selections allow you to exit the utility, save printer settings as a profile, retrieve a previously saved profile, and export a profile to the printer. For more information about profiles, see the following section.
View	Choosing View brings up a listing of the current printer settings.
Utility	The Utility selections allow you to reset the printer, change the port setting, and print a test page, status sheet, and demonstration page.
Help	The Help menu contains the Help index and the About item

To access a menu, hold down the Alt key while you press the first letter of the name of the menu (e.g., press Alt + F to bring up the File menu). Use the up and down arrows to select an item on the menu. Then press Enter.

Help is available for each item in the menu bar. To bring up help, move the cursor to the item and press F1.

To move the cursor from the menu bar to the screen, press Esc.

Getting help

The status bar at the bottom of the screen provides a brief description for each setting. For more information about the current setting, press F1. You can also bring up the Help Index in the menu bar, which allows you to get help for any EPSON Control Panel item. To bring up the Help Index, press Alt + H, then press Enter. Use the up and down arrows to move through the list of items. When you reach the item for which you want help, press Enter.

Using profiles

A profile is a specific set of printer settings. If you often reuse the same printer settings, you can create a profile to easily update your printer with predefined settings.

There are three ways to create a profile:

- Use the EPSON Control Panel for DOS to change the printer settings as needed. Then choose Save Profile in the File menu. This brings up a dialog box that prompts you to assign a filename and choose the directory in which to store the profile. When you complete the information in the dialog box, choose OK.
- Open an existing profile and modify the settings of the profile. To do so, use Open Profile in the File menu to open an existing profile. Change just those settings that you want to change and then choose Save As in the File menu. Enter a new filename and choose the directory in which to save the profile.
- Use the settings currently in use by the printer to create a profile. To do so, choose Import profile From Printer in the File menu. This brings up a dialog box that prompts you to name the profile and choose the directory in which to store it.

When you open a profile, you can export the printer settings described by the profile by using the Export Profile to Printer item on the File menu.

Reporter

The Reporter keeps you informed of the printer status and alerts you to printer problems. Each time the printer status changes or an error occurs, a message automatically appears on screen to notify you. Each Reporter message gives you the option of disabling the particular message so that it does not reappear until you re-enable it.

To modify certain Reporter parameters, use the hot key combination Ctrl + Alt + R to bring up the Reporter's main menu. The main menu allows you to do the following:

- Enable messages that you have disabled.
- Review the last message displayed by the Reporter.

- Deactivate (or re-activate) the Reporter. When the Reporter is deactivated, it does not monitor the printer and does not display messages.
- Change the hot key combination used to bring up the Reporter's main menu.
- Change the colors of the Reporter's messages.

A help option on the menu provides a brief explanation for each topic on the main menu.

Appendix C

Command Summary

C

LJ3 Emulation Commands

Your printer emulates the Hewlett-Packard LaserJet III printer and uses the PCL 5 command language.

This appendix lists the available printer commands for LJ3 emulation. Most of the commands closely emulate the original printer or the control language; however, some have operational differences.

The following notes apply to various command in the following. commandsummary:

1 These commands are specific to the EPSON ActionLaser 1100.

2 Secondary printer commands are specified as secondary by using a right parenthesis")" in the command instead of a left parenthesis.

Function	*Command*	*Parameter*	*Decimal value*	**Hexadecimal value**
Job control				
Reset	ESC E	-	027 069	1B 45
Number of copies	ESC &/ #X	X=1-99	027 038 108 #...# 088	1B 26 6C #...# 58
universal exit language	ESC %- #X	# = 1-5		
Long-edge (left) offset registration	ESC&/ #U	# = number of decipoints (1/720")	027 038 108 #...# 085	1B 26 6C #...# 55
Short-edge (top) offset registration	ESC &/ #Z	# = number of decipoints (1/720")	027 038 108 #...# 090	1B 26 6C #...# 5A
Page control				
Paper source[1]	ESC &/ OH	Eject Page	027 038 108 048 072	1B 26 6C 30 48
	ESC &/ 1H	Standard tray	027 038 108 049 072	1B 26 6C 31 48
	ESC &/ 2H	Manual feed	027 038 108 050 072	1B 26 6C 32 48
	ESC &/ 3H	Manual envelope feed	027 038 106 051 072	1B 26 6C 33 48
	ESC &/ 6H	Envelope feed from standard tray	027 038 108 054 072	1B 26 6C 36 48

Function	Command	Parameter	Decimal value	Hexadecimal value
Page size [1]	ESC &l 1A	Executive	027 038 108 049 065	1B 26 6C 31 41
	ESC &l 2A	Letter	027 038 108 050 065	1B 26 6C 32 41
	ESC &l 3A	Legal	027 038 108 051 065	1B 26 6C 33 41
	ESC &l 26A	A4	027 038 108 050 054 065	1B 26 6C 32 36 41
	ESC &l 80A	Monarch	027 038 108 056 048 065	1B 26 6C 38 30 41
	ESC &l 81A	COM 10	027 038 108 056 049 065	1B 26 6C 38 31 41
	ESC &l 90A	International DL	027 038 108 057 048 065	1B 26 6C 39 30 41
	ESC &l 91A	International C5	027 038 108 057 049 065	1B 26 6C 39 31 41
	ESC &l 100A	International B5	027 038 108 049 048 048 065	1B 26 6C 31 30 30 41
Orientation	ESC &l 0O	Portrait	027 038 108 048 079	1B 26 6C 30 4F
	ESC &l 1O	Landscape	027 038 108 049 079	1B 26 6C 31 4F
	ESC &l 2O	Reverse Portrait	027 038 108 050 079	1B 26 6C 32 4F
	ESC &l 3O	Reverse Landscape	027 038 108 051 079	1B 26 6C 33 4F
Print direction	ESC &a#P	# = Degrees of rotation counter-clockwise in 90° increments	027 038 097 #...# 080	1B 26 61 #...# 50
Top margin	ESC &l #E	# = No. of lines	027 038 108 #...# 069	1B 26 6C #...# 45
Text length	ESC &l #F	# = No. of lines	027 038 108 #...# 070	1B 26 6C #...# 46
Left margin	ESC &a#L	# = No. of columns	027 038 097 #...# 076	1B 26 61 #...# 4C
Right margin	ESC &a#M	# = No. of columns	027 038 097 #...# 077	1B 26 61 #...# 4D
Clear Horizontal margins	ESC 9	—	027 057	1B 39
Perforation skip	ESC &l 0L	Disable	027 038 108 048 076	1B 26 6C 30 4C
	ESC &l 1L	Enable	027 038 108 049 076	1B 26 6C 31 4C
Horizontal Motion Index (HMI)	ESC &k#H	# = No. of 1/120" increments	027 038 107 #...# 072	1B 26 6B #...# 48
Vertical Motion Index (VMI)	ESC &l #C	# = No. of 1/48" increments	027 038 108 #...# 067	1B 26 6C #...# 43
Line spacing	ESC &l 1D	1 line/inch	027 038 108 049 068	1B 26 6C 31 44
	ESC &l 2D	2 lines/inch	027 038 108 050 068	1B 26 6C 32 44
	ESC &l 3D	3 lines/inch	027 038 108 051 068	1B 26 6C 33 44
	ESC &l 4D	4 lines/inch	027 038 108 052 068	1B 26 6C 34 44
	ESC &l 6D	6 lines/inch	027 038 108 054 068	1B 26 6C 36 44
	ESC &l 8D	8 lines/inch	027 038 108 056 068	1B 26 6C 38 44
	ESC &l 12D	12 lines/inch	027 038 108 049 050 068	1B 26 6C 31 32 44
	ESC &l 16D	16 lines/inch	027 038 108 049 054 068	1B 26 6C 31 36 44
	ESC &l 24D	24 lines/inch	027 038 108 050 052 068	1B 26 6C 32 34 44
	ESC &l 48D	48 lines/inch	027 038 108 052 056 068	1B 26 6C 34 38 44

Function	*Commmd*	*Parameter*	*Decimal value*	Hexadecimal value
Cursor positioning				
Vertical position	ESC &a#R	# = No. of rows	027 038 097 #...# 082	1B 26 61 #...# 52
	ESC *p#Y	# = No. of dots	027 042 112 #...# 089	1B 2A 70 #...# 59
	ESC &a#V	# = No. of decipoints	027 038 097 #...# 086	1B 26 61 #...# 56
Horizontal position	ESC &a#C	# = No. of columns	027 038 097 #...# 067	1B 26 61 #...# 43
	ESC *p#X	# = No. of dots	027 042 112 #...# 088	1B 2A 70 #...# 58
	ESC &a#H	# = No. of decipoints	027 038 097 #...# 072	1B 26 61 #...# 48
Half line feed	ESC =	—	027 061	1B 3D
Line termination	ESC &k0G	CR=CR; LF=LF; FF=FF	027 038 107 048 071	1B 26 6B 30 47
	ESC &k1G	CR=CR+LF; LF=LF; FF=FF	027 038 107 049 071	1B 26 6B 31 47
	ESC &k2G	CR=CR; LF=CR+LF; FF=CR+LF	027 038 107 050 071	1B 26 6B 32 47
	ESC &k3G	CR=CR+LF; LF=CR+LF; FF=CR+FF	027 038 107 051 071	1B 26 6B 33 47
Push/Pop position	ESC &f0S	Push	027 038 102 048 083	1B 26 66 30 53
	ESC &f1S	Pop	027 038 102 049 083	1B 26 66 31 53
Font selection				
Primary symbol set [2]	ESC (0D	ISO 60: Norwegian 1	027 040 048 068	1B 28 30 44
	ESC (1E	ISO 4: United Kingdom	027 040 049 069	1B 28 31 45
	ESC (1F	ISO 69: French	027 040 049 070	1B 28 31 46
	ESC (1G	ISO 21: German	027 040 049 071	1B 28 31 47
	ESC (0I	ISO 15: Italian	027 040 048 073	1B 28 30 49
	ESC (6J	Microsoft Publishing	027 040 054 074	1B 28 36 4A
	ESC (7J	DeskTop	027 040 055 074	1B 28 37 4A
	ESC (10J	PS Text	027 040 049 048 074	1B 28 31 30 4A
	ESC (13J	Ventura International	027 040 049 051 074	1B 28 31 33 4A
	ESC (14J	Ventura US	027 040 049 052 074	1B 28 31 34 4A
	ESC (5M	PS Math	027 040 053 077	1B 28 35 4D
	ESC (6M	Ventura Math	027 040 054 077	1B 28 36 4D
	ESC (8M	Math-8	027 040 056 077	1B 28 38 4D
	ESC (0N	ISO 8859-1: (ECMA-94) Latin 1	027 040 048 078	1B 28 30 4E
	ESC (0S	ISO 11: Swedish	027 040 048 083	1B 28 30 53
	ESC (2S	ISO 17: Spanish	027 040 050 083	1B 28 32 53
	ESC (0U	ISO 6: ASCII	027 040 048 085	1B 28 30 55
	ESC (1U	Legal	027 040 049 085	1B 28 31 55

Function	Command	Parameter	Decimal value	Hexadecimal value
	ESC (8U	Roman-8	027 040 056 085	1B 28 38 55
	ESC (9U	Windows 3.0 Latin 1	027 040 057 085	1B 28 39 55
	ESC (10U	PC-8	027 040 049 048 085	1B 28 31 30 55
	ESC (11U	PC-8 D/N	027 040 049 049 085	1B 28 31 31 55
	ESC (12U	PC 850	027 040 049 050 085	1B 28 31 32 55
	ESC (15U	Pi Font	027 040 049 053 085	1B 28 31 35 55
Primary spacing	ESC (s1P	Proportional	027 040 115 049 080	1B 28 73 31 50
	ESC(s0P	Fixed	027 040 115 048 080	1B 28 73 30 50
Primary pitch	ESC (s#H	# = No. of characters/ inch	027 040 115 #...# 072	1B 28 73 #...# 48
Primary height	ESC (s#V	# = No. of points	027 040 115 #...# 086	1B 28 73 #...# 56
Primary style	ESC (s0S	Upright (solid)	027 040 115 048 083	1B 28 73 30 53
	ESC (s1S	Italic	027 040 115 049 083	1B 28 73 31 53
Primary font stroke weight	ESC (s-7B	Ultra thin	027 040 115 045 055 066	1B 28 73 2D 37 42
	ESC (s-6B	Extra thin	027 040 115 045 054 066	1B 28 73 2D 36 42
	ESC (s-5B	Thin	027 040 115 045 053 066	1B 28 73 2D 35 42
	ESC (s-4B	Extra light	027 040 115 045 052 066	1B 28 73 2D 34 42
	ESC (s-3B	Light	027 040 115 045 051 066	1B 28 73 2D 33 42
	ESC (s-2B	Demi light	027 040 115 045 050 066	1B 28 73 2D 32 42
	ESC (s-1B	Semi light	027 040 115 045 049 066	1B 28 73 2D 31 42
	ESC (s0B	Medium (book or text)	027 040 115 048 066	1B 28 73 30 42
	ESC (s1B	Semi bold	027 040 115 049 066	1B 28 73 31 42
	ESC (s2B	Demi bold	027 040 115 050 066	1B 28 73 32 42
	ESC (s3B	Bold	027 040 115 051 066	1B 28 73 33 42
	ESC (s4B	Extra bold	027 040 115 052 066	1B 28 73 34 42
	ESC (s5B	Black	027 040 115 053 066	1B 28 73 35 42
	ESC (s6B	Extra black	027 040 115 054 066	1B 28 73 36 42
	ESC (s7B	Ultra black	027 040 115 055 066	1B 28 73 37 42
Primary typeface family	ESC (s3T	Courier	027 040 115 051 084	1B 28 73 34 54
	ESC (s4101T	CG Times	027 040 115 052 049 048 049 084	1B 28 73 34 31 30 31 54
	ESC (s4148T	Univers	027 040 115 052 049 052 056 084	1B 28 73 34 31 34 38 54
	ESC (s0T	Line Printer	027 040 115 048 084	1B 28 73 30 54
Font default	ESC (3@	Primary font	027 040 051 064	1B 28 33 40
	ESC)3@	Secondary font	027 041 051 064	1B 29 33 40
Underline	ESC &d0D	Enable fixed	027 038 100 048 068	1B 26 64 30 44
	ESC &d3D	Enable floating	027 038 100 051 068	1B 26 64 33 44
	ESC &d@	Disable	027 038 100 064	1B 26 64 40
Transparent print data	ESC &p#X [Data]	# = No. of bytes	027 038 112 #...# 088	1B 26 70 #...# 58

Function	*Command*	*Parameter*	*Decimal value*	*Hexadecimal value*
Font management				
Assign font ID	ESC *c#D	# = Font ID number	027 042 099 #...# 068	1B 2A 63 #...# 44
Font and character control	ESC *c0F	Delete all fonts	027 042 099 048 070	1B 2A 63 30 46
	ESC *c1F	Delete all temporary fonts	027 042 099 049 070	1B 2A 63 31 46
	ESC *c2F	Delete last font ID specified	027 042 099 050 070	1B 2A 63 32 46
	ESC *c3F	Delete last character specified	027 042 099 051 070	1B 2A 63 33 46
	ESC *c4F	Make font temporary	027 042 099 052 070	1B 2A 63 34 46
	ESC *c5F	Make font permanent	027 042 099 053 070	1B 2A 63 35 46
	ESC *c6F	Copy/assign the currently invoked font as temporary	027 042 099 054 070	1B 2A 63 36 46
Select font (with ID #)	ESC (#X	# = ID number for primary font	027 040 #...# 088	1B 28 #...# 58
	ESC)#X	# = ID number for secondary font	027 041 #...# 088	1B 29 #...# 58
Soft font creation				
Font descriptor (font header)	ESC)s#W [Data]	# = No. of bytes	027 041 115 #...# 087	1B 29 73 #...# 57
Download character	ESC (s#W [Data]	# = No. of bytes	027 040 115 #...# 087	1B 28 73 #...# 57
Character code	ESC *c#E	# = Character code (decimal)	027 042 099 #...# 069	1B 2A 63 #...# 45
Raster graphics				
Raster resolution	ESC *t75R	75 dots/inch	027 042 116 055 053 082	1B 2A 74 37 35 52
	ESC *t100R	100 dots/inch	027 042 116 049 048 048 082	1B 2A 74 31 30 30 52
	ESC *t150R	150 dots/inch	027 042 116 049 053 048 082	1B 2A 74 31 35 30 52
	ESC *t300R	300 dots/inch	027 042 116 051 048 048 082	1B 2A 74 33 30 30 52
Raster graphics presentation	ESC *r0F	Follows orientation	027 042 114 048 070	1B 2A 72 30 46
	ESC *r3F	Follows physical page	027 042 114 051 070	1B 2A 72 33 46
Start raster graphics	ESC *r0A	Left raster graphics margin	027 042 114 048 065	1B 2A 72 30 41
	ESC *r1A	Current cursor	027 042 114 049 065	1B 2A 72 31 41
Raster Y offset	ESC *b#Y	# = No. of raster lines of vertical movement	027 042 098 #...# 089	1B 2A 62 #...# 59

Function	Command	Parameter	Decimal value	Hexadecimal value
Set Raster compression mode	ESC *b0M	Unencoded	027 042 098 048 077	1B 2A 62 30 4D
	ESC *b1M	Run-Length encoded	027 042 098 049 077	1B 2A 62 31 4D
	ESC *b2M	Tagged image file format	027 042 098 050 077	1B 2A 62 32 4D
	ESC *b3M	Delta row	027 042 098 051 077	1B 2A 62 33 4D
Transfer raster data	ESC *b#W[Data]	# = No. of bytes	027 042 098 #...# 087	1B 2A 62 #...# 57
End raster graphics	ESC *rB	Old version	027 042 114 066	1B 2A 72 42
Raster graphics height	ESC *r#T	# = No. of raster rows	027 042 114 #...# 084	1B 2A 72 #...# 54
Raster graphics width	ESC *r#S	# = Pixels of the specified resolution	027 042 114 #...# 083	1B 2A 72 #...# 53

Print model

Select current pattern	ESC *v0T	Solid black (default)	027 042 118 048 084	1B 2A 76 30 54
	ESC *v1T	Solid white	027 042 118 049 084	1B 2A 76 31 54
	ESC *v2T	Shading pattern	027 042 118 050 084	1B 2A 76 32 54
	ESC *v3T	Cross-hatch pattern	027 042 118 051 084	1B 2A 76 33 54
Select source transparency mode	ESC *v0N	Transparent	027 042 118 048 078	1B 2A 76 30 4E
	ESC *v1N	Opaque	027 042 118 049 078	1B 2A 76 31 4E
Select pattern transparency mode	ESC *v0O	Transparent	027 042 118 048 079	1B 2A 76 30 4F
	ESC *v1O	Opaque	027 042 118 049 079	1B 2A 76 31 4F
Rectangle width	ESC *c#A	# = No. of dots	027 042 099 #...# 065	1B 2A 63 #...# 41
	ESC *c#H	# = No. of decipoints	027 042 099 #...# 072	1B 2A 63 #...# 48
Rectangle height	ESC *c#B	# = No. of dots	027 042 099 #...# 066	1B 2A 63 #...# 42
	ESC *c#V	# = No. of decipoints	027 042 099 #...# 086	1B 2A 63 #...# 56
Fill rectangular area	ESC *c0P	Solid Black	027 042 099 048 080	1B 2A 63 30 50
	ESC *c1P	Erase (solid white area fill)	027 042 099 049 080	1B 2A 63 31 50
	ESC *c2P	Shaded fill	027 042 099 050 080	1B 2A 63 32 50
	ESC *c3P	Cross-hatch fill	027 042 099 051 080	1B 2A 63 33 50
	ESC *c4P	User-defined	027 042 099 052 080	1B 2A 63 34 50
	ESC *c5P	Current pattern	027 042 099 053 080	1B 2A 63 35 50
Pattern ID	ESC *c#G	% of shading or type of pattern or user pattern ID	027 042 099 #...# 071	1B 2A 63 #...# 47

Function	Command	Parameter	Decimal value	Hexadecimal value
Shading	ESC *c2G	2% gray	027 042 099 050 071	1B 2A 63 32 47
	ESC *c10G	10% gray	027 042 099 049 048 071	1B 2A 63 31 30 47
	ESC *c15G	15% gray	027 042 099 049 053 071	1B 2A 63 31 35 47
	ESC *c30G	30% gray	027 042 099 051 048 071	1B 2A 63 33 30 47
	ESC *c45G	45% gray	027 042 099 052 053 071	1B 2A 63 34 35 47
	ESC *c70G	70% gray	027 042 099 055 048 071	1B 2A 63 37 30 47
	ESC *c90G	90% gray	027 042 099 057 048 071	1B 2A 63 39 30 47
	ESC *c100G	100% gray	027 042 099 049 048 048 071	1B 2A 63 31 30 30 47
Pattern	ESC *c1G	1 horiz. line	027 042 099 049 071	1B 2A 63 31 47
	ESC *c2G	2 vert. lines	027 042 099 050 071	1B 2A 63 32 47
	ESC *c3G	3 diagonal lines	027 042 099 051 071	1B 2A 63 33 47
	ESC *c4G	4 diagonal lines	027 042 099 052 071	1B 2A 63 34 47
	ESC *c5G	5 square grid	027 042 099 053 071	1B 2A 63 35 47
	ESC *c6G	6 diagonal grid	027 042 099 054 071	1B 2A 63 36 47

Macros

Macro ID	ESC &f#Y	#=Macro ID number	027 038 102 #...# 089	1B 26 66 #...# 59
Macro control	ESC &f0X	Start macro def.	027 038 102 048 088	1B 26 66 30 58
	ESC &f1X	Stop macro def.	027 038 102 049 088	1B 26 66 31 58
	ESC &f2X	Execute macro	027 038 102 050 088	1B 26 66 32 58
	ESC &f3X	Call macro	027 038 102 051 088	1B 26 66 33 58
	ESC &f4X	Enable overlay	027 038 102 052 088	1B 26 66 34 58
	ESC &f5X	Disable overlay	027 038 102 053 088	1B 26 66 35 58
	ESC &f6X	Delete macros	027 038 102 054 088	1B 26 66 36 58
	ESC &f7X	Delete all temp. macros	027 038 102 055 088	1B 26 66 37 58
	ESC &f8X	Delete macro ID	027 038 102 056 088	1B 26 66 38 58
	ESC &f9X	Make temporary	027 038 102 057 088	1B 26 66 39 58
	ESC &f10X	Make permanent	027 038 102 049 048 088	1B 26 66 31 30 58

Status readback

Set status readback location type	ESC *s0T	Invalid location	027 042 115 048 084	1B 2A 73 30 54
	ESC *s1T	Currently selected	027 042 115 049 084	1B 2A 73 31 54
	ESC *s2T	All locations	027 042 115 050 084	1B 2A 73 32 54
	ESC *s3T	Internal	027 042 115 051 084	1B 2A 73 33 54
	ESC *s4T	Downloaded	027 042 115 052 084	1B 2A 73 34 54
	ESC *s5T	Cartridge	027 042 115 053 084	1B 2A 73 35 54
	ESC *s7T	User-installed ROM (SIMMs)	027 042 115 055 084	1B 2A 73 37 54

Function	Command	Parameter	Decimal value	Hexadecimal value
Set status readback location unit	ESC *s0U	All entities of the Location Type	027 042 115 048 085	1B 2A 73 30 55
	ESC *s1U	Entity 1 or Temporary	027 042 115 049 085	1B 2A 73 31 55
	ESC *s2U	Entity 2 or Permanent	027 042 115 050 085	1B 2A 73 32 55
	ESC *s3U	Entity 3	027 042 115 051 085	1B 2A 73 33 55
	ESC *s4U	Entity 4	027 042 115 052 085	1B 2A 73 34 55
Inquire status readback entity	ESC *s0I	Font	027 042 115 048 073	1B 2A 73 30 49
	ESC *s1I	Macro	027 042 115 049 073	1B 2A 73 31 49
	ESC *s2I	User-defined pattern	027 042 115 050 073	1B 2A 73 32 49
	ESC *s3I	Symbol set	027 042 115 051 073	1B 2A 73 33 49
	ESC *s4I	Font extended	027 042 115 052 073	1B 2A 73 34 49
Flush all pages	ESC &r0F	Flush all complete pages	027 038 114 048 070	1B 26 72 30 46
	ESC &r1F	Flush all page data	027 038 114 049 070	1B 26 72 31 46
Free memory space	ESC *s1M	—	027 042 115 049 077	1B 2A 73 31 4D
Echo	ESC *s#X	# = Echo value (-32767 to 32767)	027 042 115 #...# 088	1B 2A 73 #...# 58

Programming hints

End of line wrap	ESC &s0C	Enabled	027 038 115 048 067	1B 26 73 30 43
	ESC &s1C	Disabled	027 038 115 049 067	1B 26 73 31 43
Display functions	ESC Y	ON	027 089	1B 59
	ESC Z	OFF	027 090	1B 5A
Nondisclosed command	ESC z	Self test		

Vector graphics

Enter GL/2 emulation	ESC %0B	Use previous GL/2 pen position	027 037 048 066	1B 25 30 42
	ESC %1B	Use current PCL cursor position	027 037 049 066	1B 25 31 42
GL/2 emulation plot horizontal size	ESC *c#K	# = Horizontal size in inches	027 042 099 #...# 075	1B 2A 63 #...# 4B
GL/2 emulation plot vertical size	ESC *c#L	# = Vertical size in inches	027 042 099 #...# 076	1B 2A 63 #...# 4C
Set picture frame anchor point	ESC *c0T	Set anchor point to CAP	027 042 099 048 084	1B 2A 63 30 54

Function	*Command*	*Parameter*	*Decimal value*	*Hexadecimal value*
Picture frame horizontal size	ESC * c#x	# = Decipoints	027 042 099 #...# 088	1B 2A 63 #...# 58
Picture frame vertical size	ESC * c#Y	# = Decipoints	027 042 099 #...# 089	1B 2A 63 #...# 59

Control codes

Backspace	Es	
Line feed	LF	
Form feed	FF	
Carriage return	CR	
Shift in	SI	Select Primary font
Shift out	SO	Select secondary font
Horizontal tab	HT	
Escape	ESC	
space	SP	

GL/2 emulation context commands

Configuration and status group

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

Line and fill attributes group

Line attributes	LA
Line type	LT
User defined line type	UL
select pen	SP
Pen width	PW
Pen width unit selection	WU
Fill type	FT
Screened vectors	SV[1]
Raster fill definition	RF

Function	**Command**
Anchor corner	AC
Symbol mode	SM
Transparency mode	TR

vector group

Pm down	PD
Pen up	PU
Plot absolute	PA
Plot relative	PR
Arc absolute	AA
Arc relative	AR
Absolute arc three point	AT
Relative arc three point	RT
circle	CI[2]
Polyline encoded	PE
Bezier absolute	BZ
Bezier relative	BR

Polygon group

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

Character group

Standard font definition	SD
Alternate font definition	AD
Primary font (standard font)	FI[3]
secondary font (alternate font)	FN[3]
Select standard font	SS
select alternate font	SA
Scalable or bitmap font	SB[3]
Absolute direction	DI
Relative direction	DR
Absolute character size	SI

Function	Command
Relative character size	SR
Character slant	SL
Character fill mode	CF
Label	LB
Define label terminator	DT
Label Origin	LO
Define variable text path	DV
Extra space	ES
character plot	CP
Transparent data	TD

Dual context extension

Enter PCL mode	ESC %#A
Reset	ESC E

[1]Palette extension command

[2]Polygon group command

[3]Dual context extension command

PJL Mode

This section lists the available commands for the Printer Job Language (PJL).

Function	**Command**
COMMENT	**@ PJL COMMENT <words> [<CR>] <LF>**
DEFAULT	@ PJL DEFAULT [LPARM] [<CR>] <LF>
DINQUIRE	@ PJL DINQUIRE [LPARM] [<CR>] <LF>
ECHO	@ PJL ECHO [Words] [<CR>] <LF>
ENTER	@ PJL ENTER LANGUAGE = *** [<CR>] <LF>
INFO	@ PJL INFO read only variable [<CR>] <LF>
INITIALIZE	@ PJL INITIALIZE [<CR>] <LF>
INQUIRE	@ PJL INQUIRE [LPALM] variable [<CR>] <LF>
RESET	@ PJL RESET [<CR>] <LF>
SET	@ PJL SET [LPARM] [<CR>] <LF>
UEL/SPJL	<ESC>%-12345X
USTATUS	@ PJL USTATUS variable = value [<CR>] <LF>
USTATUSOFF	@ PJL USTATUSOFF [<CR>] <LF>
PJL	@ PJL [<CR>] <LF>

Appendix D

Installing Additional Memory

D

Memory *Module*

By installing a 1MB, 2MB, or 4MB Single In-Line Memory Module (SIMM), you can increase printer memory up to 5MB. You may want to add additional memory if you are having difficulty printing complex, graphics-intensive pages or if you regularly use many downloaded fonts.

You can purchase SIMMs from various vendors. Be sure the SIMMs you purchase meet the following requirements:

- ❑ 72-pin type
- ❑ Capacity of 1,2, or 4MB
- ❑ Access speed of 70ns or less

Installing the SIMM

Warning:
High voltages are present inside the printer when the power is on. Do not attempt to install a SIMM unless the printer is turned off.

1. Turn off the printer and unplug the power cable from the electrical outlet.
2. Turn the printer so the back of the printer is facing you.
3. Remove the metal access cover located above the parallel connector.

Warning:
Avoid touching the electrical components that are exposed after you remove the metal access cover. They may be very hot if the printer has been used recently.

4. Mount the SIMM in the slot provided for it.
5. Replace the metal access cover.
6. Reattach the power cord.
7. Switch on the printer's power.
8. Now you need to update the printer driver's Memory setting. Bring up a software program that you often use to print.

9. From the File menu, choose Print or Print Setup.
10. Choose the Setup button. (Depending on your software, you might need to choose Options or Printer.)
11. If prompted to select a printer, select Action Laser 1100.
12. Once the Setup dialog box is open, change the Memory setting for the amount of memory now installed in the printer. (Be sure to include the 1MB already installed.)
13. Choose OK to close dialog boxes. When you return to the Print dialog box, choose Cancel.

Checking the memory

To verify that memory is correctly installed, print a test sheet by pressing the reset button at the back of the printer.

If an incorrect amount of memory is shown on the test sheet, turn off the printer and remove the metal access cover. 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.

Glossary

auto line feed
A printer feature in which each carriage return code (CR) is automatically accompanied by a line feed (LF) code.

control **codes**
Special codes used to control printer functions such as performing a carriage return or line feed.

default
A value or setting that takes effect when the printer is turned on, reset, or initialized.

download
To transfer information from the computer to the printer. Fonts are downloaded to the printer when needed.

dpi
Dots per inch. The number of dots per inch is a measure of printer resolution. The higher the number of dots, the higher the resolution.

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.

edge smoothing
A feature that smooths the jagged edges of printed lines or shapes.

emulation
See *printer emulation.*

ESC (escape) code
A special control code used to begin most printer commands.

font
A set of characters and symbols that share a common typographic design and style.

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.

interface
The connection between the printer and the computer.

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 temporarily.

orientation
Refers to the direction in which characters are printed on a page. This direction is either portrait with the text printed across the width of the page, or landscape with the text printed across the length of the page.

PCL 5
The command **language** built into the Hewlett-Packard LaserJet III.

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 III.

reset
To refresh the printer's memory and erase the current print jobs, and reset printer settings to the factory defaults.

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.

symbol set
A collection of symbols and special characters. Symbols are assigned to specific codes in a character table.

test sheet
A report that lists the printer settings and other printer information.

toner cartridge
The consumable part of the printer that contains a photosensitive print drum and the toner supply.

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.

Index

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