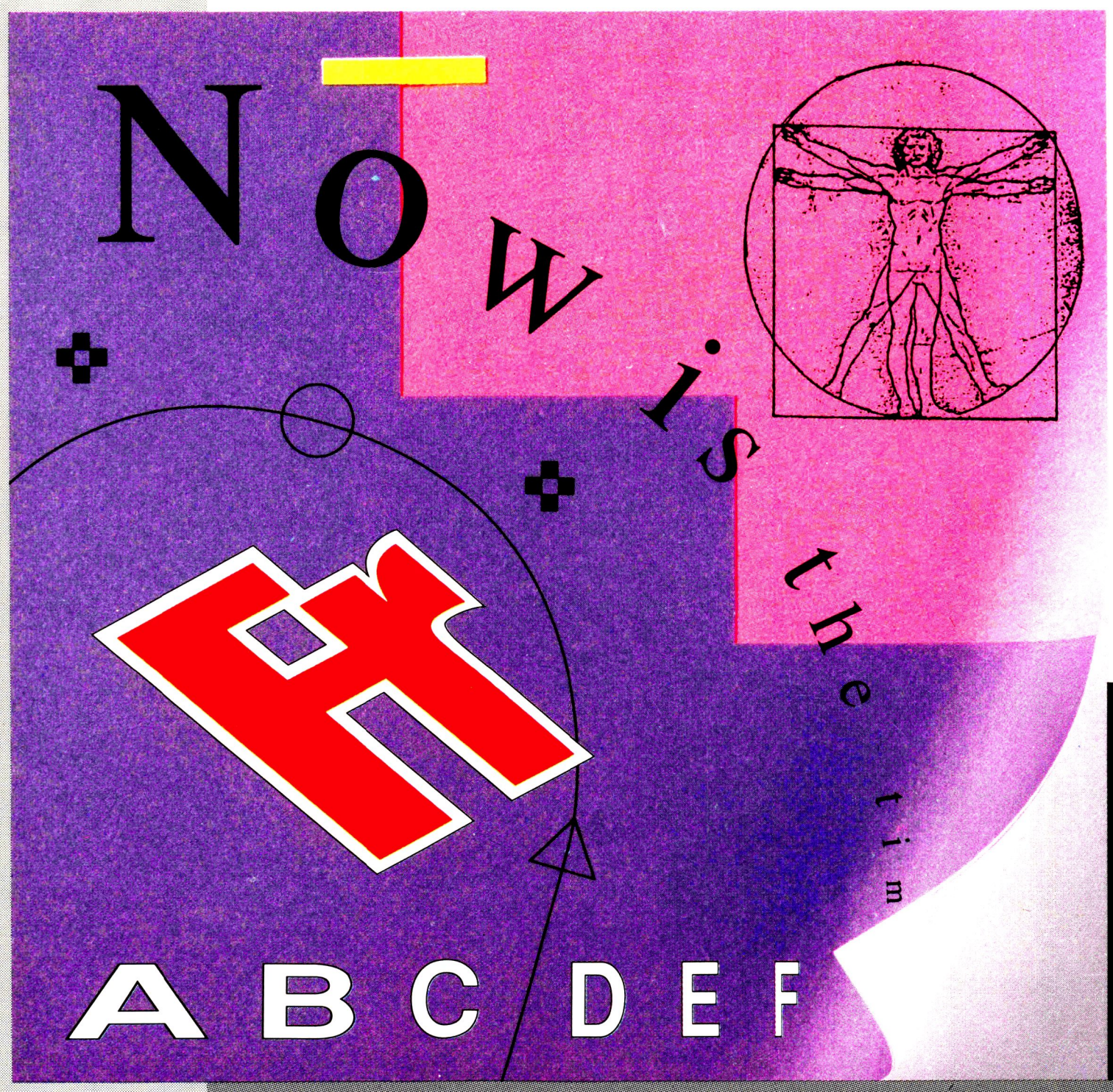
HEWLETT PACKARD

PostScript® Cartridge User's Guide



HEWLETT-PACKARD
WANTS TO KNOW WHAT YOU THINK!

HP PRINTER ADOBE POSTSCRIPT CARTRIDGE REGISTRATION

Please Print.

Date Purchased or Received _____
MONTH, YEAR

User's Name
Mr./Ms. _____
FIRST INITIAL LAST

Company Name _____

Street Address _____

City _____ **State** _____ **Zip** _____

Telephone Number (_____) _____ **Extension** _____

You are the key! The information you provide will help us understand your needs. Thank you for taking the time to respond.

To enter the Calculator drawing, simply fill out the questionnaire and return this postage paid reply card. We are giving away ten (10) HP Calculators each month. Each winner will be contacted by mail.

1. Would you like to receive information on new product updates?

☐ Yes ☐ No

2. What is your current position? (Check only one)

11. ☐ Administrative Asst./Clerical
12. ☐ Secretarial
13. ☐ Technical Staff
14. ☐ Professional Staff
15. ☐ Middle Manager
16. ☐ Top Manager
17. ☐ Owner or Principal
99. ☐ Other _____ (Please specify)

3. In what industry and department do you work? (Check only one from each column)

Industry	Department
21. ☐ Agriculture, Forestry, Fishing	51. ☐ Accounting, Auditing
22. ☐ Banking, Finance, Investment	52. ☐ Customer Service, Maintenance Support
23. ☐ Business & Consulting Service	53. ☐ Data Processing
24. ☐ Construction, Architecture	54. ☐ Education, Training
25. ☐ Communication, Transportation, Utilities	55. ☐ Engineering
26. ☐ Computer Service (Hardware & Software)	56. ☐ Finance/Investment Analysis
27. ☐ Education Services	57. ☐ General Admin./Mgmt.
28. ☐ Government	58. ☐ Legal
29. ☐ Health/Hospital/Medical Services	59. ☐ Marketing
30. ☐ Insurance	60. ☐ Personnel
31. ☐ Legal Services	61. ☐ Production/Procurement
32. ☐ Manufacturing Industrial Goods	62. ☐ Research & Development
33. ☐ Manufacturing Consumer Goods	63. ☐ Sales
34. ☐ Natural Resources/Energy	99. ☐ Other _____ (Please specify)
35. ☐ Research and Non-Profit Organizations	
36. ☐ Public Administration	
37. ☐ Publishing/Media/Advertising	
38. ☐ Real Estate	
39. ☐ Retail/Distribution Trade	
40. ☐ Technical Consulting	
41. ☐ Wholesale Trade	
99. ☐ Other _____ (Please specify)	

4. Approximately how many employees are there at your location and in the entire company (if applicable)?

At Your Location	Entire Company
71. ☐ 1	81. ☐ 1
72. ☐ 2-5	82. ☐ 2-5
73. ☐ 6-9	83. ☐ 6-9
74. ☐ 10-49	84. ☐ 10-49
75. ☐ 50-99	85. ☐ 50-99
76. ☐ 100-249	86. ☐ 100-249
77. ☐ 250-499	87. ☐ 250-499
78. ☐ 500-999	88. ☐ 500-999
79. ☐ Over 1,000	89. ☐ Over 1,000

5. What HP printers do you use?

91. ☐ LaserJet Series II Printer
92. ☐ LaserJet IID Printer
93. ☐ LaserJet IIP Printer
94. ☐ LaserJet III Printer
95. ☐ LaserJet IIID Printer
96. ☐ LaserJet IIIP Printer
97. ☐ LaserJet IIISi Printer

6. Which type of computer is your LaserJet printer, equipped with the PostScript cartridge, connected to?

11. ☐ Personal computer
12. ☐ Technical workstation
13. ☐ Mini computer
14. ☐ Mainframe computer

7. What brands of computer are connected to the LaserJet printer equipped with the PostScript cartridge?

21. ☐ Apple
22. ☐ Apollo
23. ☐ AST
24. ☐ Compaq
25. ☐ DEC
26. ☐ Epson
27. ☐ Hewlett-Packard
28. ☐ IBM
29. ☐ NEC
30. ☐ Sun
98. ☐ Don't know
99. ☐ Other _____ (Please specify)

8. What operating systems do you use with the LaserJet printer equipped with the PostScript cartridge?

31. ☐ DOS
32. ☐ OS/2
33. ☐ Mac OS
34. ☐ DOS with Microsoft Windows
35. ☐ UNIX/UNIX Clone
36. ☐ OS/VS/VSE/MVS/VM
37. ☐ HP NewWave
99. ☐ Other _____ (Please specify)

9. How many people will use this LaserJet printer, equipped with the PostScript cartridge, on a regular basis?

41. ☐ 1
42. ☐ 2-3
43. ☐ 4-6
44. ☐ 7-10
45. ☐ More than 10

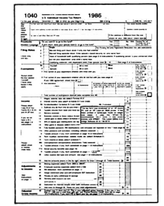
10. If more than 1 user will be sharing this LaserJet printer, how will it be done?

51. ☐ Manual switchbox
52. ☐ Smart automatic switchbox
53. ☐ Network
    01. ☐ Appletalk
    02. ☐ Ethernet
    03. ☐ Token Ring
    99. ☐ Other _____
54. ☐ One personal computer and one LaserJet shared by several people
98. ☐ Don't know

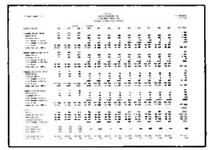
11. With this printer what languages/emulations will be used? (Check all that apply)

61. ☐ Adobe PostScript
62. ☐ Epson
63. ☐ IBM
64. ☐ HP LaserJet (PCL)
99. ☐ Other _____ (Please specify)

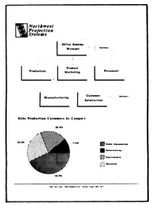
12. Which of the following applications will you use with your Adobe PostScript Cartridge and what is the primary software package you will use for each of these applications?



10. ☐ Electronic Forms Creation
    11. ☐ Form Maker Horizon
    12. ☐ Indigo JetForm
    13. ☐ Delrina Perform
    14. ☐ Bloc Form Filler
    15. ☐ Other _____

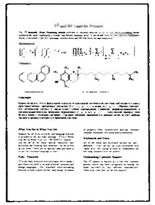


20. ☐ Spread Sheet/Financial
    21. ☐ Lotus 1-2-3
    22. ☐ Microsoft Excel
    23. ☐ Borland Quattro
    24. ☐ Lotus Symphony
    25. ☐ Other _____

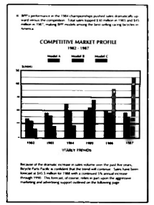


30. ☐ Graphics
    31. ☐ Lotus 1-2-3
    32. ☐ Harvard Graphics
    33. ☐ Freelance Plus
    34. ☐ Graphics Gallery
    35. ☐ Other _____

40. ☐ General Word Processing
    41. ☐ WordPerfect
    42. ☐ WordStar
    43. ☐ Microsoft Word
    44. ☐ DisplayWrite
    45. ☐ Other _____



50. ☐ Technical Word Processing
    51. ☐ WordPerfect
    52. ☐ Lotus Manuscript
    53. ☐ WordStar
    54. ☐ Microsoft Word
    55. ☐ Other _____



60. ☐ Merged Text and Graphics
    61. ☐ Ventura Publisher
    62. ☐ WordPerfect
    63. ☐ Lotus Symphony
    64. ☐ Microsoft Word
    65. ☐ Other _____

70. ☐ Desktop Publishing
    71. ☐ Ventura Publisher
    72. ☐ Aldus PageMaker
    73. ☐ WordPerfect
    74. ☐ PFS: First Publisher
    75. ☐ Other _____

13. Who purchases LaserJet accessories and for whom in your company?

81. ☐ By the user, for the user
82. ☐ By department head for their department
83. ☐ By a manager for their secretary
84. ☐ By the corporate buyer for any and all users or departments
99. ☐ Other _____

14. When did you purchase your Adobe PostScript cartridge?

91. ☐ With a software package which specifically makes use of PostScript features
92. ☐ With the printer
93. ☐ After printer purchased (please specify amount of time after printer purchase)
    94. ☐ 0-3 months
    95. ☐ 4-6 months
    96. ☐ 7-12 months
    97. ☐ more than 12 months

15. Where did you first learn about the HP Adobe PostScript cartridge?

11. ☐ Hewlett-Packard Sales Rep
12 ☐ Dealer
13. ☐ Magazine
14. ☐ Friend/co-worker
15. ☐ Hewlett-Packard's personal peripherals assist line
99. ☐ Other _____

16. What other accessories have you purchased to use with your LaserJet printer?

21. ☐ Lower paper cassettes
22. ☐ Hewlett-Packard 1 MByte memory board
23. ☐ Hewlett-Packard 2 MByte memory board
24. ☐ Hewlett-Packard 4 MByte memory board
25. ☐ Non-Hewlett-Packard memory board
26. ☐ Fonts
27. ☐ No accessories purchased
99. ☐ Other _____

17. What influenced your decision to buy the Adobe PostScript cartridge? (Check all that apply)

31. ☐ Generate "professional looking" output
32. ☐ Run a specific application well
33. ☐ Flexibility to access additional and more advanced software programs
34. ☐ Produce complex documents, such as desktop publishing and custom graphics
35. ☐ Produce a wide range of documents from simple word processing, and spreadsheets, to desktop publishing
36. ☐ Access a larger number and variety of fonts
37. ☐ Use both the HP LaserJet (PCL) and Adobe PostScript languages on the same printer
38. ☐ Other _____

18. Is there any specific information you were unable to find in the manual?

_____

_____

_____

_____

19. Please rate this manual from 1 to 5 in the following areas:

1 = Poor 5 = Excellent

	1	2	3	4	5
Ease of locating information	☐	☐	☐	☐	☐
Quantity of examples	☐	☐	☐	☐	☐
Usefulness of examples	☐	☐	☐	☐	☐
Usefulness of illustrations	☐	☐	☐	☐	☐
Clarity of printer message information	☐	☐	☐	☐	☐
Overall manual ease of use	☐	☐	☐	☐	☐

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Entries must be received by the last date of the month to be eligible for the month's drawing. Drawing will be held on the 10th day of the following month, or the next business day if the 10th falls on a weekend or holiday.

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HEWLETT PACKARD

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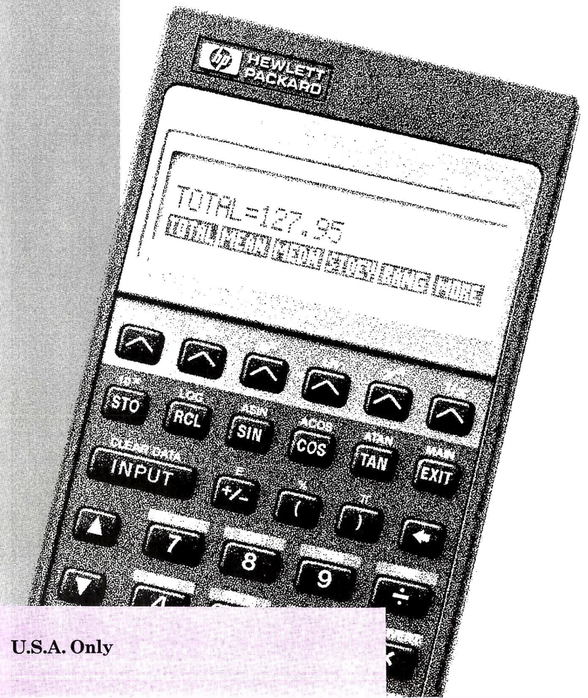

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PostScript® Cartridge
User's Guide

HP Part No. 33439-90920
Printed in U.S.A.

HEWLETT PACKARD

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Edition 1 May 1991

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Contents

1. Introduction

How To Use This Guide 1-1
Items Needed 1-3
IBM-Compatible: 1-3
Macintosh: 1-3
About Your PostScript Cartridge 1-4
About the Cartridge Label 1-4
Built-In Typeface Offering 1-5

2. Getting Started

System Requirements 2-1
Computers 2-1
Printers 2-1
Printer Memory 2-2
Printer Drivers for IBM-compatible PCs 2-4
Interfaces 2-5
Serial Interface 2-5
Parallel Interface 2-5
AppleTalk Interface 2-6
Paper and Envelope Sizes 2-7
Verifying Amount of Printer Memory 2-8
Installing the PostScript Cartridge 2-10
LaserJet IID, III or IIID: 2-10
LaserJet IIP or IIIP: 2-11
Setting the Printer Control Panel 2-13
LaserJet IID, III or IIID: 2-13
LaserJet IIP or IIIP: 2-16
Verifying Printer Configuration 2-20
Verifying Computer Configuration 2-21
IBM-Compatible Computers 2-21
Macintosh Computers 2-21
Removing the Cartridge 2-22

3. Using the Control Panel

Introduction 3-1
Using the Menus 3-2
Printing Menu Settings 3-5
Activating Printing Menu Settings 3-7
Activating Default Printing Menu Settings . . . 3-7
Configuration Menu Settings 3-8
Printing a PostScript Fonts Page 3-10
Printing a PostScript Test Page 3-12
Resolution Enhancement 3-14
LaserJet III or IIID Printers 3-14
LaserJet IIIP 3-15

4. Understanding the Printer Messages

Introduction 4-1
Printer Status Messages 4-2
Printer Attendance Messages 4-5
Printer System Error Messages 4-11
Printer PostScript Error Messages 4-13
Printer Service Error Messages 4-16

5. Common Problems

Symptom Checklist 5-1
Calling for Help 5-9
Use the Guide 5-9
Ask Your Organization 5-9
Call Your Dealer 5-9
Call Worldwide Sales and Service Offices 5-11
Call the U.S. Personal Peripheral Assist Line . . 5-11
Limited Warranty 5-12
Exclusions 5-12
Warranty Limitations 5-12
Cartridge Replacement 5-12

A. Typeface Families

Introduction A-1
ITC Avant Garde Gothic A-1
ITC Bookman A-2
Courier A-2
Helvetica A-3
Helvetica Narrow A-3

New Century Schoolbook A-4
Palatino A-4
Symbol A-5
Times A-5
ITC Zapf Chancery A-6
ITC Zapf Dingbats A-6

B. Character Sets
Character Set Tables B-1

C. PostScript Technical Notes
Introduction C-1
Changing System Parameters C-2
Entering the Statusdict C-2
Statusdict Operators C-3
System Setup Operators C-3
Timeout Operators C-9
Duplex Operators C-10
Page Type Operators C-11
Tray Selection Operators C-12
Related Documentation C-15
Translated Documentation C-16

D. Printer Default Settings
LaserJet IIID D-1
Printing Menu D-2
Configuration Menu D-3
LaserJet III D-4
Printing Menu D-4
Configuration Menu D-5
LaserJet IID D-6
Printing Menu D-6
Configuration Menu D-7
LaserJet IIP or IIIP D-8
Printing Menu D-8
Configuration Menu D-9

Glossary

Index

Figures

1-1. Samples of PostScript Text 1-6
2-1. LaserJet IID, III or IIID Cartridge Installation . . 2-10
2-2. LaserJet IIP/IIIP Cartridge Installation 2-11
2-3. Example of a Start-up Page 2-19
3-1. Example of a PostScript Fonts Page 3-11
3-2. Example of a PostScript Test Page 3-13

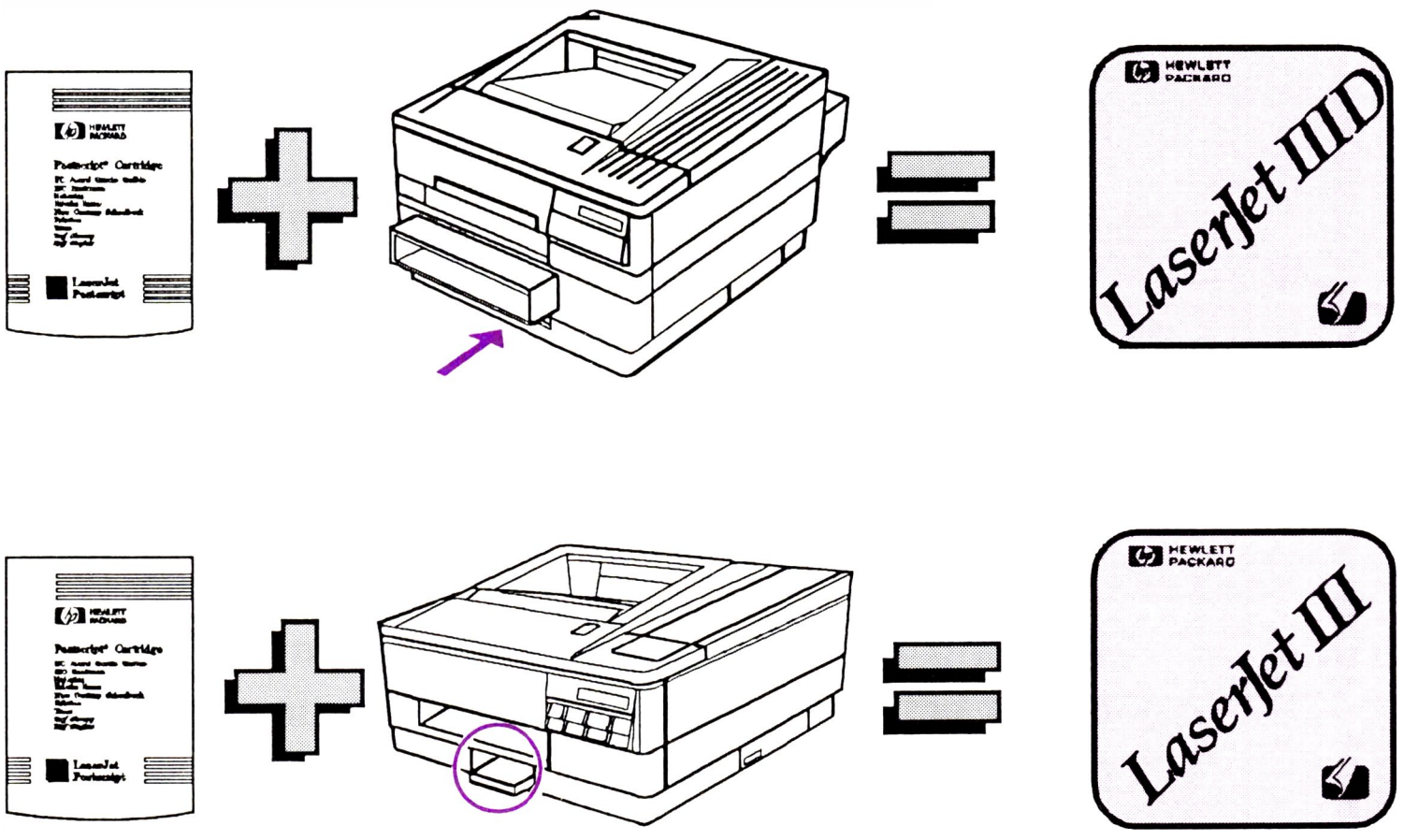
1

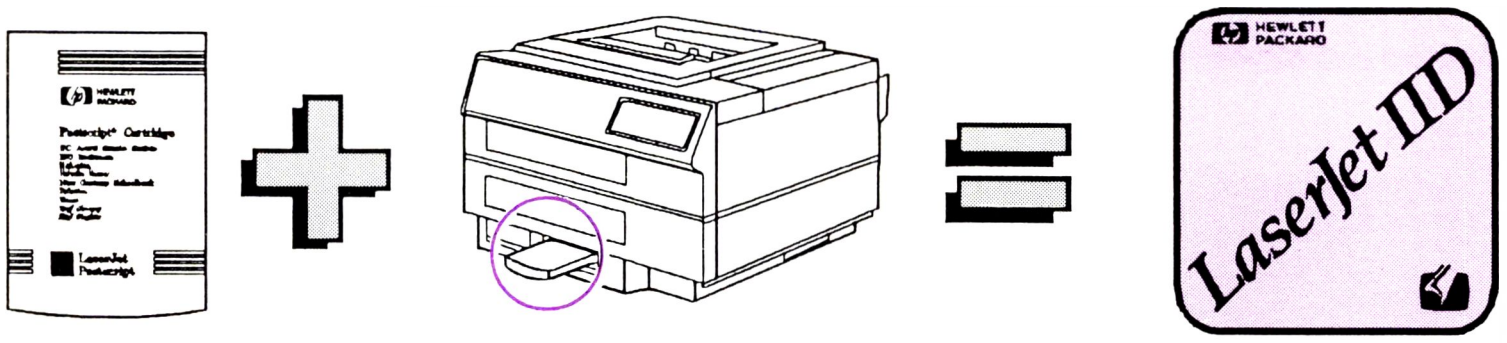
Introduction

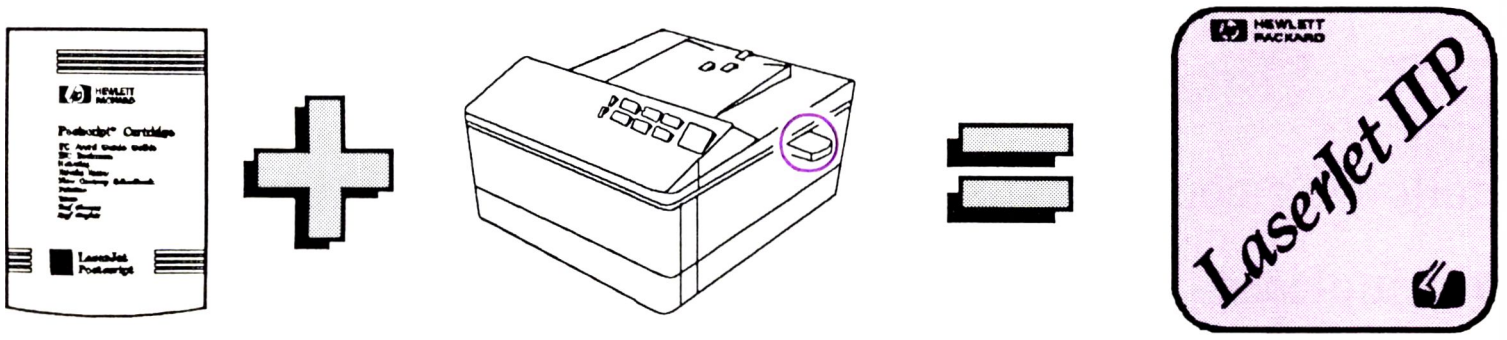
How To Use This Guide

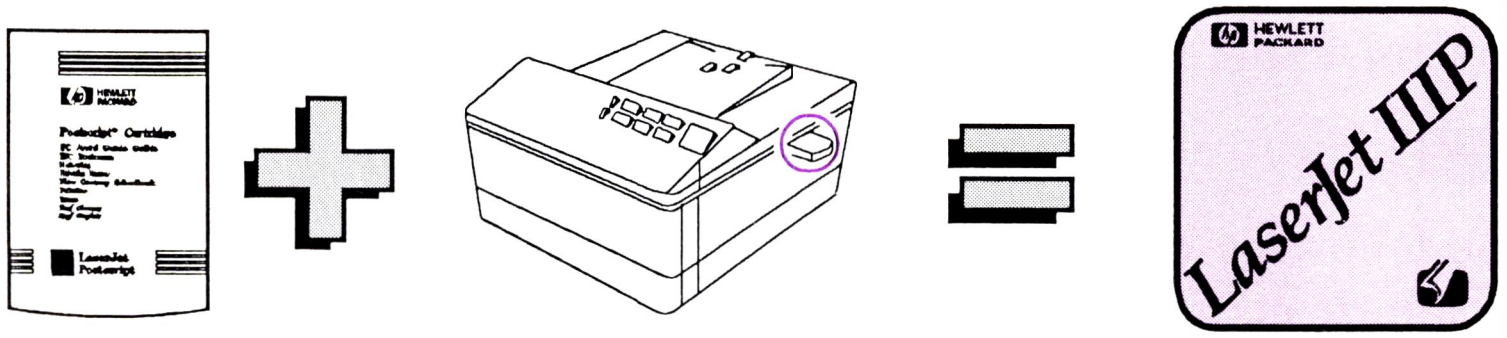
The following conventions are used throughout this guide:

- **Bold** indicates a term defined in the Glossary.
- *Italic* refers to a related document, or is used for emphasis.
- COMPUTER type indicates text that appears on the printer's Control Panel display.
- KEY indicates a key on the *printer* Control Panel.
- The following equations (PostScript cartridge plus your printer) explain icons used to identify types of HP LaserJet printers:









Note

Notes contain important information that is set off from the text.

Caution

Caution messages appear before procedures which, if not observed, could result in damage to equipment.

Warning

Warning messages indicate personal injury could occur when a specific procedure or practice is not followed correctly.

This guide uses the term *printer* to refer generically to the HP LaserJet IIID, LaserJet III, LaserJet IID, LaserJet IIP or LaserJet IIIP printer. Because each printer offers different features, this guide will occasionally give instructions for a specific printer model. When this occurs, use the instructions given for the printer you have purchased.

Items Needed

The following items are needed to turn your printer into PostScript for an IBM-compatible, or a Macintosh computer:

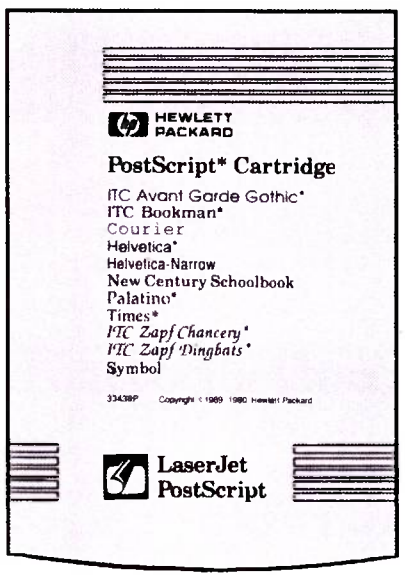
IBM-Compatible:

- HP LaserJet printer
- HP PostScript cartridge
- One Megabyte of additional printer memory

Macintosh:

- HP LaserJet printer
- HP PostScript cartridge
- One Megabyte of additional printer memory
- AppleTalk Interface Kit

About Your PostScript Cartridge



Your PostScript cartridge from Hewlett-Packard Company brings Adobe PostScript to your HP LaserJet IID, IIP, III, IIID and IIIP printers. By simply inserting your cartridge into a standard cartridge slot, your printer becomes a PostScript printer. Now you can use your printer with complex desktop publishing and illustration applications which support PostScript.

Note

You must purchase additional memory to print to an HP LaserJet PostScript printer from an IBM-compatible computer. You must purchase an AppleTalk Interface Kit, and additional memory to print to an HP LaserJet PostScript printer from a Macintosh computer.

About the Cartridge Label

Typefaces of similar design, but different stroke weights, styles, or widths are grouped into families. Your PostScript cartridge contains members of 11 *typeface families*. These typeface families are listed on your cartridge. For more information about these typeface families, see Appendix A. Below are some members of the ITC Avant Garde Gothic* family:

ITC Avant Garde Gothic Book
ITC Avant Garde Gothic Book Oblique
ITC Avant Garde Gothic Demi
ITC Avant Garde Gothic Demi Oblique

*Refer to the Trademark Credits on page iii.

Built-In Typeface Offering

Your PostScript cartridge contains the following 35 typefaces, all licensed from Adobe Systems, Inc.

ITC Avant Garde Gothic Book
ITC Avant Garde Gothic Book Oblique
ITC Avant Garde Gothic Demi
ITC Avant Garde Gothic Demi Oblique

ITC Bookman* Demi
ITC Bookman Demi Italic
ITC Bookman Light
ITC Bookman Light Italic

Courier
Courier Bold
Courier Bold Oblique
Courier Oblique

Helvetica*
Helvetica Bold
Helvetica Bold Oblique
Helvetica Oblique

Helvetica Narrow
Helvetica Narrow Bold
Helvetica Narrow Bold Oblique
Helvetica Narrow Oblique

New Century Schoolbook Bold
New Century Schoolbook Bold Italic
New Century Schoolbook Italic
New Century Schoolbook Roman

Palatino*
Palatino Bold
Palatino Bold Italic
Palatino Italic

Symbol Σψμβολ

Times Bold
Times Bold Italic
Times Italic
Times Roman*

ITC Zapf Chancery Medium Italic*

*ITC Zapf Dingbats** ✤✻■✳✪✿▼▲

*Refer to the Trademark Credits on page iii.

The PostScript language lets you *bend*, *clip*, *rotate*, *scale*, *shape*, and *stretch* typefaces as shown in Figure 1-1. Check your *Software Application Notes** for information on how your software supports these PostScript features.

Several vendors offer additional typefaces which can be used in combination with your cartridge's typefaces. If you wish to purchase these additional typefaces, contact your dealer for more information.

Note

You cannot use your cartridge's typefaces in combination with fonts resident in the printer or with other fonts supported by the PCL printer language.

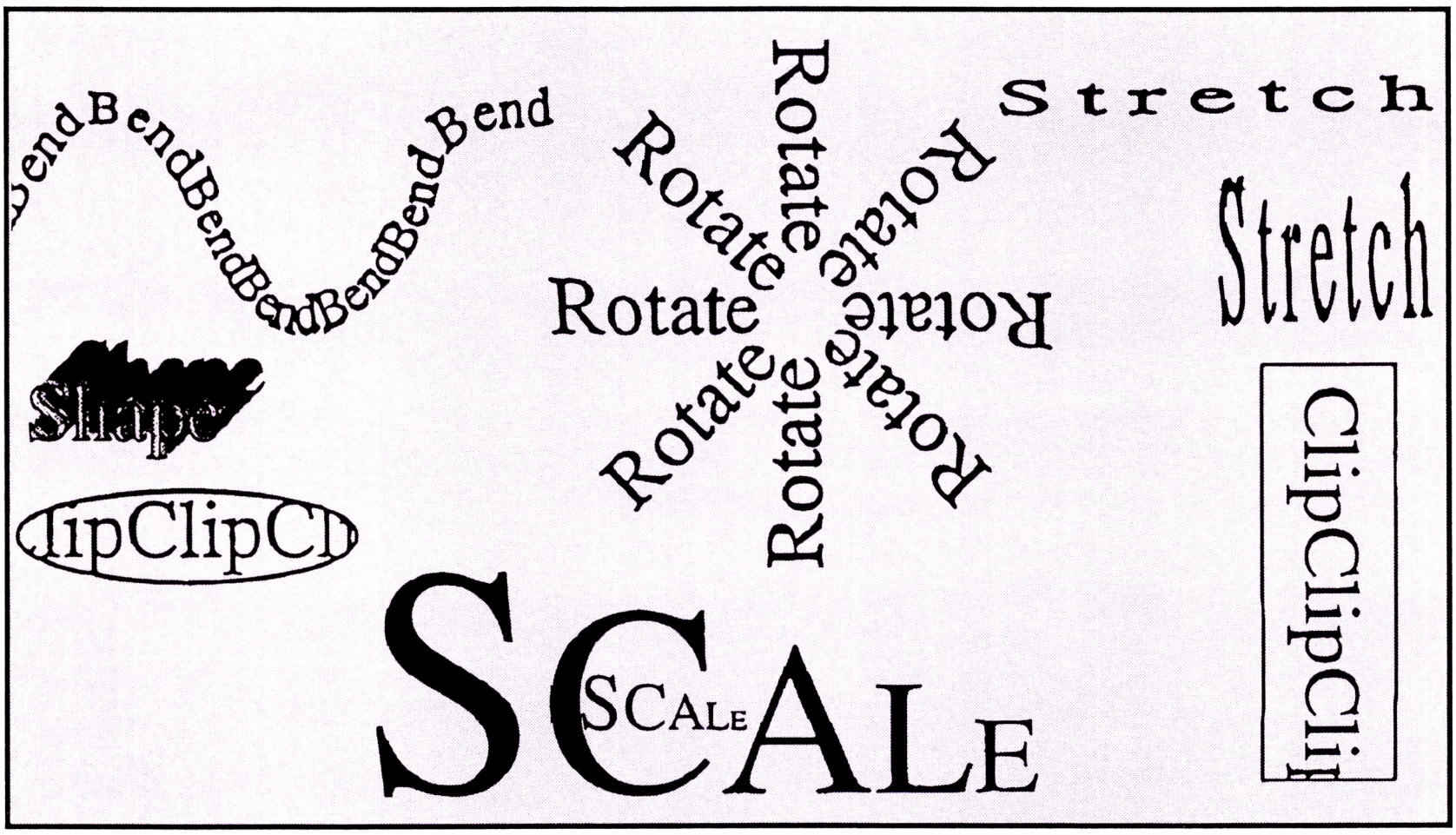


Figure 1-1. Samples of PostScript Text

* Available in the U.S.A. only.

2

Getting Started

System Requirements

The following sections show what is required for your PostScript cartridge to work with your computer and your printer.

Computers

Your PostScript printer cartridge may be used with IBM–compatible and Macintosh computers.

Note

You must purchase additional memory to print to an HP LaserJet PostScript printer from an IBM–compatible computer. You must purchase an AppleTalk Interface Kit, and additional memory to print to an HP LaserJet PostScript printer from a Macintosh computer.

Printers

Your PostScript cartridge is designed for use with the HP LaserJet IID, IIP, III, IIID and IIIP printers.

Printer Memory

The amount of printer memory must be known before installation of this PostScript cartridge takes place. The following shows the amount of memory required for various printing needs.

Printing Need	Total Memory Required	Additional Memory Required
• Printing on Legal Paper	2 Mbyte	1 Mbyte
• Simplex (single-sided) Printing	2 Mbyte	1 Mbyte
• Duplex (double-sided) Printing	4 Mbyte	3 Mbyte[1]
• PostScript Printing	2 Mbyte	1 Mbyte
• Optimum PostScript Performance	4 Mbyte	3 Mbyte[1]

1 The HP LaserJet IID and IIP printers require an additional 4 Mbytes.

Optional memory boards may be purchased from an HP Authorized Dealer. *Only use HP memory boards designed for your printer.* Use the table on the following page to find the product number(s) of the memory board(s) you need.

Note

For the HP LaserJet IID printer, you can add only one optional memory board. It is important to decide to expand your HP LaserJet IID printer's memory by 2 or 4 Megabytes before purchasing additional printer memory.

Table 2-1. LaserJet Printer Memory Boards

Printer	Size	Product Number
LaserJet IID	4 Megabyte	HP33445B
	2 Megabyte	HP33444B
LaserJet IIP	2 Megabyte	HP33475A/B
	1 Megabyte	HP33474A/B
LaserJet III	2 Megabyte	HP33475A/B
	1 Megabyte	HP33474A/B
LaserJet IIID	2 Megabyte	HP33475A/B
	1 Megabyte	HP33474A/B
LaserJet IIIP	2 Megabyte	HP33475A/B
	1 Megabyte	HP33474A/B

Note

For the HP LaserJet IID, IIP, and IIIP printers, refer to the installation instructions packaged with the memory boards. For the HP LaserJet III and IIID printers, refer to the memory board installation instructions in the *LaserJet III* and *IIID Printer User's Manual*.

Printer Drivers for IBM-compatible PCs

In order to use **software applications** which support PostScript, you must select a PostScript **printer driver** from within your application. The printer driver translates your print files into the PostScript language.

Using your software application, select the available PostScript printer driver. Refer to the *Software Application Notes** that come with your cartridge for a printer driver recommendation, and instructions on driver installation and selection.

Note

See your software application manual for instructions on printer driver installation and selection.

Software applications which support PostScript may not support all your printer's features. For example, your software may not support dual paper trays or *duplex* (double-sided) printing. To access features not supported by your software printer driver, use the printer's Control Panel as shown in Chapter 3 of this guide, or your *LaserJet Printer User's Manual*.

* Available in the U.S.A. only.

Interfaces

The four types of **interfaces** your PostScript cartridge supports are:

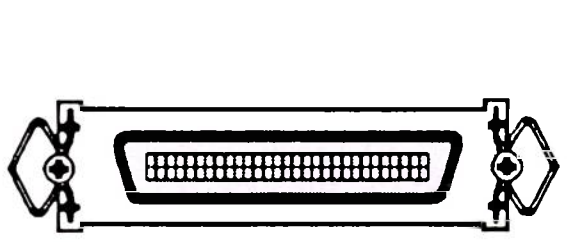
- **RS-232-C/RS-422-A serial**
- **Centronics parallel**
- **AppleTalk**
- **Optional** (applies only to the HP LaserJet IID, III and IIID printers)

Serial Interface

Serial interfaces allow two-way communication between your printer and your computer.

You must use a serial interface when your printer is located more than 10 feet from your computer. Serial interfaces operate at **baud rates** ranging from 300 to 19,200 baud. RS-232-C is used when you need to locate your printer more than 10 feet (and up to 50 feet) from your computer. RS-422-A is designed for long distance communications (up to 4000 feet).

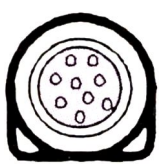
Parallel Interface



In PostScript mode, a parallel interface is an input-only channel. For example data can only be sent *from* your computer *to* your printer.

A parallel interface is faster than a serial interface. It is preferred when you are sending primarily graphic data to the printer. When using a parallel interface, your printer must be located less than 10 feet from your computer due to cable length limitations.

AppleTalk Interface



AppleTalk interfaces allow two way communication between your printer and your Macintosh computer.

Note

AppleTalk and Optional interfaces do not come with your printer but may be purchased separately. Optional interfaces are available from other vendors for hardware devices such as print spoolers. HP offers an AppleTalk Interface which allows you to use your PostScript printer cartridge with a Macintosh computer. For more information about these interfaces, see your local authorized HP Dealer.

Paper and Envelope Sizes

You can use your PostScript cartridge with the following paper and envelope sizes:

Table 2-2. Paper Sizes

Paper	Size
Letter	8.5 x 11.0 inches (215.9 by 279.4 mm)
Legal	8.5 x 14.0 inches (215.9 by 355.6 mm)
A4	8.3 x 11.7 inches (210 by 297 mm)
Executive	7.25 x 10.5 inches (184 by 267 mm)

Table 2-3. Envelope Sizes

Envelope	Size
COM-10	4.125 x 9.5 inches (104.8 by 241.3 mm)
Monarch	3.875 x 7.5 inches (98.4 by 190.5 mm)
C5	6.4 x 9 inches (162 by 229 mm)
DL	4.3 x 8.7 inches (110 by 220 mm)

Verifying Amount of Printer Memory

If you know you have at least the minimum required amount of optional memory installed, go to the next section. If you need to check the amount of memory in your printer, do the following:

1. Press the (ON LINE) key to take the printer offline. This will turn the On Line indicator light off.
2. If you are using the HP LaserJet IID, III or IIID printer, hold the (TEST) key down until `05 SELF TEST` appears in the display. If you are using a LaserJet IIP or IIIP printer, hold down the (ALT) key and press the (TEST) key. A Self Test Page will print. The Test Page will take about 1 minute to print. This page will take longer to print if additional memory has been added.
3. Check the *RAM size* listed on the Self Test Page. Use Table 2-4 on the following page to verify that you have at least the minimum required amount of optional memory installed.

Note

After your PostScript cartridge is installed and working, the "Optional Memory Installed" appears on the PostScript Test Page (see the "Printing a PostScript Test Page" section at the end of Chapter 3).

Table 2-4. Optional Memory Installed

Printer	Optional Memory	RAM Size
LaserJet IID [1]	4 Megabytes [2]	4736K bytes
	2 Megabytes [3]	2688K bytes
	None [4]	640K bytes
LaserJet IIP	4 Megabytes	4608K bytes
	2 Megabytes [2]	2560K bytes
	1 Megabyte [3]	1536K bytes
	None [4]	512K bytes
LaserJet III	4 Megabytes	5120K bytes
	2 Megabytes [2]	3072K bytes
	1 Megabyte [3]	2048K bytes
	None [4]	1024K bytes
LaserJet IIID [1]	4 Megabytes [2]	5120K bytes
	2 Megabytes [3]	3072K bytes
	None [4]	1024K bytes
LaserJet IIIP	4 Megabytes	5120K bytes
	2 Megabytes [2]	3072K bytes
	1 Megabyte [3]	2048K bytes
	None [4]	1024K bytes

1 For duplex printing, 4 Megabytes of optional printer memory is required.

2 For optimum printer performance, HP recommends this amount of optional printer memory.

3 Your PostScript cartridge requires at least this amount of optional printer memory. The LaserJet IIP, III, and IIIP printers require at least 1 Megabyte of memory for letter size printing. The LaserJet IIP, III, and IIIP printers require at least 2 Megabyte of memory for legal size printing.

4 Your PostScript cartridge requires more memory. See the "Printer Memory" section in this chapter.

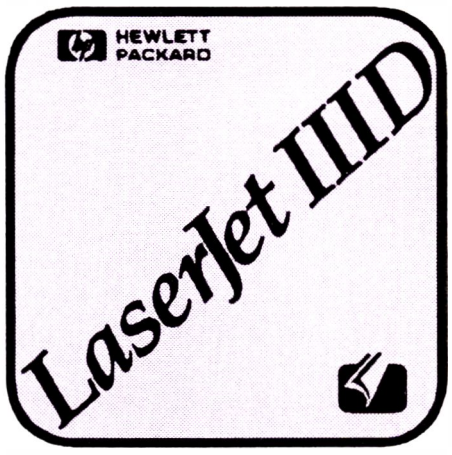
Installing the PostScript Cartridge

Do the following to locate the cartridge slot on your printer:

Caution

Do not insert or remove the PostScript cartridge while the printer is turned on.

LaserJet IID, III or IIID:



Use either of the cartridge slots on the lower front of the printer. Go to page 2-12 to install the PostScript cartridge.

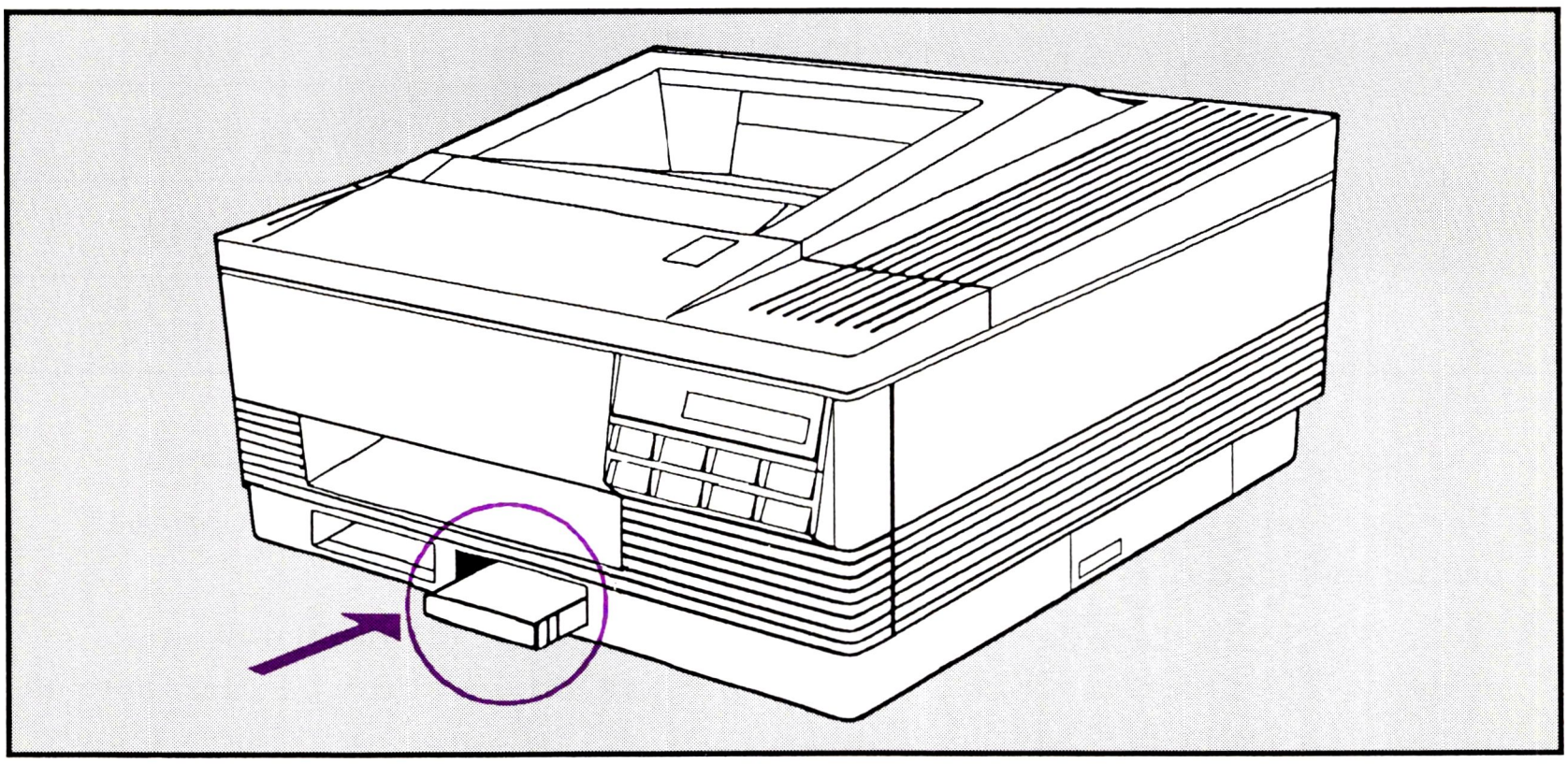
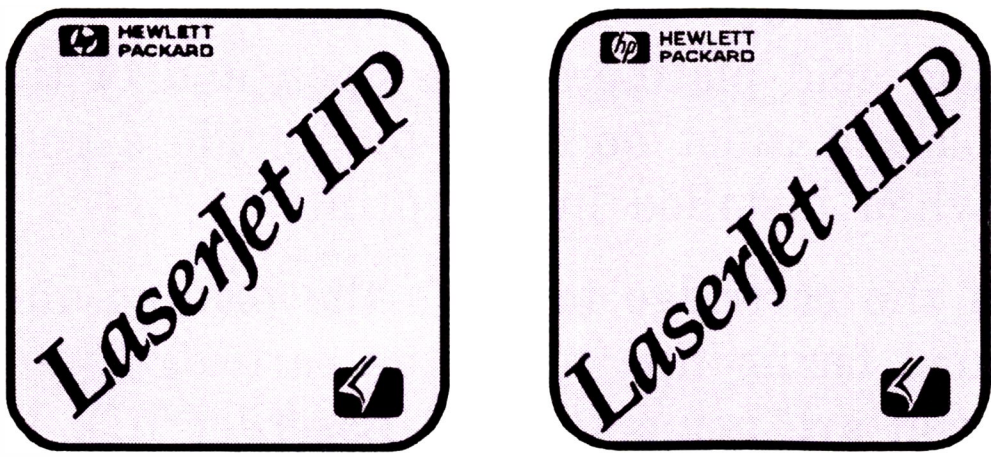


Figure 2-1. LaserJet IID, III or IIID Cartridge Installation

LaserJet IIP or IIIP:



The cartridge slot is located on the *right* side of the printer, and is covered by a spring loaded door such as those used on cassette tape players.

Do the following to install the PostScript cartridge:

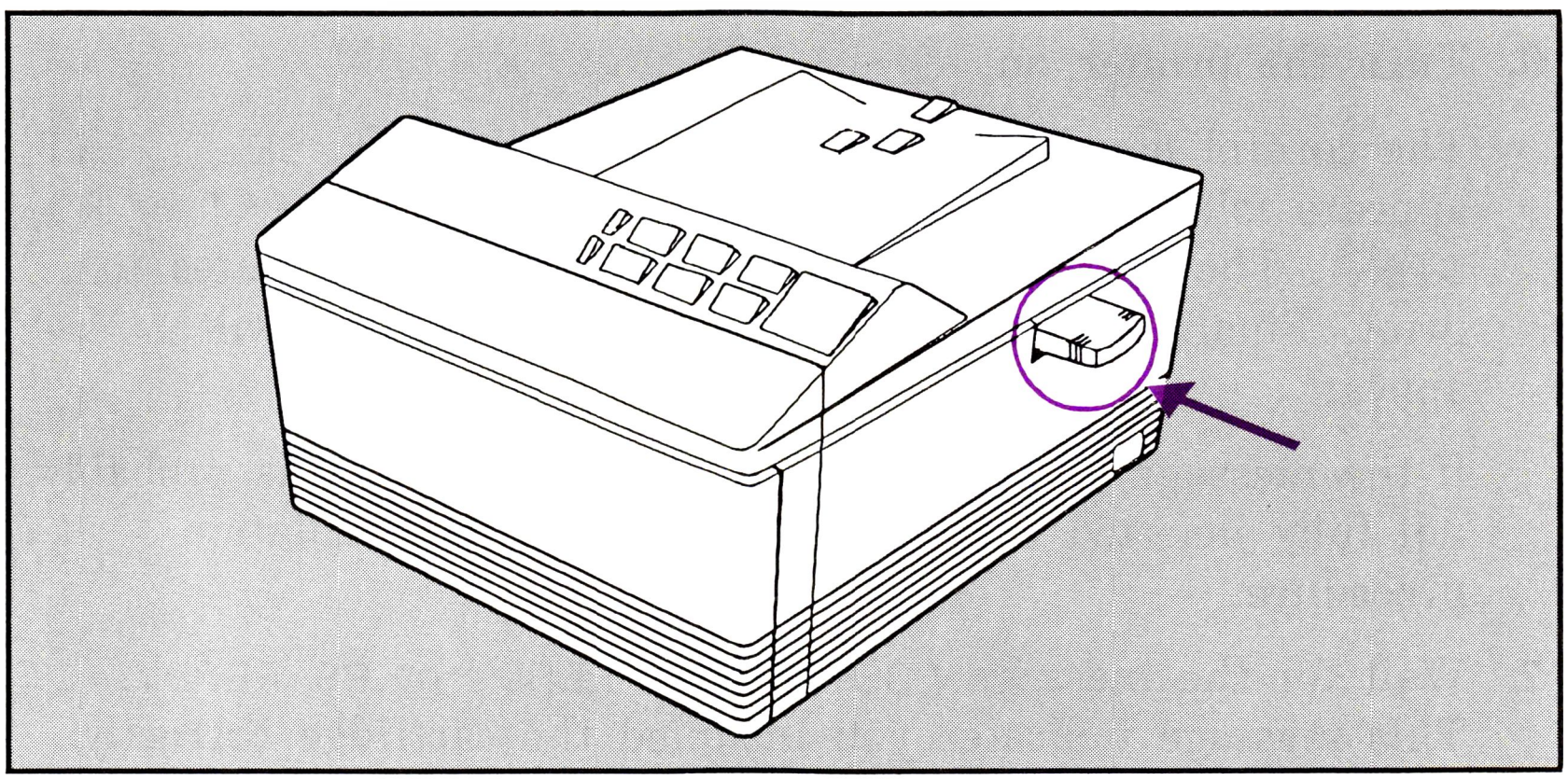


Figure 2-2. LaserJet IIP or IIIP Cartridge Installation

1. Turn the printer off to avoid damage to the cartridge.
2. Remove any cartridges installed in the printer.
3. Remove the PostScript cartridge from its package. Be careful not to touch the gold plating in the open end of the cartridge. This gold plating must be clean to provide a good electrical connection when installed in the printer.
4. With the open end of the cartridge towards the printer and the typeface family label facing up, insert the cartridge into the cartridge slot. If you are using the HP LaserJet IID, III or IIID printer, you may use either of the cartridge slots on the lower front of the printer. For the HP LaserJet IIP or IIIP printer, the cartridge slot is on the right side of the printer and is covered by a spring loaded door such as those used on cassette tape players.
5. Press the cartridge in *firmly* to make sure it is completely installed in the slot. When the cartridge installs, *you should feel the cartridge snap into place.* If you do not feel the cartridge snap into place, try pushing the cartridge using a little more force.
6. Turn the printer on.

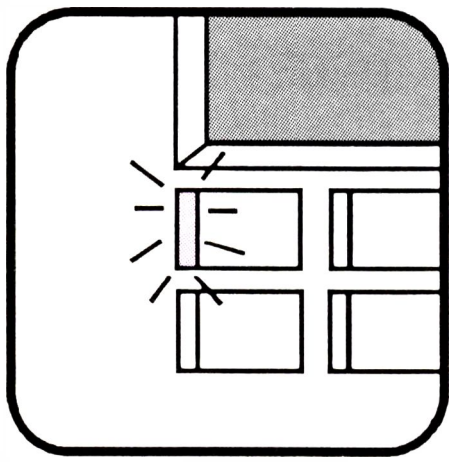
   The control panel lights up and the message `05 SELF TEST` appears followed by the message `POSTSCRIPT START` or `PS START`. The Startup Page should take about 3 minutes to print. Finally, `POSTSCRIPT READY` or `PS READY` will appear.

   If the message `00 READY` appears, your cartridge is probably not fully inserted and you must repeat the installation procedure.
7. Wait for the message `POSTSCRIPT READY` or `PS READY`. This message indicates you installed the cartridge correctly. If this message does not appear, refer to page 5-1, Chapter 5, "Common Problems."
8. Your printer Control Panel displays its messages in English by default. Change your printer Control Panel language by doing the following on each type of printer listed:

Setting the Printer Control Panel

The following shows how to set the language displayed on your printer control panel.

LaserJet IID, III or IIID:



Do the following to change your displayed Control Panel language:

a. Turn your printer on. The Control Panel indicators light and the message `05 SELF TEST` appears followed by `POSTSCRIPT START`.

Note

If this is the first time your cartridge has been used or if you have not turned the Start-up Page feature off, the message `STARTUP PAGE` appears and the printer automatically prints a Start-up page after approximately three minutes (see Figure 2-3). After the Start-up page prints, the printer displays `POSTSCRIPT READY`.

To turn Start-up Page off:

1. Press the (ON LINE) key to take the printer offline. `OFFLINE` should be displayed.
2. Hold the (MENU) key down for up to 5 seconds. `AUTOCONT = ON *` or `AUTOCONT = OFF *` should be displayed.
3. Press the (MENU) key two times. `STARTPAGE = ON *` should be displayed.
4. Press the (+) key. `STARTPAGE = OFF` should appear.

5. Press the (ENTER) key. STARTPAGE = OFF * should appear.
6. Press the (ON LINE) key. **Your start-up page is now turned off.**

---

b. Press the (ON LINE) key to take the printer offline. OFFLINE should appear in the Control Panel display.

c. Hold down the (MENU) key for 3 to 5 seconds until AUTO CONT=ON * or AUTO CONT=OFF * appears.

d. Press the (MENU) key three times. LANGUAGE=ENG * should appear. Change your displayed language by doing the following:

English: When LANGUAGE=ENG * appears, press the (ON LINE) key. Your Control Panel messages are now displayed in English.

French: When LANGUAGE=ENG * appears, press the (+) key once. LANGUE=FRANCAIS should appear. Then press the (ENTER) key. LANGUE=FRANCAIS * should appear. Finally, press the (ON LINE) key. Your Control Panel messages are now displayed in French.

German: When LANGUAGE=ENG * appears, press the (+) key twice. SPRACHE=DEUTSCH should appear. Then press the (ENTER) key. SPRACHE=DEUTSCH * should appear. Finally, press the (ON LINE) key. Your Control Panel messages are now displayed in German.

Italian: When LANGUAGE=ENG * appears, press the (+) key three times. LINGUA=ITALIANO should appear. Then press the (ENTER) key. LINGUA=ITALIANO * should appear. Finally, press the (ON LINE) key. Your Control Panel messages are now displayed in Italian.

Spanish: When LANGUAGE=ENG * appears, press the (+) key four times. LENGUAJE=ESP should appear. Then press the (ENTER) key. LENGUAJE=ESP * should appear. Finally, press the (ON LINE) key. Your Control Panel messages are now displayed in Spanish.

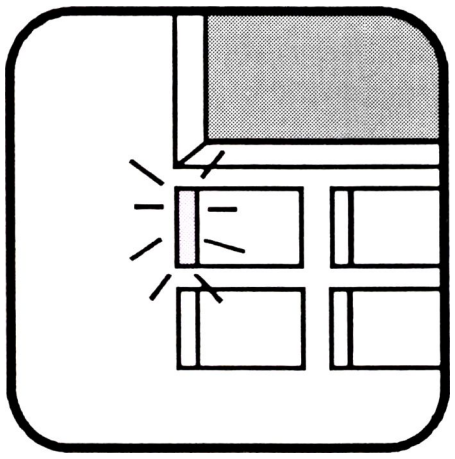
e. You have now changed your displayed Control Panel language.

Turning the printer off or a printer reset will not affect language selection. To change languages, follow the steps given above. For more information on how to use your printer's Configuration Menu, see Table 3-1 or 3-3 in Chapter 3.

Note

If you start the language selection process and you do not change your language option by pressing the ENTER key, the printer will default to the language previously selected.

LaserJet IIP or IIIP:



Do the following to change your displayed Control Panel language:

a. Turn your printer on. The Control Panel indicators light and the message `05 SELF TEST` appears followed by `PS START`.

Note

If this is the first time your cartridge has been used or if you have not turned the Start-up Page feature off, the message STARTUP PAGE appears and the printer automatically prints a Start-up page after approximately three minutes (see Figure 2-3). After the Start-up page prints, the printer displays PS READY.

To turn Start-up Page off:

1. Press the (ON LINE) key. OFFLINE should be displayed.
2. Press the (MENU) key 5 times. DEVICE CONFIG should be displayed.
3. Press the (ENTER) key. AUTOCONT ON * or AUTOCONT OFF * should appear.
4. Press the (MENU) key twice. STARTUP PG ON * should appear.
5. Press the (+) key. STARTUP PG OFF should appear.
6. Press the (ENTER) key. STARTUP PG OFF * should appear.
7. Press the (ON LINE) key. PS READY should apear.
8. **Your start-up page is now turned off.**

b. Press the (ON LINE) key to take the printer offline. OFFLINE should appear in the Control Panel display.

c. Press the (MENU) key 5 times. DEVICE CONFIG should appear.

d. Press the (ENTER) key once. AUTOCONT ON * or AUTOCONT OFF * should appear.

e. Press the (MENU) key 3 times. LANGUAGE ENGLISH * should appear. Change your displayed language by doing the following:

English: When LANGUAGE ENGLISH * appears, press the (ON LINE) key. Your Control Panel messages are now displayed in English.

French: When LANGUAGE ENGLISH * appears, press the (+) key once. LANGUE FR should appear. Then press the (ENTER) key. LANGUE FR * should appear. Finally, press the (ON LINE) key. Your Control Panel messages are now displayed in French.

German: When LANGUAGE ENGLISH * appears, press the (+) key twice. SPRACHE DEUTSCH should appear. Then press the (ENTER) key. SPRACHE DEUTSCH * should appear. Finally, press the (ON LINE) key. Your Control Panel messages are now displayed in German.

Italian: When LANGUAGE ENGLISH * appears, press the (+) key three times. LINGUA ITALIAN should appear. Then press the (ENTER) key. LINGUA ITALIAN * should appear. Finally, press the (ON LINE) key. Your Control Panel messages are now displayed in Italian.

Spanish: When LANGUAGE ENGLISH * appears, press the (+) key four times. LENGUAJE Espanol should appear. Then press the (ENTER) key. LENGUAJE Espanol * should appear. Finally, press the (ON LINE) key. Your Control Panel messages are now displayed in Spanish.

f. You have now changed your displayed Control Panel language.

Turning the printer off or a printer reset will not affect language selection. To change languages, follow the steps given above. For more information on how to use your printer's Configuration Menu, see Table 3-1 or 3-3 in Chapter 3.

Note

If you start the language selection process and you do not change your language option by pressing the ENTER key, the printer will default to the language previously selected.

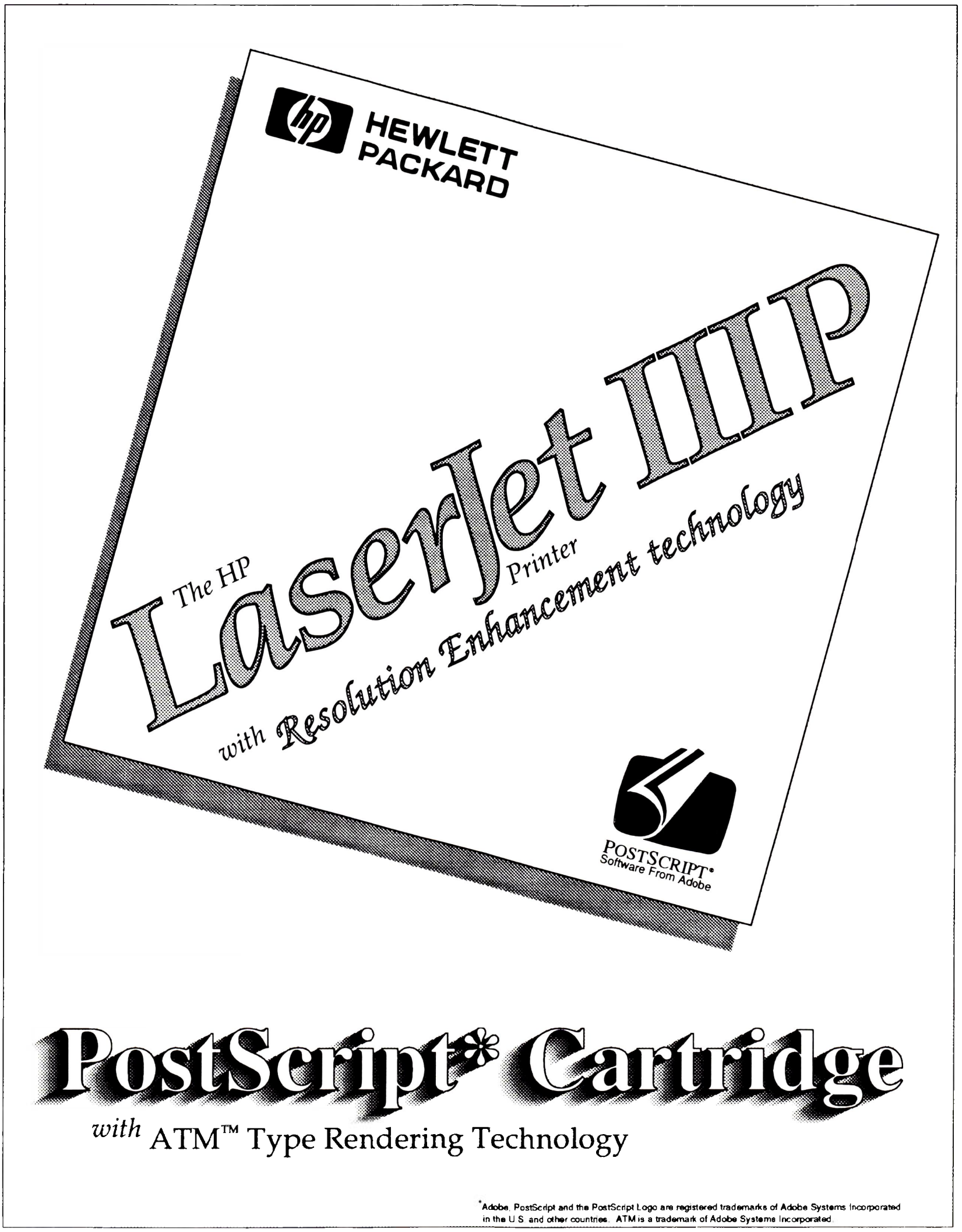


Figure 2-3. Example of a Start-up Page

Verifying Printer Configuration

Your printer must have the same I/O configuration as your computer to receive data. Check your printer's Configuration Menu to make sure that the I/O and communication settings are the same as your computer. Table 2-5 lists the Configuration Menu settings commonly used for parallel and serial communication.

Note

The first time your PostScript cartridge is installed, it will default to I/O=PARALLEL regardless of the I/O setting previously selected.

If you need information on how to use the Configuration Menu, see the "Using the Menus" section in Chapter 3 of this guide.

Table 2-5. Printer I/O Configuration Settings

Configuration	Settings
Parallel	I/O=PARALLEL *
Serial	I/O=SERIAL * SERIAL=RS-232 [1] BAUD RATE=9600 ROBUST XON=ON DTR POLARITY=HI
AppleTalk	I/O=APPLETK *

1 For the HP LaserJet IIP or IIIP printer, the serial type is hardware selectable. See Appendix D of the *LaserJet IIP* or *IIIP Printer User's Manual.*

Verifying Computer Configuration

IBM-Compatible Computers

The I/O and communication settings for your computer are usually set in your computer's AUTOEXEC.BAT file. To verify that your computer has the correct configuration settings, at the MS or PC DOS prompt of your computer's root directory, type the following:

TYPE AUTOEXEC.BAT and press ENTER.

For parallel communication, the following MODE command should appear in the file listing:

MODE LPT1:,,P

For serial communication, the MODE commands should appear as follows:

MODE COM1:9600,N,8,1,P

MODE LPT1:=COM1

If the MODE commands are incorrect and you need to change them, refer to your printer's installation guide or your DOS manual for instructions on how to change your AUTOEXEC.BAT file.

Note

The "9600" indicates the baud rate. The baud rate in your computer's AUTOEXEC.BAT file needs to match your printer's baud rate setting (see the previous section).

Your printer may be connected to a port other than LPT1 or COM1. If so, you need to use the correct LPT or COM port number in the above MODE commands.

Macintosh Computers

The Macintosh computer is configured for your printer. Go to Chapter 3 to set the printer Control Panel to I/O=APPLETK * or I/O APPLETK *.

Removing the Cartridge

Do the following to remove the cartridge:

Caution

Do not remove the PostScript cartridge while the printer is turned on.

1. Turn the printer off.
2. Grasp the edge of the cartridge and pull it straight out of the printer.
3. Turn the printer on. When the printer is first turned on, the Control Panel indicators light up and the message `05 SELF TEST` appears. The printer will perform a Self Test. After the power-up sequence, the printer automatically returns online and the message `00 READY` appears. Your printer is now back in its standard operating mode.

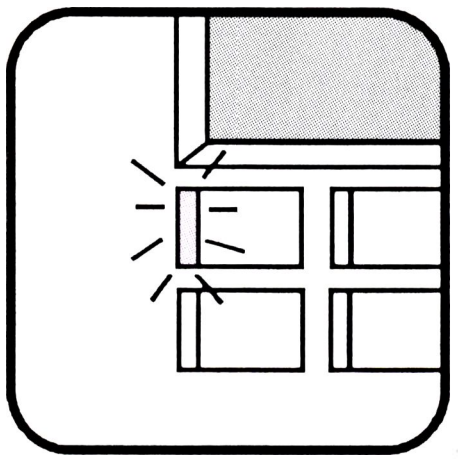
Note

Selections made in PostScript mode will not be active when you return to the printer's standard operating mode and vice versa. This allows you to select different settings for each printer mode.

3

Using the Control Panel

Introduction



Your PostScript cartridge allows your printer to "understand" a second printer language. Your printer can have the following operating modes:

- PCL mode - without your PostScript cartridge installed.
- PostScript mode - with your PostScript cartridge installed. The indicator lights, and the Control Panel keys function the same as in PCL mode with two exceptions:
  - □ The (FORM FEED) key is inactive.
  - □ For the HP LaserJet IID, III, and IIID printers, the READY indicator light flashes when the printer is busy receiving a print job. For the HP LaserJet IIP, and IIIP printers, the FORM FEED indicator light flashes when the printer is busy receiving a print job.

  For a full explanation of how to operate your printer's Control Panel, see your *LaserJet Printer User's Manual.*

Using the Menus

When you first install your PostScript cartridge, your printer will print using **factory default** settings. Factory default settings are permanently stored in the printer's memory. You can select your own settings to meet your printing needs by using the Control Panel **menus** or your software application.

There are two Control Panel menus: the **Printing Menu** and the **Configuration Menu**. The Printing Menu lists print options such as the number of copies to print and manual feed options. See Table 3-4. The Configuration Menu lists configuration options which allow your printer to communicate with your computer along with other printer setup options. See Table 3-5.

Quick reference tables for using the Control Panel menus for each of the three printers are provided on the following pages. Should you need a detailed explanation of how to use your printer's Control Panel menus, see your *LaserJet Printer User's Manual*.

Note

Your software can override your Printing Menu settings. If you use your software to make Printing Menu selections, you should leave the Control Panel settings at their factory defaults.

PostScript and PCL Control Panel menu settings are stored in separate areas of the printer's memory. This allows you to select different settings for each printer mode. Selections made in PostScript mode will not be active when you return to PCL mode and *vice versa*.

Starting with your printer online, use the keystroke sequences in the following tables (Tables 3-1 through 3-3) to enter a menu and change settings:

Table 3-1. Using the IID, III or IIID Menus

STEP	PRESS	ACTION
1	ON LINE	Takes the printer offline
2	MENU [1]	Enters a menu
3	MENU	Steps through menu items
4	+ or -	Steps through menu item choices
5	ENTER	Makes selection an asterisk (*) appears
6	MENU	Access additional menu item choices? If yes - repeat steps 4 and 5 If no - go to step 7
7	ON LINE or CONTINUE	Exits menu

1 Press once to enter the Printing Menu, or hold down for 3 to 5 seconds to enter the Configuration Menu.

Table 3-2. Using the IIP or IIIP Printing Menus

STEP	PRESS	ACTION
1	ON LINE	Takes the printer offline
2	MENU	Steps through menu items
3	+ or -	Steps through menu item choices
4	ENTER	Makes selection an asterisk (*) appears
5	MENU	Access additional menu item choices? If yes - repeat steps 3 and 4 If no - go to step 6
6	ON LINE	Exits menu

Table 3-3. Using the IIP, and IIIP Configuration Menus

STEP	PRESS	ACTION
1	ON LINE	Takes the printer offline
2	MENU	Press repeatedly until DEVICE CONFIG appears
3	ENTER	Enters the Configuration Menu
4	MENU	Steps through menu items
5	+ or -	Steps through menu item choices
6	ENTER	Makes selection an asterisk (*) appears
7	MENU	Access additional menu item choices? If yes - repeat steps 5 and 6 If no - go to step 8
8	ON LINE	Exits menu

Printing Menu Settings

The Printing Menu allows you to select print options such as the number of copies to print and manual feed options. Your software may also allow you to select these options. If so, your software application can override your Printing Menu settings. For example, if you use your software application to select two copies, it will override a Control Panel setting of COPIES=1*. Software settings are not displayed on your printer's Control Panel and they remain in effect only until the **job** ends.

Table 3-4 lists the Printing Menu items along with a range of possible choices which you may select. These items are listed as they appear on your printer Control Panel.

Note

For the HP LaserJet IID and IIID printers, if you have selected DUPLEX=ON *, the actual printing will not begin until at least two pages or a complete job have been submitted for printing.

For the HP LaserJet IIP and IIIP printers, with the optional Lower Cassette installed, the printer has two paper trays. If you select TRAY ANY * from the Printing Menu and both trays are filled with the same size paper, the printer automatically prints from the Multi-Purpose tray first.

Table 3-4. Printing Menu Settings

Menu Items	Menu Item Choices			
	LaserJet IID	**LaserJet IIP/IIIP**	**LaserJet III**	**LaserJet IIID**
MP SIZE	N/A	LETTER* [1], LEGAL, A4, EXEC, COM10, MONARCH, C5 or DL	N/A	N/A
COPIES	1* [1] - 99	1* [1] - 99	1* [1] - 99	1* [1] - 99
DUPLEX	OFF* [1] or ON	N/A	N/A	OFF* [1] or ON
BIND (If DUPLEX=ON)	LONG EDGE*[1] SHORT EDGE	N/A	N/A	LONG EDGE*[1] SHORT EDGE
TRAY [2]	ANY* [1], UPPER, LOWER or ENV FEEDER[3]	LC TRAY, MP TRAY or ANY* [1]	N/A	ANY* [1], UPPER, LOWER or ENV FEEDER[3]
MANUAL FEED	OFF* [1], LETTER, LEGAL, A4, EXEC, COM10, MONARCH, C5 or DL	OFF* [1], LETTER, LEGAL, A4, EXEC, COM10, MONARCH, C5 or DL	OFF* [1], LETTER, LEGAL, A4, EXEC, COM10, MONARCH, C5 or DL	OFF* [1], LETTER, LEGAL, A4, EXEC, COM10, MONARCH, C5 or DL
DEVICE CONFIG	N/A	ENTER [4]	N/A	N/A

1 An asterisk (*) indicates the factory default

2 For the HP LaserJet IIP or IIIP printer, this item only appears if an optional Lower Cassette is installed.

3 ENV FEEDER only appears if the optional envelope feeder is installed.

4 Press ENTER to access the IIP or IIIP printer Configuration Menu.

Activating Printing Menu Settings

Printing Menu selections are normally activated as soon as the (ENTER) key is pressed. If a job is in process, the RESET TO SAVE message will appear when the (ENTER) key is pressed. If you see this message, the printer will not automatically activate your menu selections. You have two choices:

1. For the HP LaserJet IID, III and IIID printers, hold the (RESET) key down until RESETTING appears. For the HP LaserJet IIP or IIIP printer, hold down the (ALT) key and press the (RESET) key. This clears stored page data and cancels the current printer job (be sure to cancel the print job from your computer before resetting your printer). Your new Printing Menu Control Panel settings will be activated and the printer will return online.
2. For the HP LaserJet IID, III, and IIID printers, you can press the (CONTINUE) key. For the HP LaserJet IIP or IIIP printer, hold down the (ALT) key and press the (CONTINUE) key. This causes the printer to continue with your old menu selections. Then, when the current job has finished, your new menu selections will be activated.

Activating Default Printing Menu Settings

To return Printing Menu settings to the factory default settings given in Table 3-4, for the IID, III, and IIID printers, take the printer offline and hold the (RESET MENU) key down until MENU RESET appears in the display window. For the IIP or IIIP printers, with the printer offline, hold down both the (ALT) and the (RESET) key until MENU RESET appears.

Configuration Menu Settings

Use the Configuration Menu to select items which allow the printer to communicate with the computer. Table 3-5 lists Configuration Menu items along with a range of possible choices which you may select. These items are listed as they appear on your printer Control Panel. For information on how to use your printer's Configuration Menu, see the "Using the Menus" section in this chapter. These items are listed as they appear on your printer Control Panel.

Note

Configuration Menu settings are active as soon as you press the ENTER key.

Table 3-5. Configuration Menu Settings

Menu Items	Menu Item Choices			
	LaserJet IID	**LaserJet IIP**	**LaserJet III/IIID**	**LaserJet IIIP**
AUTO CONT	OFF or ON* [1]	OFF or ON* [1]	OFF or ON* [1]	OFF or ON* [1]
I/O	PARALLEL, SERIAL* [1], OPTIONAL [2] or APPLETK [3]	PARALLEL* [1] SERIAL or APPLETK [3]	PARALLEL* [1], SERIAL, OPTIONAL [2] or APPLETK [3]	PARALLEL* [1] SERIAL or APPLETK [3]
SERIAL [4]	RS-232* [1] or RS-422	N/A [5]	RS-232* [1] or RS-422	N/A [5]
BAUD RATE	300, 600, 1200, 2400, 4800, 9600* [1] or 19200	300, 600, 1200, 2400, 4800, 9600* [1] or 19200	300, 600, 1200, 2400, 4800, 9600* [1] or 19200	300, 600, 1200, 2400, 4800, 9600* [1] or 19200
ROBUST XON [4]	ON* [1] or OFF	ON* [1] or OFF	ON* [1] or OFF	ON* [1] or OFF
DTR POLARITY [6]	HI* [1] or LO	HI* [1] or LO	HI* [1] or LO	HI* [1] or LO
START PAGE	ON*[1] or OFF	ON* [1] or OFF	ON* [1] or OFF	ON* [1] or OFF
LANGUAGE	ENG * [1], FRANCAIS, DEUTSCH, ITALIANO, or ESP	ENGLISH * [1], FR, DEUTSCH, ITALIAN, or Espanol	ENG * [1], FRANCAIS, DEUTSCH, ITALIANO, or ESP	ENGLISH * [1], FR, DEUTSCH, ITALIAN, or Espanol
RET	N/A	N/A	DARK, MEDIUM * [1], LIGHT or OFF	DARK, MEDIUM * [1], LIGHT or OFF

1 An asterisk (*) indicates the factory default

2 Appears only if an optional interface is installed.

3 Appears only if an AppleTalk interface is installed.

4 Appears only if I/O=SERIAL.

5 See Appendix D of the *LaserJet IIP* or *IIIP Printer User's Manual.*

6 Appears only if SERIAL=RS-232.

Printing a PostScript Fonts Page

The Fonts Page has samples of all 35 of the cartridge's built-in typefaces. Due to the complexity of the Fonts Page, it may take up to 4 minutes before printing begins. To print a PostScript Fonts Page, do the following:

1. Press the (ON LINE) key to take the printer offline. The indicator light is off and OFFLINE is displayed.

2. For the HP LaserJet IID, III and IIID printers, momentarily press the (PRINT FONTS) key. For the HP LaserJet IIP or IIIP printer, hold down the (ALT) key and press the (PRINT FONTS) key. The message FONTS JOB QUEUED or FONT JOB QUEUED will appear. This message indicates that the job which prints the Fonts Page has been queued for printing.

3. To start the print job, you may press the (ON LINE) key to return the printer online or wait 10 seconds and the printer will automatically return online.

   Due to the complexity of the Fonts Page, *it may take up to 4 minutes before printing begins*. If the printer was working on another job when the (PRINT FONTS) key was pressed, the previous job will finish processing before the Fonts Page is started. While the Fonts Page is being created, the message FONTS PAGE will be displayed. For the HP LaserJet IID, III, and IIID printers, the Ready indicator light will flash. For the HP LaserJet IIP or IIIP printer, the Form Feed indicator light will flash.

FONT PAGE

HP LaserJet IIIP printer

PostScript* cartridge

ITC Avant Garde Gothic* Book	ABCDEabcde012345()*%#!?'"
ITC Avant Garde Gothic Book Oblique	*ABCDEabcde012345()*%#!?'"*
ITC Avant Garde Gothic Demi	**ABCDEabcde012345()*%#!?'"**
ITC Avant Garde Gothic Demi Oblique	***ABCDEabcde012345()*%#!?'"***
ITC Bookman* Demi	**ABCDEabcde012345[]*%#!?'"**
ITC Bookman Demi Italic	***ABCDEabcde012345[]*%#!?'"***
ITC Bookman Light	ABCDEabcde012345[]*%#!?'"
ITC Bookman Light Italic	*ABCDEabcde012345[]*%#!?'"*
Courier	ABCDEabcde012345[]*%#!?'"
Courier Bold	**ABCDEabcde012345[]*%#!?'"**
Courier Bold Oblique	***ABCDEabcde012345[]*%#!?'"***
Courier Oblique	*ABCDEabcde012345[]*%#!?'"*
Helvetica*	ABCDEabcde012345[]*%#!?'"
Helvetica Bold	**ABCDEabcde012345[]*%#!?'"**
Helvetica Bold Oblique	***ABCDEabcde012345[]*%#!?'"***
Helvetica Oblique	*ABCDEabcde012345[]*%#!?'"*
Helvetica Narrow	ABCDEabcde012345[]*%#!?'"
Helvetica Narrow Bold	**ABCDEabcde012345[]*%#!?'"**
Helvetica Narrow Bold Oblique	***ABCDEabcde012345[]*%#!?'"***
Helvetica Narrow Oblique	*ABCDEabcde012345[]*%#!?'"*
New Century Schoolbook Bold	**ABCDEabcde012345[]*%#!?'"**
New Century Schoolbook Bold Italic	***ABCDEabcde012345[]*%#!?'"***
New Century Schoolbook Italic	*ABCDEabcde012345[]*%#!?'"*
New Century Schoolbook Roman	ABCDEabcde012345[]*%#!?'"
Palatino*	ABCDEabcde012345[]*%#!?'"
Palatino Bold	**ABCDEabcde012345[]*%#!?'"**
Palatino Bold Italic	***ABCDEabcde012345[]*%#!?'"***
Palatino Italic	*ABCDEabcde012345[]*%#!?'"*
Symbol	ΑΒΧΔΕαβχδε012345[]*%#!? ∀
Times Bold	**ABCDEabcde012345[]*%#!?'"**
Times Bold Italic	***ABCDEabcde012345[]*%#!?'"***
Times Italic	*ABCDEabcde012345[]*%#!?'"*
Times Roman*	ABCDEabcde012345[]*%#!?'"
ITC Zapf Chancery* Medium Italic	*ABCDEabcde012345[]*%#!?'"*
ITC Zapf Dingbats*	✡✢✣✤✥❁❂❇❈✐➪➫✓✔✕✳✻☛✌✂✁✝❀✄

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Figure 3-1. Example of a PostScript Fonts Page

Printing a PostScript Test Page

The Test Page provides useful information for the PostScript language programmer by listing values for several of PostScript's *persistent parameters*. See Figure 3-2. If you are interested in learning more about these parameters, see the "PostScript Technical Notes" in Appendix C. To print a PostScript Test Page, do the following:

1. Take the printer offline by pressing the (ON LINE) key. The indicator light is off and OFFLINE is displayed.

2. For the HP LaserJet IID, III and IIID printers, hold the (TEST) key down for about three seconds until the display shows TEST JOB QUEUED. For the HP LaserJet IIP or IIIP printer, hold down the (ALT) key and press the (TEST) key. The message TEST JOB QUEUED indicates that the job which prints the Test Page has been accepted and queued for printing.

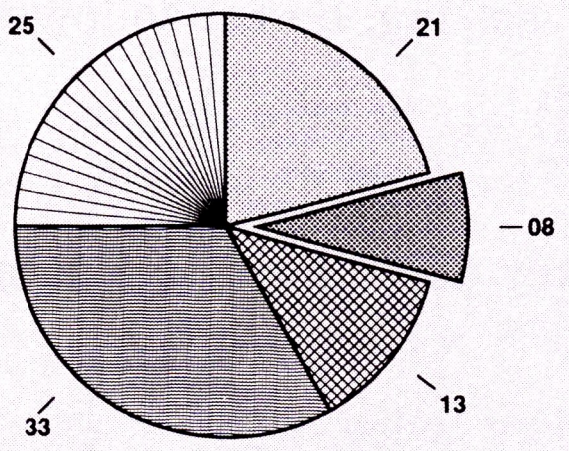
3. To start the print job, you may press the (ON LINE) key to return the printer online or wait 10 seconds and the printer will automatically return online. It takes about 1 minute and 30 seconds to print the Test Page. If the printer was working on another job when the (TEST) key was pressed, the previous job will finish processing before the Test Page is started. While the Test Page is being created, the message TEST PAGE will be displayed. For the HP LaserJet IID, III and IIID printers, the Ready indicator light will flash. For the HP LaserJet IIP or IIIP printer, the Form Feed indicator light will flash.

TEST PAGE

HP LaserJet IIIP printer

PostScript* cartridge

STATUSDICT OPERATOR/VARIABLE	PERSISTENT VALUE
SYSTEM SETUP OPERATORS	
Password:	0
Idle Font Caching:	false (off)
Jam Recovery:	false (off)
Auto Continue:	true (on)
Print Errors:	false (off)
RET:	2 (Medium)
Start Page:	true (on)
Left Margin:	0 (1/300 inch increments)
Top Margin:	0 (1/300 inch increments)
PostScript Page Count:	23
Optional Memory Installed:	4 Megabytes
Virtual Memory:	3171960 (maximum available)
Printer Name:	Dennis' IIIP
Product Name:	HP LaserJet IIIP
PostScript Code Version:	52.2
Device Specific Revision:	0
TIMEOUT OPERATORS	
Job Timeout:	0 (no time limit)
Manual Feed Timeout:	60 (seconds)
Wait Timeout:	255 (seconds)



*PostScript is a registered trademark of Adobe Systems Incorporated in the U.S. and other countries.

Figure 3-2. Example of a PostScript Test Page

Resolution Enhancement

If you have an HP LaserJet III, IIID or IIIP printer, the Test Page can also be used to help adjust the print density and Resolution Enhancement. Resolution Enhancement refines the print quality of characters and graphics by "smoothing" the fine gradations along the edge of the printed image. This process sets a new standard of print quality for 300 dpi (dots per inch) printing.

The Resolution Enhancement option has four choices: *dark*, *medium*, *light*, and *off*. The factory default setting is RET=MEDIUM *. You may discover that a different setting works better for your printer. Experiment with different selections to see which option produces the best results for you.

You can see the effects of the different settings by examining the pie chart on the PostScript Test Page. In the 33% slice, look for dark or light vertical stripes in the gray shading. If you see either dark or light vertical stripes, using the printer's Configuration Menu, adjust the RET setting to minimize these stripes. For detailed instructions on how to adjust print density and quality, see the "Adjusting Print Density" and "Print Density and Resolution Enhancement" sections in Chapter 6 of the *LaserJet III* or *IIID Printer User's Manual*.

LaserJet III or IIID Printers

To change your RET setting, do the following:

1. Press the (ON LINE) key to take the printer offline. The indicator light is off and OFFLINE is displayed.
2. Hold the (MENU) key down for 3 to 5 seconds. AUTO CONT = ON * or AUTO CONT = OFF * should appear.
3. Press the (MENU) key twice. RET = MEDIUM * should appear.
4. Press the (+) key to select DARK, OFF or LIGHT.
5. Press the (ENTER) key to save your choice. An asterisk (*) should appear.
6. You have now changed your RET setting.

LaserJet IIIP

To change your RET setting, do the following:

1. Press the (ON LINE) key to take the printer offline. The indicator light is off and OFFLINE is displayed.
2. Press the (MENU) key repeatedly until DEVICE CONFIG appears.
3. Press the (ENTER) key. AUTOCONT ON * or AUTOCONT OFF * should appear.
4. Press the (MENU) key repeatedly until RET MEDIUM * appears.
5. Press the (+) key to select DARK, OFF or LIGHT.
6. Press the (ENTER) key to save your choice. An asterisk (*) should appear.
7. Press the (ON LINE) key.
8. You have now changed your RET setting.

Note

HP recommends a RET setting of MEDIUM for overall print quality. You may, however, find a different setting works better for your toner/printer combination.

Mac Users

Your screen fonts may not match the resolution of printed fonts. Experiment with a sample print before deciding how to set your Resolution Enhancement.

4

Understanding the Printer Messages

Introduction

The display on your printer shows five kinds of printer messages:

- Status Messages to inform you of the printer's current operating condition;
- Attendance Messages which request that you perform a task before the printer continues printing;
- System Error Messages to let you know when the printer encounters difficulty;
- PostScript Error Messages to let you know there is a problem with your PostScript program;
- Service Error Messages to let you know when the printer may need service.

The following sections provide the meanings of these messages and describe actions that can be taken.

Note If attendance or error messages appear before the message `POSTSCRIPT START` or `PS START` appears, refer to your *LaserJet Printer User's Manual* for help.

Printer Status Messages

During the course of normal operation, you will see printer status messages. These messages inform you of the printer's current operating condition. The following table lists the display window messages and their meanings.

Table 4-1. Printer Status Messages

LaserJet IID/III/IIID	Meaning
LaserJet IIP/IIIP	
FONTS JOB QUEUED	The job which prints the Fonts Page has been accepted and queued for printing. The Fonts Page will print after jobs previously queued for printing have printed.
FONT JOB QUEUED	
FONTS PAGE	A page of sample characters is being created and will be printed. It may take up to four minutes to create and print this page.
FONTS PAGE	
MENU RESET	The Printing Menu settings will return to their factory default settings. Also, the printer's page buffer will be cleared.
MENU RESET	
N/A	The specified paper or envelope size must be fed manually from the Multi-Purpose tray (*paper size* may be: LETTER, LEGAL, A4 or EXEC; *envelope size* may be: COM10, MONARCH, C5 or DL.
MF READY *paper* **or** *envelope size*	

Table 4-1. Printer Status Messages (continued)

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning
OFFLINE **OFFLINE**	The printer is offline and will not accept data from the computer.
OFFLINE PENDING **OFFLINE PENDING**	This message appears if the (ON LINE) key is pressed while the printer is printing. When the printer has finished printing, the printer will go offline. While waiting for the printer to go offline, the On Line indicator light flashes.
POSTSCRIPT READY **PS READY**	The printer is online and ready for PostScript data.
POSTSCRIPT START **PS START**	A PostScript Start-up test is in process.
PROCESSING DATA **PS BUSY**	The printer is processing PostScript data. Complex PostScript jobs may take several minutes to print. If you think your PostScript job has been processing for an unreasonably long time, you may have a problem with your PostScript file. For the HP LaserJet IID, III and IIID, cancel the job by placing the printer in the offline state and holding the (RESET) key down until RESETTING is displayed. For the HP LaserJet IIP or IIIP, cancel the job by holding down the (ALT) key and pressing the (RESET) key.

Table 4-1. Printer Status Messages (continued)

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning
READY/ SERVICE 68	The printer's permanent memory has failed. This failure will not prevent printer operation; however, service is required to restore full memory operation. When power is turned off, the Printing and Configuration Menu items will return to their factory default settings. READY/SERVICE 68, or READY/68 will replace POSTSCRIPT READY, or PS READY until serviced.
READY/68	
RESETTING	The current job will be cancelled and all Printing Menu items will return to user selected settings.
RESET IN PROGRESS	
05 SELF TEST	A Self Test is in process. The PostScript cartridge has not yet taken control of the printer.
05 SELF TEST	
STARTUP PAGE	A PostScript Start Page will be printed in about three minutes.
STARTUP PAGE	
TEST JOB QUEUED	The job which prints the Test Page has been accepted and queued for printing. In 10 seconds the printer will return online and the Test Page will print after jobs previously queued for printing have printed.
TEST JOB QUEUED	
TEST PAGE	A PostScript Test Page is being created and will be printed. It takes about 1 and 30 seconds minute to print this page.
TEST PAGE	

Printer Attendance Messages

The following table explains the meaning of each attendance message and recommends a response.

Table 4-2. Printer Attendance Messages

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning	Recommended Action
DUPLEX LEVER OFF **N/A**	The position of the Output Selector Knob is preventing duplex printing.	Adjust the Output Selector Knob to the 9:00 position. See your *LaserJet IID* or *IIID Printer User's Manual.*
EC, EE, LE or UE LOAD *envelope size* **LE LOAD** *envelope size*	Printer received a request for an envelope size not loaded, or selected. (EC=Envelope Cassette, EE=Envelope feeder Envelope, LE=Lower cassette Envelope, UE=Upper cassette Envelope; *envelope size* may be: COM10, MONARCH, C5 or DL).	Load the correct envelope size in the specified tray. For the HP LaserJet IID, III or IIID, printing will continue. For the HP LaserJet IIP or IIIP, press the ON LINE key. For all four printers, use the CONTINUE key to use the envelope size loaded. [1]

1 If the envelope size loaded is different from that requested, image clipping may occur. These messages only appear for 10 seconds.

Table 4-2. Printer Attendance Messages (continued)

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning	Recommended Action
EE, LE, PE or UE TRAY= *envelope size* [1] **LE TRAY** *envelope size* [1]	The printer needs you to tell it what size envelope is loaded (EE= Envelope feeder Envelope, LE=Lower Envelope, PE=Print Envelope, UE=Upper Envelope; *envelope size* may be: COM10, MONARCH, C5 or DL).	Use the (+) or (−) key to select an envelope size. When the desired size appears, press (ENTER), then (ON LINE).
EE, LC, PC or UC TRAY EMPTY **LC or MP EMPTY**	A paper/envelope tray is empty. (EE=Envelope feeder Envelope, LC=Lower Cassette, PC=Paper Cassette, UC=Upper Cassette, MP=Multi-Purpose tray).	The specified tray is empty. You may continue printing using another tray.

1 Your printer uses the last envelope size selected unless you select another size within 10 seconds.

Table 4-2. Printer Attendance Messages (continued)

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning	Recommended Action
LC, PC or UC LOAD *paper size*	Printer received a request for a paper or envelope size not loaded, or selected. (`LC`=Lower Cassette, `PC`=Paper Cassette, `UC`=Upper Cassette, `MP`=Multi-Purpose tray; *paper size* may be: `LETTER`, `LEGAL`, `A4` or `EXEC`; *envelope size* may be: `COM10`, `MONARCH`, `C5` or `DL`).	Load the correct paper or envelope size. For the HP LaserJet IID, III or IIID, printing will continue. For the HP LaserJet IIP or IIIP, make sure the MP size is properly set and press the ON LINE key. For all four printers, use the CONTINUE key to use the paper or envelope size loaded. [1]
LC or MP LOAD *paper* **or** *envelope size*		
NEED MORE MEMORY	There is not enough memory for running the PostScript cartridge.	Install at least the minimum required amount of optional printer memory. See the "Printer Memory" section in Chapter 2.
ADD MORE MEMORY		

1 If the paper or envelope size loaded is different from that requested, image clipping may occur.

Table 4-2. Printer Attendance Messages (continued)

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning	Recommended Action
NO TONER CART OPEN OR NO EP	For the HP LaserJet IID, III or IIID, the toner or EP-S cartridge is not properly installed or is missing. For the HP LaserJet IIP or IIIP, either the printer is not closed properly or the EP-L cartridge is missing.	Make sure an EP cartridge is fully seated and the tape is removed. See your printer User's Manual. For the HP LaserJet IIP or IIIP, ensure the paper path and fuser access doors are securely closed. Check in the fuser for jammed paper which may be holding a fuser door slightly open.
PAPER JAM PAPER JAM	Paper is jammed in the paper path.	Open the cover and remove the jammed paper. See your printer User's Manual for details. The printer door must be opened and closed to clear the jam message.

Table 4-2. Printer Attendance Messages (continued)

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning	Recommended Action
PE FEED *envelope size* **ME FEED** *envelope size*	Printer has been setup or has received a request from the computer for manual feed. (*envelope size* may be: COM10, MONARCH, C5 or DL).	For the HP LaserJet IID, III or IIID, feed envelope through the manual feed slot. Press CONTINUE to feed from the default tray. [1] For the HP LaserJet IIP or IIIP, load envelope into the MP tray and press the ON LINE key.
PF FEED *paper size* **MF FEED** *paper size*	Printer has been setup or has received a request from the computer for manual feed. (*paper size* may be: LETTER, LEGAL, A4 or EXEC).	For the HP LaserJet IID, III or IIID, feed paper through the manual feed slot. Press CONTINUE to feed from the default tray. [1] For the HP LaserJet IIP or IIIP, load paper into the MP tray and press the ON LINE key.

1 If the paper or envelope size loaded is different from that requested, image clipping may occur.

Table 4-2. Printer Attendance Messages (continued)

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning	Recommended Action
PRINTER OPEN **OPEN OR NO EP**	For the HP LaserJet IID, III or IIID, the upper main body of the printer is not closed properly. For the HP LaserJet IIP or IIIP, either the printer is not closed properly or the EP-L cartridge is missing.	For the HP LaserJet IID, III or IIID, make sure the cover is firmly closed. For the HP LaserJet IIP or IIIP, ensure the paper path and fuser access doors are securely closed. Check in the fuser for jammed paper which may be holding a fuser door slightly open. Also make sure an EP cartridge is fully seated and the tape is removed. See your printer User's Manual.
RESET TO SAVE **RESET TO SAVE**	This reminder appears when you change Printing Menu settings while printing a job.	Press the (RESET) key to cancel the job and keep your changes. Then press the (CONTINUE) key to print the current job and defer your changes to the next job.
TONER LOW **N/A**	Toner cartridge is almost out of toner.	If the print becomes light, remove the cartridge and try rocking it. If necessary, replace the cartridge. See your printer User's Manual for details.

Printer System Error Messages

When a system error occurs, the printer will go offline and an error message will be displayed. At this point, the (CONTINUE), (RESET) or (MENU) keys are active. You may attempt to continue printing; however, this may cancel your job or lead to unwanted results. Your printer default is AUTO CONT = OFF *. If your auto continue feature is on (AUTO CONT=ON *), the following system error messages will appear in the display window for about 10 seconds. The printer will then attempt to return online and resume operation. The following table lists the system error messages, along with recommended actions.

Table 4-3. Printer System Error Messages

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning
I/O CONFIG ERROR I/O CONF ERROR	The computer and printer are not communicating because of improper signal protocols. Refer to Chapter 2 to verify proper computer and printer configuration. Press the (CONTINUE) key (IID, III, or IIID), or the (ALT) (CONTINUE) keys (IIP or IIIP) to clear the message. If the error continues, call your Service Representative.
I/O DATA ERROR I/O DATA ERROR	Error occurred while transferring data from your computer. This error can occur if you turn off your computer while the printer is receiving data or if the printer's baud rate is not the same as the computer's. Make sure the printer is set at the same baud rate as the computer. This applies only if you are using a serial interface. Press the (CONTINUE) key (IID, III, or IIID), or the (ALT) (CONTINUE) keys (IIP or IIIP) to clear the message. If the error continues, call your Service Representative.

Table 4-3. Printer System Error Messages (continued)

LaserJet IID/III/IIID **LaserJet IIP/IIIP**	**Meaning**
OPT I/O ERROR *number* **OPT I/O ERROR** *number*	Problem occurred on the optional interface (*number* may be: 42,43). Make sure your optional interface is installed and configured correctly. Press the CONTINUE key (IID, III, or IIID), or the ALT CONTINUE keys (IIP or IIIP) to clear the error message. If the error continues, call the manufacturer of your optional I/O.
OPT MEMORY ERROR **MEMORY ERROR**	An error has been detected on the optional memory printed circuit assembly. Verify the correct memory for your printer is installed. Refer to the "Printer Memory" section in Chapter 2.
SYSTEM ERROR *number* **SYSTEM ERROR** *number*	If this error appears, press the CONTINUE key (IID, III, IIID), or the ALT CONTINUE keys (IIP or IIIP) to resume operation (*number* may be: 51,52,55). Some data loss may occur. If the error continues, call your Service Representative.

Printer PostScript Error Messages

When a PostScript program error occurs, the printer will go offline and a PostScript error message will be displayed. Press the (CONTINUE) key (IID, III, IIID), or the (ALT) (CONTINUE) keys (IIP or IIIP), or set the auto continue feature ON to cancel the current job and resume operation. Your printer default is AUTO CONT = ON *. If the auto continue feature is on (AUTO CONT=ON *), error messages will not appear in the Control Panel display. The printer will then return online and resume operation. If the auto continue feature is off (AUTO CONT = OFF *) and a PostScript error occurs, a message will appear in the Control Panel display. For more information about these errors, see the *PostScript Language Reference Manual*, referenced at the end of Appendix C.

Table 4-4. Printer PostScript Error Messages

LaserJet IIP/IIIP/ IID/III/IIID	Meaning
PS ERROR 00	No more room in dictionary.
PS ERROR 01	Dictionary stack overflow (too many begins).
PS ERROR 02	Dictionary stack underflow (too many ends).
PS ERROR 03	Execution stack overflow (too many nesting levels).
PS ERROR 04	Invalid access of array, dictionary, file, string, etc.
PS ERROR 05	No "exit" found in loop.
PS ERROR 06	Invalid file access.
PS ERROR 07	Invalid font name or dictionary.
PS ERROR 08	Improper restore.

Note

If these errors appear, press the CONTINUE key (IID, III, or IIID), or the ALT CONTINUE keys (IIP or IIIP), or set the auto continue feature to on (AUTO CONT = ON *) to cancel the current job and resume operation. Below is a brief description of each of these errors. For more information about these errors, see the *PostScript Language Reference Manual*, referenced at the end of Appendix C.

Table 4-4. Printer PostScript Error Messages (continued)

LaserJet IIP/IIIP/ IID/III/IIID	Meaning
PS ERROR 09	Input/output error occurred. Press the CONTINUE key (IID, III, or IIID), or the ALT CONTINUE keys (IIP or IIIP) if a print job is cancelled from a Macintosh computer.
PS ERROR 10	Implementation limit exceeded.
PS ERROR 11	Current point is undefined.
PS ERROR 12	Operand out of bounds. One common cause of this error is that the tray size requested by your application does not match the tray size you have selected or installed. Another reason for this error is that there is not enough printer memory for duplexing. For the IIP or IIIP printer, remember to set the MP SIZE using the printer's Control Panel.
PS ERROR 13	Operand stack overflow.
PS ERROR 14	Operand stack underflow.
PS ERROR 15	Syntax error in program text.

Note

If these errors appear, press the CONTINUE key (IID, III or IIID), or the ALT CONTINUE keys (IIP or IIIP), or set the auto continue feature to on (AUTO CONT = ON *) to cancel the current job and resume operation. Below is a brief description of each of these errors. For more information about these errors, see the *PostScript Language Reference Manual*, referenced at the end of Appendix C.

Table 4-4. Printer PostScript Error Messages (continued)

LaserJet IIP/IIIP/ IID/III/IIID	Meaning
PS ERROR 16	Time limit exceeded. A **Control D** command could also be missing from your source file.
PS ERROR 17	Operand of wrong type.
PS ERROR 18	Unrecognized data.
PS ERROR 19	File not found.
PS ERROR 20	Over/underflow or meaningless result.
PS ERROR 21	Expected mark not on stack.
PS ERROR 22	Internal error.
PS ERROR 23	Virtual Memory exhausted. Your printer does not have enough memory to print your job. If you are using downloaded typefaces, try removing one or two of them to free up some virtual memory. If you still get this error, you may need to add additional printer memory.
PS ERROR 24	PostScript quit operator executed. Turn your printer off and then on to recover.

Printer Service Error Messages

When a service error occurs, the printer will go offline and a service error message will be displayed. At this point, the keypad is completely nonfunctional. To clear the error message, turn the printer off and then back on. If the error message remains, the printer will be non-functional until serviced. The following table lists service error messages, and their meanings. If a service error is not listed here, refer to your *LaserJet Printer User's Manual*.

Table 4-5. Printer Service Error Messages

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning
SERVICE ERROR 54 **N/A**	An error occurred while duplexing. Make sure the paper is the correct size. Turn the printer off, then on. If the error continues call your Service Representative.
61 SERVICE **61 NEEDS SERVICE**	An internal service error occurred. Turn the printer off, then on. If the error continues, turn the printer off and remove the cartridge. Turn the printer back on. If the error message appears again, the problem is in the printer. If the error message does not appear, the problem is with the cartridge. Call your Service Representative for your printer or see the "Cartridge Replacement" section of Chapter 5.

Table 4-5. Printer Service Error Messages (continued)

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning
SERVICE ERROR 63 **SERVICE ERROR 63**	The printer found a problem while checking its internal memory. Turn the printer off. Any data stored in the printer will be lost. If the error continues and the printer contains an optional memory board, turn the printer off. Make sure that the memory board is correctly installed and then turn the printer back on. If the error persists, turn the printer off and remove the optional memory board. Turn the printer back on. If the error message appears again, the problem is in the printer memory. If the error message does not appear, the problem is with the memory board. Call your Service Representative.
SERVICE ERROR 69 **SERVICE ERROR 69**	An optional interface error occurred. Turn the printer off, then on. If the error continues, call your Service Representative.
70 ERROR **70 ERROR**	The printer does not support the cartridge or your PostScript cartridge has an internal problem. If your cartridge has an internal problem, see the "Cartridge Replacement" section of Chapter 5.

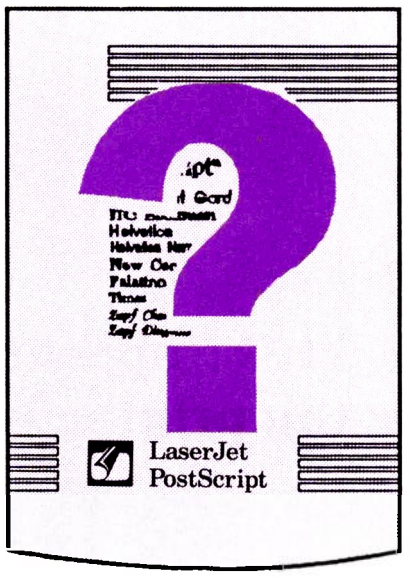
Table 4-5. Printer Service Error Messages (continued)

LaserJet IID/III/IIID LaserJet IIP/IIIP	Meaning
SERVICE ERROR 50,64,65,67 **SERVICE ERROR 50,64,65**	An internal service error occurred. Turn the printer off, then remove the cartridge. Turn the printer back on. If the error continues, call your Service Representative. To clear SERVICE ERROR 50, the printer must be off for at least 10 minutes.
SERVICE 79-PS *code number* **SERVICE 79-PS** *number*	An internal service error occurred. Turn the printer off, then remove the cartridge. Turn the printer back on. If the error continues, call your Service Representative.

5

Common Problems

Symptom Checklist



If you are having trouble printing in PostScript mode, this checklist may help solve the problem. To use this checklist, start at question 1 and step your way through until you find the description of the problem.

- **Does the printer's power come on?** (Are the Control Panel indicator lights on?)

  YES - Go to the next question.

  NO - Check the following:

  1. Make sure the printer power cord is plugged into a power outlet and into your printer.
  2. Make sure the printer's on/off switch is in the on position.

3. Make sure the line voltage is correct for the printer's power configuration.

   (Model HP Product No. A = 115V ± 10%)

   (Model HP Product No. AU = 240V ± 10%)

   (Model HP Product No. AB = 220V ± 10%)

4. Will other items plugged into the same power source work? If not, the problem is your power source.

- **Does the printer work without the PostScript cartridge installed?** (See the "Leaving PostScript Mode" section of Chapter 2.)

  YES - Go to the next question.

  NO - See your *LaserJet Printer User's Manual*.

- **Does the message `POSTSCRIPT START` or `PS START` appear in the display window within 30 seconds after the printer is turned on?**

  YES - Go to the next question.

  NO - Check the following:

  1. Do you have either an HP LaserJet IID, IIP, III, IIID, or IIIP printer? Your PostScript cartridge is compatible ONLY with these printers.

  2. Is the PostScript cartridge properly installed? Turn the printer off. Push the cartridge in until it snaps into place. Be sure that the cartridge is firmly seated. If you do not feel the cartridge snap into place, try pushing the cartridge using a little more force. Turn the printer back on.

3. Is there another printer language cartridge installed? Only one language cartridge can be used at a time.
4. Does the printer have enough memory? See the "Printer Memory" section in Chapter 2.
5. Do any attendance or error messages appear in the printer's display window? If yes, see Chapter 4 for help.

Note

If attendance or error messages appear before the message POSTSCRIPT START or PS START appears, refer to your *LaserJet Printer User's Manual* for help.

- **Will the printer print a Start Page?**

  YES - Go to the next question.

  NO - Do the following:

  1. The Start-up Page may be turned off. Using the Control Panel's Configuration Menu, turn the Start Page on.

     To turn Start-up Page on:

     a. Hold the (MENU) key down for up to 5 seconds. AUTOCONT = ON * or AUTOCONT = OFF * should be displayed.
     b. Press the (MENU) key two times. STARTPAGE = OFF * should be displayed.
     c. Press the (+) key. STARTPAGE = ON should appear.
     d. Press the (ENTER) key. STARTPAGE = ON * should appear.
     e. Press the (ON LINE) key. Your Start Page is now turned on.

  2. Now print a Start-up Page by turning the printer off and then back on.

- **Can you print a PostScript Test Page using the Control Panel's (TEST) key?**

  YES - Go to the next question.

  NO - Check the following:

  1. Is the printer offline? If not, take the printer offline and then use the (TEST) key to print a Test Page.

2. Do any attendance or error messages appear in the printer's display window? If yes, see Chapter 4 for help.

3. If the Test Page does not print within two minutes after the TEST key is pressed, you should call a Service Representative (see the next section, "Calling for Help").

- **Is the print quality good?**

  YES - Go to the next question.

  NO - Check the following:

  1. If you have a IID, IIP, or IIIP printer, see your *LaserJet Printer User's Manual* for instructions on how to adjust print quality.

  2. If you have a III, or IIID printer, use the PostScript Test Page, printed in 5. above, to adjust the print density and Resolution Enhancement. For detailed instructions on how to adjust print density and quality, see the "Adjusting Print Density" and "Print Density and Resolution Enhancement" sections in Chapter 6 of the *LaserJet III* and *IIID Printer User's Manual.*

- **Can you send a PostScript file to the printer from your computer? (Does the message** PROCESSING DATA **or** PS BUSY **appear?)**

  YES - Go to the next question.

  NO - Check the following:

  1. Make sure the printer is online. The On Line indicator light should be on.

  2. Make sure you are using the proper interface cable and it is securely connected to the correct printer and computer **ports**. See your printer and computer installation documentation for specific instructions on how to connect your printer to your computer.

Note

There may be multiple serial or parallel connectors on your computer. Also, some serial connectors look the same as some parallel connectors.

3. If you are using a serial connector, make sure your Configuration Menu settings are consistent with your computer settings. Remember, Configuration Menu selections made in PCL mode DO NOT affect PostScript Configuration Menu settings. With the PostScript cartridge installed, using the Control Panel, verify that your printer configuration settings match those of your computer. See the "Verifying Printer Configuration for IBM-compatible PCs" and "Verifying Computer Configuration for IBM-compatible PCs" sections of Chapter 2 for more information about printer and computer configuration.
4. Has the correct printer driver been selected? See the "Printer Drivers for IBM-compatible PCs" section of Chapter 2.
5. Make sure your computer is working properly by running a software application that supports PostScript that you know works.
6. Make sure the computer's I/O port is working properly by running another **peripheral** connected to the port.
7. If you are still having trouble, see the next section, "Calling for Help."

- **Does your PostScript file print?**

YES - Go to the next question.

NO - Check the following:

1. Does the message PROCESSING DATA or PS BUSY appear in the display window? If you think your PostScript job has been processing for an unreasonably long time, there may be a problem with your PostScript file. Check your software application manual. Also, sending non-PostScript files can cause unexpected results. To cancel the job, use the RESET key on your printer's Control Panel.

2. Does the message PS ERROR 16 appear in the display window? If so, check the following:

   - □ Verify that your computer configuration settings are set as described in the "Verifying Computer Configuration for IBM-compatible PCs" section of Chapter 2.
   - □ Do you have manual feed selected? If so, the default value for the number of seconds the printer waits for a page to be manually fed before cancelling a job is 60 seconds.
   - □ If you have created your own PostScript program, check your PostScript file for the following problems:
     - □ Did your job print before you received the PS ERROR 16? If so, your PostScript file may contain information after the PostScript end-of-file marker (control-D) which is interpreted as another job. The default value for the number of seconds the printer waits to receive more data before cancelling this job is 40 seconds.
     - □ Do you have a control-D at the end of your PostScript file? If not, you will receive a PS ERROR 16 and your job will be cancelled. The control-D must be the last thing sent to the printer. The default value for the number of seconds the printer waits to receive a control-D before cancelling the job is 40 seconds.

3. Are you using the DOS **COPY** command with the **/B** option (i.e. **COPY /B** <filename> **PRN:** or **COPY** <filename> **PRN: /B**) ?

   Your PostScript file may have a DOS end-of-file marker (control-Z) after the PostScript end-of-file marker (control-D). This can cause a PS ERROR 16 or a PS ERROR 18. Use the DOS **COPY** command without the **/B** option.

Note

The DOS end-of-file marker and the DOS **COPY** command with the **/B** option may effect the next print job, and not the print job which caused the problem.

4. Are you using the DOS PRINT command (i.e. **PRINT** <filename>)?

   The DOS **PRINT** command appends a FormFeed (control-L) to your PostScript file which can cause a PS ERROR 16. Use the DOS **COPY** command without the **/B** option instead (i.e. **COPY** <filename> **PRN:**).

5. Does the message PS ERROR 18 appear in the display window? If so, check the following:

   - □ Are you on a network? If so, many networks send a non-PostScript banner page to the printer before your job which the PostScript interpreter does not understand. Sending a non-PostScript file to the printer causes a PS ERROR 18. If you are experiencing this type of problem, either turn this banner page off or alter the network in such a way so that it sends a PostScript banner page.
   - □ Do you receive a PS ERROR 18 when trying to print from a software application? If so, try using another PostScript printer driver (see the "Printer Drivers for IBM-compatible PCs" section in Chapter 2).
   - □ If you have created your own PostScript program, try using the **doprinterrors** PostScript operator, given in Appendix C, to help determine the cause of the PS ERROR 18.

- **Does your computer's monitor indicate that the job has been cancelled?**

  YES - Check the following:

  Check your computer's I/O configuration. If you are not familiar with how to configure your computer, see the "Verifying Computer Configuration for IBM-compatible PCs" section of Chapter 2.

  NO - Go to the next question.

- **Does the message `PS ERROR 09` appear in the display window?**

  YES - Check the following:

  Check to see if you cancelled a print job.

  NO - Go to the next question.

- **Is your print data being correctly and completely printed?**

  YES - Check the following:

  If you are experiencing a printer problem not described in this checklist, and no messages appear in the display window, perform the maintenance procedures described in your *LaserJet Printer User's Manual*. If you are still unable to resolve the difficulty, see the next section, "Calling for Help."

  NO - Check the following:

  If there is no error message, but you are losing data, check your software application manual to be sure you have no errors in the print files. If there is an error message displayed on the Control Panel, refer to Chapter 4 for help.

Calling for Help

Hewlett-Packard and its dealers stand behind the HP product you have purchased. Several sources of support are available. Follow these steps to get the help you need.

Use the Guide

The information in this guide may help you solve the problem on your own. If the *printer's* Control Panel is displaying an attendance or error message, you can find an explanation and suggested action in Chapter 4. If you are having trouble, Chapter 5 contains problem solving information. In Chapter 5 you will also find warranty and cartridge replacement information to help if you have a cartridge failure.

Ask Your Organization

Your organization may be able to help you. Some companies designate central support personnel that you may go to when you have problems with your equipment. These central support personnel, in turn, may call special resources within HP for help.

Call Your Dealer

If the support services listed above do not provide you with the help you need, call your dealer. A dealer understands your software and equipment and can help you solve most problems.

Before calling, please answer the questions in Table 5-1 and, if possible, print a Test Page both with and without the cartridge installed. This information will help us answer your questions quickly.

Table 5-1. LaserJet Printer Setup Information Sheet

What is your printer serial number?	
What brand and model of computer are you using?	
What version of DOS are you using?	
What commands are in your CONFIG.SYS and AUTOEXEC.BAT files?	
What port are you connected to? COM1, LPT1 ... ?	
What cable are you using and who is the manufacturer?	
What software package and version are you using?	
What software printer driver have you selected?	
Are you using additional typefaces with your cartridge?	
Are you using any special equipment or software?	
Are you using special interface, or memory boards?	
Are you using a spooler/sharing device?	
Are you on a network?	

To locate an authorized HP dealer in the U.S. call 1-800-752-0900. Or, refer to the listing located at the back of your *LaserJet Printer User's Manual*.

Call Worldwide Sales and Service Offices

Hewlett-Packard products are sold and supported worldwide through Hewlett-Packard Sales and Service Offices. To locate the one nearest you, consult your telephone directory or contact one of the major Hewlett-Packard offices listed in your *LaserJet Printer User's Manual*.

Call the U.S. Personal Peripheral Assist Line

Hewlett-Packard also offers world-wide support (in English) through the Personal Peripheral Assist Line. A customer assistance technician can offer advice to help you solve your problem. The Personal Peripheral Assist Line number in the United States is:

(208) 323-2551

The Personal Peripheral Assist Line is open from 7 a.m. to 6 p.m. Mountain Standard Time (MST), Monday through Friday, except Wednesdays when it is open from 7 a.m. to 4 p.m. MST.

Before you call, make sure you have followed the instructions in this guide and have asked your dealer for help. Our support representatives can provide you with faster service if you answer the questions in Table 5-1 before calling.

Note

If you have questions about the PostScript programming language, see Appendix C and the books referenced at the end of Appendix C.

Limited Warranty

Hewlett-Packard warrants this product against defects in materials and workmanship for one (1) year from the Date of Purchase. If HP receives notice of such defects during the warranty period, HP will replace cartridges which prove to be defective. Should HP be unable to replace the cartridge within a reasonable amount of time, you will receive a refund of the purchase price.

Exclusions

The above warranty shall not apply to defects resulting from accident or misuse, unauthorized service or modification, or operation outside of the environmental specifications of your printer.

Warranty Limitations

HP makes no other warranty, whether written or oral, express or implied, with respect to this cartridge. HP specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

Some states or provinces do not allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. However, any implied warranty of merchantability or fitness is limited to the one year duration of this written warranty.

Cartridge Replacement

If the cartridge (part number HP 33439Q) fails within the one (1) year warranty period, return the cartridge to the point of purchase for replacement. Be sure to include a copy of your purchase receipt with the returned cartridge. If you are unable to return the cartridge to its original point of purchase, you can obtain a replacement cartridge by providing any authorized HP Dealer or HP Sales Office with the defective cartridge and its purchase receipt.

A

Typeface Families

Introduction

Typeface refers to the design of **characters** and symbols. Typefaces increase readability, draw the reader's attention, create a mood, and add impact. Typefaces of similar design but different stroke weights, styles, or widths are grouped into families. Your PostScript cartridge contains members of 11 **typeface families**.

Below is a brief description of each of the 11 typeface families. Following each description is a subset of the characters your cartridge offers. The characters are shown in an upright style, 10-**point size**. These characters can be scaled to any size. See the "Built-In Typeface Offering" section of Chapter 1 for a listing of your cartridge's typefaces.

ITC Avant Garde Gothic

The ITC Avant Garde Gothic typeface has a symmetrical and modern appearance. It is often used for **display type** and headings.

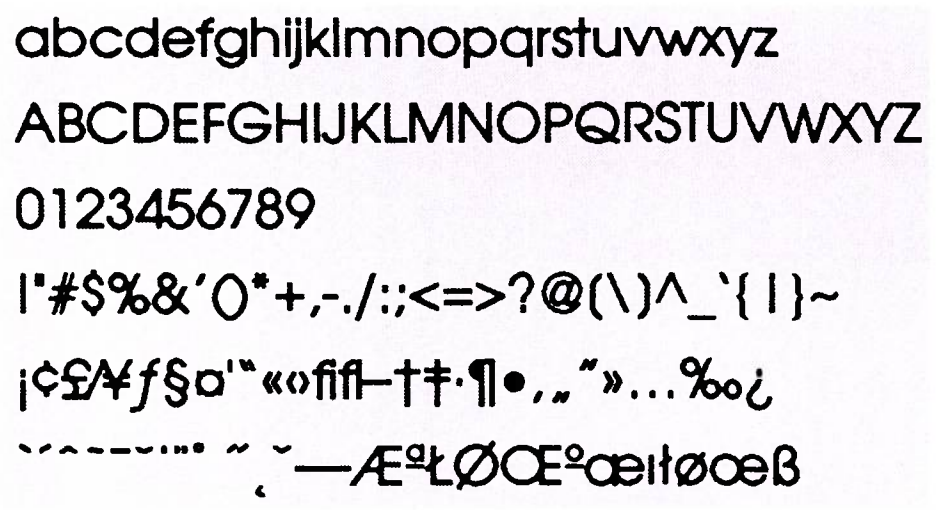


Figure A-1.

ITC Bookman

ITC Bookman is a simple, easy-to-read typeface. Its characteristics make it an excellent choice for situations where the reading conditions are less than ideal.

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

0123456789

!"#$%&'()*+,-./:;<=>?@[\]^_'{|}~

¡¢£⁄¥ƒ§¤'"«‹›fifl–†‡·¶•‚„"»…‰¿

`´ˆ˜¯˘˙¨ ˚ ¸˝—ÆªŁØŒºæıłøœß

Figure A-2.

Courier

Courier is the PostScript Cartridge's only fixed space typeface. It is a popular "typewriter" style typeface. It is also often used for computer code and tables.

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

0123456789

!"#$%&'()*+,-./:;<=>?@[\]^_`{|}~

¡¢£⁄¥ƒ§¤'"«‹ ›fifl–†‡·¶•‚„"»…‰¿

`´ˆ˜¯˘˙¨ ˚ ¸˝—ÆªŁØŒºæıłøœß

Figure A-3.

Helvetica

Helvetica has superb legibility. Its flawless, modern, and clean design makes it an excellent professional typeface for eye-catching headings.

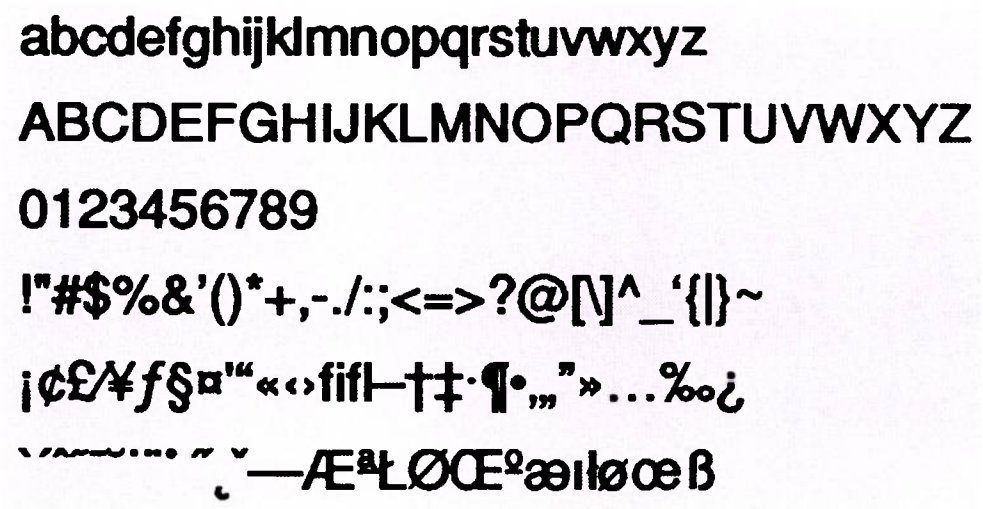


Figure A-4.

Helvetica Narrow

Helvetica Narrow is a compact and easy-to-read design. Its number set is especially legible. It is often used for accounting and finance applications.

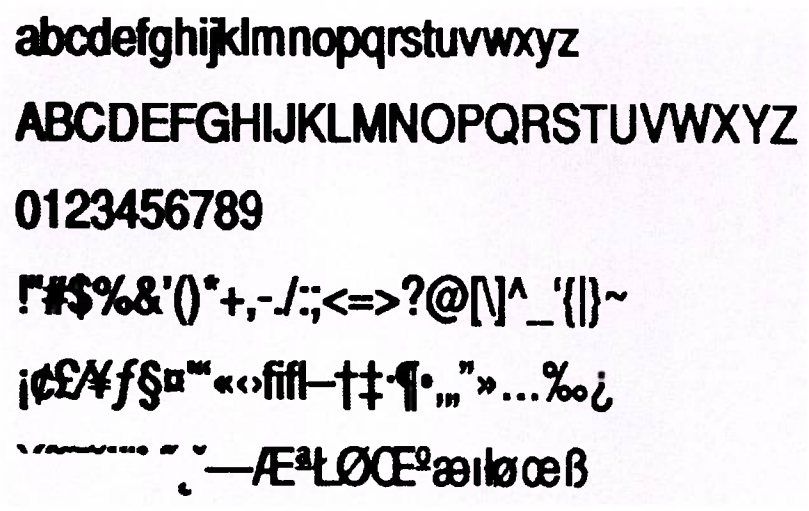


Figure A-5.

New Century Schoolbook

This typeface was originally designed to facilitate learning to read. It is widely used for school textbooks.

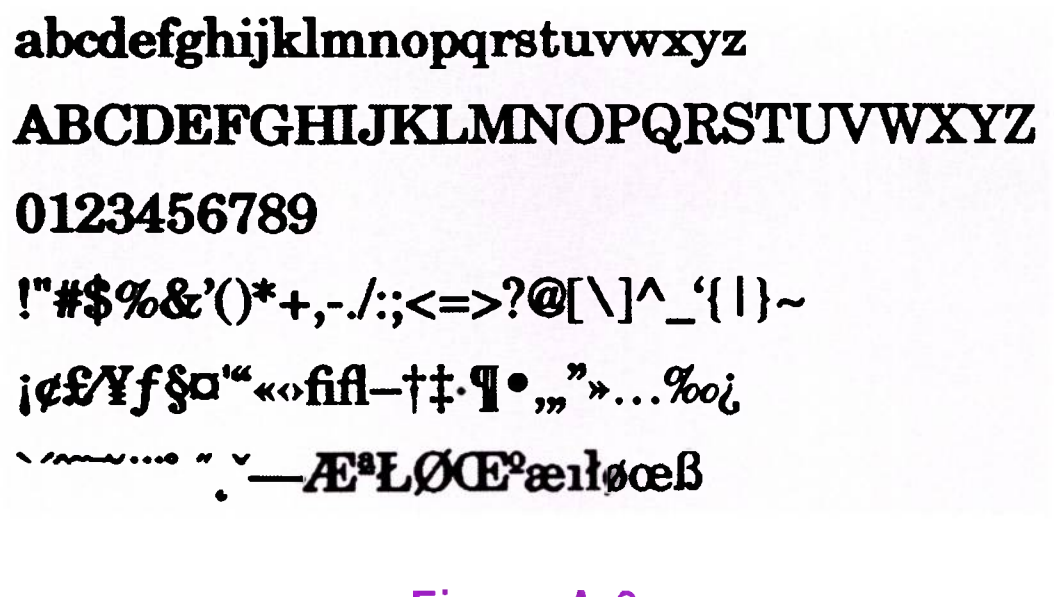


Figure A-6.

Palatino

This typeface has a "classy" appearance. It works well for both text and display applications. Palatino is often used for annual reports, magazines, and advertisements.

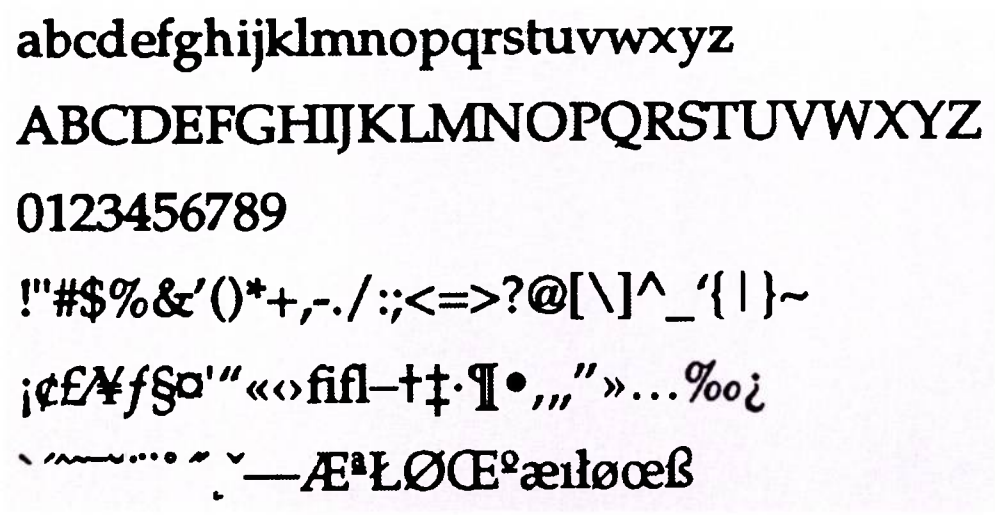


Figure A-7.

Symbol

The Symbol typeface is used for science and math applications and other documents where special characters are required.

αβχδεφγηιφκλμνοπθρστυϖωξψζ

ΑΒΧΔΕΦΓΗΙϑΚΛΜΝΟΠΘΡΣΤΥςΩΞΨΖ

0123456789

!∀#∃%&∋()*+,−./:;<=>?≅[∴]⊥_ {|}~

ϒ′≤⁄∞ƒ♣♦♥♠↔←↑→↓°±″≥×∝∂•÷≠≡≈…|—↵

ℵℑℜ℘⊗⊕Ø∩∪⊃⊇⊄⊂⊆∈∉∠∇®©™∏√·¬∧∨⇔⇐⇑⇒

⇓◊〈®©™Σ⎛⎜⎝⎡⎢⎣⎧⎨⎩⎫⎬⎭⎪⎮⎞⎟⎠⎤⎥⎦⎪⎮⎫⎬⎭

Figure A-8.

Times

This typeface has extreme typographic legibility making it a popular typestyle for text, newsletters, memos, reports, and any document requiring a professional "typeset" appearance. Also, its compact design makes it an excellent choice when space conservation is a priority.

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

0123456789

!"#$%&'()*+,-./:;<=>?@[\]^_‘{|}~

¡¢£⁄¥ƒ§¤'“«‹›fifl–†‡·¶•‚„”»…‰¿

`´ˆ˜¯˘˙¨˚¸˝˛ˇ—ÆªŁØŒºæıłøœß

Figure A-9.

ITC Zapf Chancery

ITC Zapf Chancery is a typeface with a handwritten appearance. It is appropriate for menus, greeting cards, announcements, and other personalized messages.

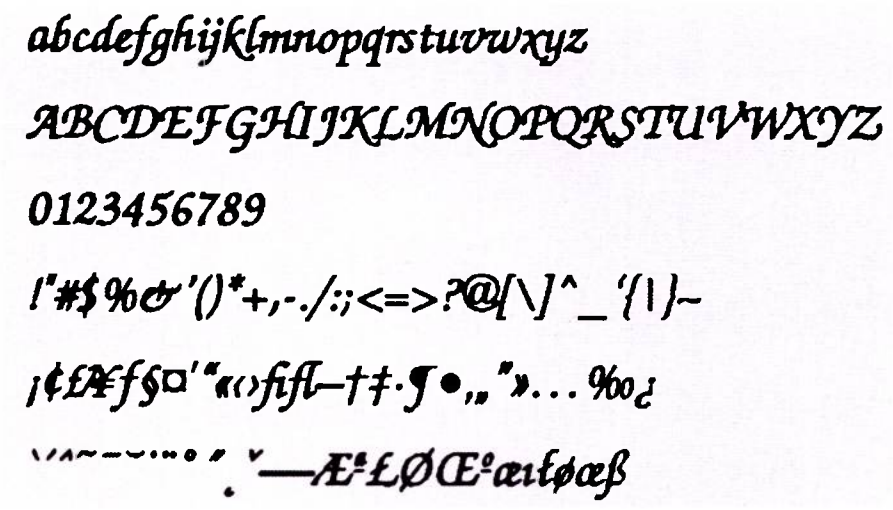


Figure A-10.

ITC Zapf Dingbats

ITC Zapf Dingbats is a collection of signs and symbols. Use it for bullet points or to create a decorative border to add interest to your document.

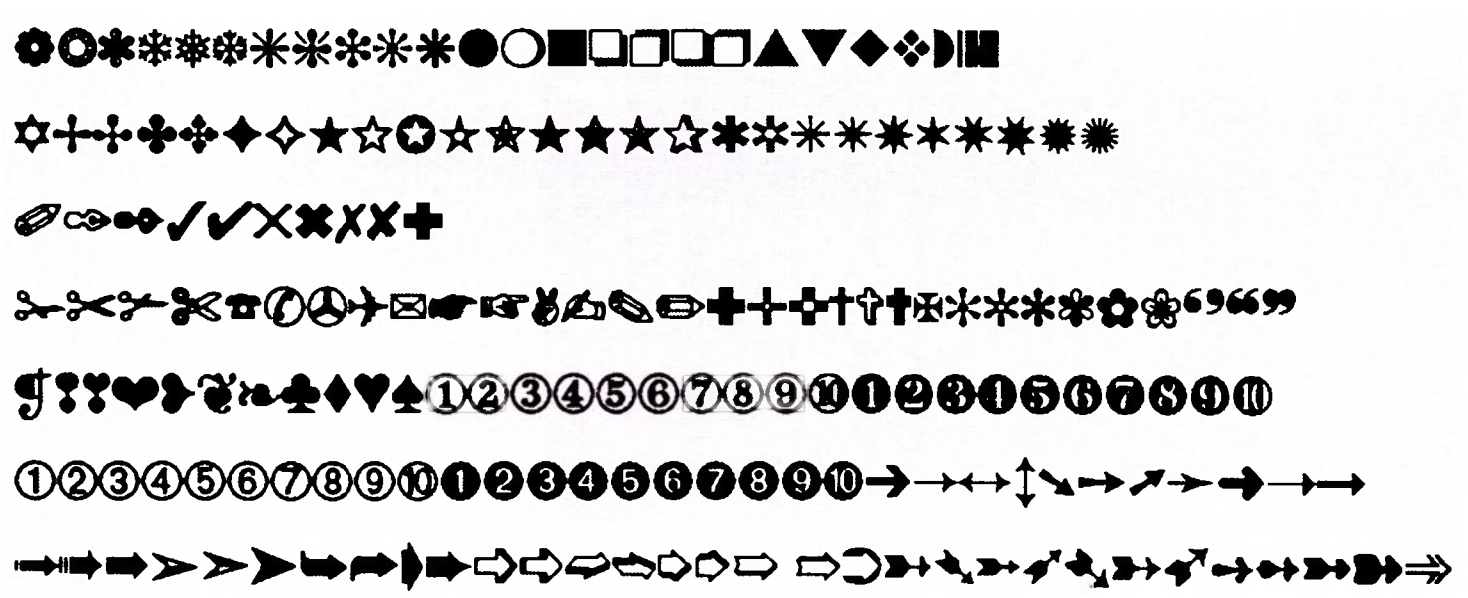


Figure A-11.

B

Character Sets

Character Set Tables

This appendix includes three character set tables:

- The ISOLatin1 character set used by Adobe text typefaces.
- A Symbol character set which includes mathematics and Greek characters which can be used for formulas and equations.
- A Dingbat character set for ITC Zapf Dingbats.

These tables display the characters and symbols for each of the character sets listed above along with their ASCII decimal equivalents. Characters not found on your keyboard can be inserted into text by using their decimal equivalents. In addition, your software may allow you to access additional characters, such as accented characters. Refer to your software manual for information on printing these characters and any additional ones it may support.

Note

Your software may not support some of these characters. For more information on how to print these characters, see your software manual.

Some characters will not appear on your screen the same way they print unless your computer has matching screen fonts.

Table B-1. ISOLatin1 Character Set

NUL 0	DLE 16	SP 32	0 48	@ 64	P 80	‘ 96	p 112	 128	 144	 160	 176	 192	— 208	 224	 240
SOH 1	DC1 17	! 33	1 49	A 65	Q 81	a 97	q 113	 129	 145	¡ 161	– 177	` 193	 209	Æ 225	æ 241
STX 2	DC2 18	" 34	2 50	B 66	R 82	b 98	r 114	 130	 146	¢ 162	† 178	´ 194	 210	 226	 242
ETX 3	DC3 19	# 35	3 51	C 67	S 83	c 99	s 115	 131	 147	£ 163	‡ 179	^ 195	 211	a 227	 243
EOT 4	DC4 20	$ 36	4 52	D 68	T 84	d 100	t 116	 132	 148	/ 164	· 180	~ 196	 212	 228	 244
ENQ 5	NAK 21	% 37	5 53	E 69	U 85	e 101	u 117	 133	 149	¥ 165	 181	¯ 197	 213	 229	ı 245
ACK 6	SYN 22	& 38	6 54	F 70	V 86	f 102	v 118	 134	 150	ƒ 166	¶ 182	˘ 198	 214	 230	 246
BEL 7	ETB 23	’ 39	7 55	G 71	W 87	g 103	w 119	 135	 151	§ 167	• 183	· 199	 215	 231	 247
BS 8	CAN 24	(40	8 56	H 72	X 88	h 104	x 120	 136	 152	¤ 168	, 184	¨ 200	 216	Ł 232	ł 248
HT 9	EM 25	) 41	9 57	I 73	Y 89	i 105	y 121	 137	 153	' 169	„ 185	 201	 217	Ø 233	ø 249
LF 10	SUB 26	* 42	: 58	J 74	Z 90	j 106	z 122	 138	 154	“ 170	” 186	° 202	 218	Œ 234	œ 250
VT 11	ESC 27	+ 43	; 59	K 75	[91	k 107	{ 123	 139	 155	« 171	» 187	¸ 203	 219	º 235	ß 251
FF 12	FS 28	, 44	< 60	L 76	\ 92	l 108	| 124	 140	 156	‹ 172	… 188	 204	 220	 236	 252
CR 13	GS 29	- 45	= 61	M 77	] 93	m 109	} 125	 141	 157	› 173	‰ 189	˝ 205	 221	 237	 253
SO 14	RS 30	. 46	> 62	N 78	^ 94	n 110	~ 126	 142	 158	fi 174	 190	˛ 206	 222	 238	 254
SI 15	US 31	/ 47	? 63	O 79	_ 95	o 111	DEL 127	 143	 159	fl 175	¿ 191	ˇ 207	 223	 239	 255

Table B-2. Symbol Character Set

NUL 0	DLE 16	SP 32	0 48	≅ 64	Π 80	‾ 96	π 112	128	144	160	° 176	ℵ 192	∠ 208	◊ 224	240
SOH 1	DC1 17	! 33	1 49	A 65	Θ 81	α 97	θ 113	129	145	ϒ 161	± 177	ℑ 193	∇ 209	⟨ 225	⟩ 241
STX 2	DC2 18	∀ 34	2 50	B 66	P 82	β 98	ρ 114	130	146	′ 162	″ 178	ℜ 194	® 210	® 226	∫ 242
ETX 3	DC3 19	# 35	3 51	X 67	Σ 83	χ 99	σ 115	131	147	≤ 163	≥ 179	℘ 195	© 211	© 227	⌠ 243
EOT 4	DC4 20	∃ 36	4 52	Δ 68	T 84	δ 100	τ 116	132	148	/ 164	× 180	⊗ 196	TM 212	TM 228	⌡ 244
ENQ 5	NAK 21	% 37	5 53	E 69	Y 85	ε 101	υ 117	133	149	∞ 165	∝ 181	⊕ 197	∏ 213	Σ 229	⎛ 245
ACK 6	SYN 22	& 38	6 54	Φ 70	ς 86	φ 102	ϖ 118	134	150	ƒ 166	∂ 182	∅ 198	√ 214	⎜ 230	⎞ 246
BEL 7	ETB 23	∋ 39	7 55	Γ 71	Ω 87	γ 103	ω 119	135	151	♣ 167	• 183	∩ 199	· 215	⎜ 231	⎟ 247
BS 8	CAN 24	(40	8 56	H 72	Ξ 88	η 104	ξ 120	136	152	♦ 168	÷ 184	∪ 200	¬ 216	⎝ 232	⎠ 248
HT 9	EM 25	) 41	9 57	I 73	Ψ 89	ι 105	ψ 121	137	153	♥ 169	≠ 185	⊃ 201	∧ 217	⎡ 233	⎤ 249
LF 10	SUB 26	* 42	: 58	ϑ 74	Z 90	φ 106	ζ 122	138	154	♠ 170	≡ 186	⊇ 202	∨ 218	⎢ 234	⎥ 250
VT 11	ESC 27	+ 43	; 59	K 75	[91	κ 107	{ 123	139	155	↔ 171	≈ 187	⊄ 203	⇔ 219	⎣ 235	⎦ 251
FF 12	FS 28	, 44	< 60	Λ 76	∴ 92	λ 108	| 124	140	156	← 172	… 188	⊂ 204	⇐ 220	⎧ 236	⎫ 252
CR 13	GS 29	− 45	= 61	M 77	] 93	μ 109	} 125	141	157	↑ 173	⏐ 189	⊆ 205	⇑ 221	{ 237	} 253
SO 14	RS 30	. 46	> 62	N 78	⊥ 94	ν 110	~ 126	142	158	→ 174	— 190	∈ 206	⇒ 222	⎩ 238	⎭ 254
SI 15	US 31	/ 47	? 63	O 79	_ 95	o 111	DEL 127	143	159	↓ 175	↵ 191	∉ 207	⇓ 223	⎪ 239	255

Table B-3. ITC Zapf Dingbats Character Set

NUL 0	DLE 16	SP 32	 48	 64	 80	 96	 112	128	144	160	 176	 192	 208	 224	240
SOH 1	DC1 17	 33	 49	 65	 81	 97	 113	129	145	 161	 177	 193	 209	 225	 241
STX 2	DC2 18	 34	 50	 66	 82	 98	 114	130	146	 162	 178	 194	 210	 226	 242
ETX 3	DC3 19	 35	 51	 67	 83	 99	 115	131	147	 163	 179	 195	 211	 227	 243
EOT 4	DC4 20	 36	 52	 68	 84	 100	 116	132	148	 164	 180	 196	 212	 228	 244
ENQ 5	NAK 21	 37	 53	 69	 85	 101	 117	133	149	 165	 181	 197	 213	 229	 245
ACK 6	SYN 22	 38	 54	 70	 86	 102	 118	134	150	 166	 182	 198	 214	 230	 246
BEL 7	ETB 23	 39	 55	 71	 87	 103	 119	135	151	 167	 183	 199	 215	 231	 247
BS 8	CAN 24	 40	 56	 72	 88	 104	 120	136	152	 168	 184	 200	 216	 232	 248
HT 9	EM 25	 41	 57	 73	 89	 105	 121	137	153	 169	 185	 201	 217	 233	 249
LF 10	SUB 26	 42	 58	 74	 90	 106	 122	138	154	 170	 186	 202	 218	 234	 250
VT 11	ESC 27	 43	 59	 75	 91	 107	 123	139	155	 171	 187	 203	 219	 235	 251
FF 12	FS 28	 44	 60	 76	 92	 108	 124	140	156	 172	 188	 204	 220	 236	 252
CR 13	GS 29	 45	 61	 77	 93	 109	 125	141	157	 173	 189	 205	 221	 237	 253
SO 14	RS 30	 46	 62	 78	 94	 110	 126	142	158	 174	 190	 206	 222	 238	 254
SI 15	US 31	 47	 63	 79	 95	 111	DEL 127	143	159	 175	 191	 207	 223	 239	255

C

PostScript Technical Notes

Introduction

All PostScript printers use a standard set of PostScript operators to describe the appearance of a printed page. Your cartridge uses these operators. If you are interested in learning more about these operators or you need assistance in programming in the PostScript programming language, see the *PostScript Language Reference Manual* referenced at the end of this appendix.

Besides the standard set of operators, your PostScript cartridge has an additional set of device-specific operators. These operators provide a way for software and PostScript programmers to access the special printing features of your printer. A special dictionary, named statusdict, is used to define these device-specific operators.

Statusdict operators are used to change two types of **system parameters**:

- Volatile - parameters that remain in effect only until the current job ends.
- Persistent - parameters that remain in effect from job to job and even when the printer is turned off.

Changing System Parameters

To change volatile parameters, enter the statusdict as described in the next section.

To change persistent parameters, you must first exit the normal printer save/restore environment. To do this, execute the following PostScript statement:

serverdict begin *password* **exitserver**

where *password* is an integer. The default password is 0, but it may be changed to any other number by executing the **setpassword** operator. After successfully executing this statement, enter the statusdict as described below.

Note

If you change the password, be sure to record the new integer. Without the password, you will be unable to change persistent parameters.

Entering the Statusdict

To enter the statusdict, execute the following command:

statusdict begin

Once you have entered the statusdict, the statusdict operators may be used to change system parameters. Some system parameters are stored in statusdict as ordinary data values (integers, booleans, strings, etc.). These values may be read, by executing their names, or changed using the **def** operator.

You have access to the statusdict operators that change persistent parameters only until the next end-of-file marker is executed.

Note

Only those familiar with the PostScript language should attempt to change persistent parameters. Before changing a parameter, please read all the material relating to it. This will help prevent mistakes that might have undesirable effects on the printer.

Statusdict Operators

The following sections list the statusdict operators defined for HP LaserJet printers. These operators are grouped into sections relating to their function. Operators used to change persistent parameters are marked with an asterisk (*).

Note

Since the following statusdict operators are device-specific, PostScript programs using these operators may not run on other PostScript printers.

System Setup Operators

There are several System Setup operators. These operators are usually used by the System Administrator when the printer is first installed.

setpassword* – *old new* setpassword *boolean*
Sets the System Administrator password. This password must be used to execute the exitserver command and make changes to persistent parameters. The values, old and new, are 16 bit integers. If *old* is the correct old password, setpassword changes the password to *new* and returns *true*; otherwise, it returns *false*. The factory default password is Ø.

checkpassword – *password* checkpassword *boolean*
Returns *true* if *password* is equal to the current System Administrator password; otherwise, it returns *false*.

appletalktype – appletalktype *string*
Returns a *string* that identifies the type of printer in use. The default value is LaserWriter since the Macintosh Print Manager assumes that all PostScript printers are of type LaserWriter.

setdoautocontinue – *boolean* setdoautocontinue
Turns the auto continue feature ON, (*true*) or OFF (*false*). If the auto continue feature is ON, PS error messages will not appear in the Control Panel display. The printer will return online and resume operation followed by POSTSCRIPT READY or PS READY appearing in the Control Panel display. If the auto continue feature is OFF, system error and PS error messages remain in the display window until you correct the problem, tell the printer to continue, or both. The factory default is ON.

doautocontinue* – doautocontinue *boolean*
Returns a *boolean* indicating whether the auto continue feature is on (*true*) or off (*false*).

setdoidlefonts* – *boolean* setdoidlefonts
Turns idle-time font caching on (*true*) or off (*false*). This operator does not let you specify which fonts to work on during idle time. The factory default is off.

doidlefonts – doidlefonts *boolean*
Shows whether idle-time font caching is on or off. *True* indicates that the printer will cache fonts during idle times. *False* indicates that idle-time font caching will not occur.

idlefonts – idlefonts *mark font sx sy rot nchars ...*
Returns a *mark* followed by integers which indicate which fonts will be cached during idle time. The fonts cached during idle time are fixed and cannot be changed. The fonts cached during idle time are: Courier (10 point), Helvetica (10,12,14 point), Helvetica Bold (10,12,14 point lowercase), Times Bold (10,12,14 point lowercase), and Times Roman (10,12,14 point).

setdojamrecovery* – *boolean* setdojamrecovery
Turns jam recovery on (*true*) or off (*false*). If jam recovery is on, the printer re-prints jammed pages. If jam recovery is off and a jam occurs, the printer cancels the current job. Using jam recovery can reduce printer throughput (or require more memory to maintain the throughput possible without jam recovery). The factory default is off.

* Indicates operators used to change persistent parameters.

dojamrecovery – dojamrecovery *boolean*
Indicates whether jam recovery is on (*true*) or off (*false*).

setdoprinterrors * – *boolean* setdoprinterrors
Turns the printing of error messages on the current page on or off. Error messages can be helpful for debugging PostScript programs . When **doprinterrors** is *true*, errors are printed automatically by a built-in error handler called "ehandler.ps." For more information on this error handler, see *PostScript Language Program Design*, referenced at the end of this appendix. The factory default is off.

doprinterrors – doprinterrors *boolean*
Returns a *boolean* indicating whether or not the printer prints error messages.

setdoret – integer setdoret
Sets the Resolution Enhancement Technology (RET) for the HP LaserJet III, IIID, and IIIP printers to the *integer* specified for the current print job only. Possible *integer* values follow: 0 = OFF, 1 = LIGHT, 2 = MEDIUM, 3 = DARK. The Factory default is MEDIUM.

doret – doret integer
Returns an *integer* indicating the RET setting for the HP LaserJet III, IIID, and IIIP printers. Possible *integer* values follow: 0 = OFF, 1 = LIGHT, 2 = MEDIUM, 3 = DARK.

setdostartpage* – *boolean* setdostartpage
Turns the Start Page on or off. You can also do this using the printer's Control Panel. The factory default is on.

dostartpage – dostartpage *boolean*
Returns a *boolean* indicating whether or not a Start-up Page will be printed at power-up.

setmargins* – *top left* setmargins
Adjusts the printer's margins, thereby changing the position of the imaging area on the physical page. *Top* and *left* are signed 8-bit integers that specify distances in $\frac{1}{300}$ inch increments. A positive margin widens the distance between the edge of the page and the imaging area. A negative margin decreases it. This operator is intended to fine tune the printer's margin alignment when the printer is first setup. The factory defaults are Ø.

margins – margins *top left*
Returns the *top* and *left* margin adjustment values (signed 8-bit integers).

pagecount – pagecount integer
Returns an *integer* which shows approximately how many pages have been printed while in PostScript mode (if duplexed, each side counts as one page). The page count can be used to determine when to change the ozone filter and to track usage of your printer. The page count is current as long as the printer is powered on. When the printer is powered off, the page count is rounded-down to the nearest 10 page increment and recorded in memory. This value cannot be reset.

To determine the total number of pages printed on your HP LaserJet IID, III, IIID, or IIIP printer, add the page count given by the **pagecount** PostScript operator on the PostScript Test Page to the page count given on the PCL Self Test Page.

pagestackorder – pagestackorder *boolean*
For the HP LaserJet IID printer, this operator returns a *boolean* indicating whether pages are ejected face-up or face-down. *True* indicates face-down and *false* indicates face-up. Also, *true* indicates the 9:00 position of the Output Selector Knob on the IID or IIID printer. *False*, indicates the 11:00 position.

* Indicates operators used to change persistent parameters .

setprintername * – *string* setprintername
Establishes a *string* for the printer's name.

1. If you have selected I/O=APPLETK from the printer's Configuration Menu, you can use this operator as described below:

   You can establish a persistent *string* for the printer's name. The *string* is a variable, up to 31 characters in length, that remains in effect from job to job and even when the printer is turned off. The *string* is stored in the non-volatile memory of the AppleTalk I/O board. If the AppleTalk I/O board is removed from one printer and reinstalled in another, the *string* will persist in the memory of the AppleTalk I/O board.

2. If you have selected either I/O=SERIAL or I/O=PARALLEL from the printer's Configuration Menu, you can use this operator in either of two ways:

   a. You can establish a persistent *string* for the printer's name. The *string* must be "Hewlett-Packard LaserJet #x." The last character (x) must be a printing character and not the character ":" or "@". The factory default for x is Ø.

   OR

   b. You can establish a semi-persistent *string* for the printer's name. The *string* is a variable, up to 31 characters in length, that remains in effect from job to job but not when the printer is turned off.

printername – *string* printername *substring*
Stores the printer's name in the specified *string* (overwriting some initial portion of its value) and returns a *string* object designating the *substring* actually used.

product – product *string*
Returns a *string* which is the name of your HP LaserJet printer. The *string* will be either HP LaserJet IID, HP LaserJet IIP, HP LaserJet III, HP LaserJet IIID, or HP LaserJet IIIP.

revision – revision integer
Returns the revision number of the device-specific portion of the PostScript interpreter. The **version** operator in systemdict returns the version number of the device-independent portion of the PostScript interpreter.

setsccbatch* – channel baud parity setsccbatch
Sets communication parameters as specified by three integers designating *channel* (9 = RS-422, 25=RS-232), *baud rate* (300, 600, 1200, 2400, 4800, 9600, 19200), and *parity* (3 = All 8 bits of each character are treated as data and no parity checking is performed). These parameters may be set independently for each of the two channels. The default values are 9600 and 3 respectively.

The new *baud* rate and *parity* do not take effect until the end of the current job.

Note For the HP LaserJet IIP or IIIP printer, the serial type is hardware selectable (see Appendix D of the *LaserJet IIP* or *IIIP Printer User's Manual*).

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sccbatch – *channel* sccbatch *baud parity*
Returns the *baud* rate and *parity* for the specified *channel* (9 = RS-422, 25 = RS-232).

Timeout Operators

setdefaulttimeouts* – *job manualfeed wait* setdefaulttimeouts
Establishes the default values used at the beginning of each job to initialize the job, manual feed, and wait timeouts. Each value is an unsigned 8-bit integer from Ø to 255 indicating the timeout in seconds. A value of Ø means there is no time limit. The job and wait timeouts have a limited range. They may be set to Ø or a value greater than or equal to 15. The factory defaults are: job = Ø, manualfeed = 60, wait = 40.

defaulttimeouts – defaulttimeouts *job manualfeed wait*
Returns the default job, manual feed, and wait timeouts (in seconds). Each value returned is an unsigned 8-bit integer.

setjobtimeout – *integer* setjobtimeout
Sets the job timeout to the *integer* specified. The *integer* may be Ø or a value greater than or equal to 15. This value remains in effect only until the current job ends. After this, the default job timeout is active. A value of Ø means there is no time limit. The factory default is Ø.

jobtimeout – jobtimeout *integer*
Returns the number of seconds the printer waits before a job timeout occurs. This value is in effect only until the current job ends. A value of Ø means there is no time limit.

manualfeedtimeout – manualfeedtimeout *integer*
Indicates the number of seconds that the printer waits for a page to be manually fed before cancelling the job. This value is in effect only when **manualfeed** is *true*. The **manualfeedtimeout** is not an operator. It is a variable name defined in statusdict. It is initialized to the default manual feed timeout at the beginning of a job; however, it may be changed to any positive *integer* by using **def**, **put**, or **store**, e.g. **/manualfeedtimeout 25 def**. Changes made to this variable remain in effect only until the current job ends.

waittimeout – waittimeout *integer*
Indicates the number of seconds the printer waits to receive additional characters before cancelling the job. The **waittimeout** is not an operator. It is a variable name defined in statusdict. It is initialized to the default wait timeout at the beginning of a job; however, it may be changed to **0** or a value greater than or equal to 15 by using either **def**, **put**, or **store**, e.g. **/waittimeout** 25

def. Changes made to this variable remain in effect only until the current job ends.

Duplex Operators

The statusdict operators defined in this section apply *only* to the HP LaserJet IID and IIID printers.

setdefaultduplexmode* – *boolean* setdefaultduplexmode
Modifies the value of defaultduplexmode. When *true*, the default printing mode is duplex (double-sided). When *false*, the default printing mode is simplex (single-sided). You can also select duplex printing using the printer's Control Panel. The factory default printing mode is simplex.

defaultduplexmode – defaultduplexmode *boolean*
Returns a *boolean* indicating the default printing mode. *True* indicates duplex (double-sided) printing mode. *False* indicates simplex (single-sided) printing mode.

setduplexmode – *boolean* setduplexmode
Turns duplex printing on or off. *True* turns duplex printing on. *False* turns duplex printing off. This operator affects only the current job. After the current job, **defaultduplexmode** is active.

duplexmode – duplexmode *boolean*
Returns a *boolean* indicating the printing mode. *True* indicates duplex (double-sided) printing. *False* indicates simplex (single-sided) printing.

setdefaulttumble* – *boolean* setdefaulttumble
Sets the default value for **tumble**. When *true*, the second side of a duplex page is upside-down in comparison to the first side (this mode is often used for wall calendars). When *false*, the second side has the same orientation as the first side. You can also use your printer's Control Panel to set this value. A **tumble** value of *true* is the same as BIND=SHORT EDGE while *false* is the same as BIND=LONG EDGE. The factory default is BIND=LONG EDGE; i.e. a tumble value of *false*.

defaulttumble – defaulttumble *boolean*
Returns a *boolean* indicating whether **tumble** is on or off.

settumble – *boolean* settumble
Turns **tumble** on or off ONLY for the current job. After the current job, **tumble** is set to the value of **defaulttumble**.

tumble – tumble *boolean*
Returns a *boolean* indicating the orientation of text on a duplex page. When *true*, the second side of a duplex page is upside-down in comparison to the first side. When *false*, the second side has the same orientation as the first side. A value of *true* is the same as BIND=SHORT EDGE while *false* is the same as BIND=LONG EDGE.

firstside – firstside *boolean*
Returns a *boolean* indicating whether or not the image being created falls on the first side of a logical page. This value will always be *true* for the first page of a job.

Page Type Operators

You can use your PostScript cartridge with several different sizes of paper and envelopes. The following operators are used to select page sizes and establish imaging areas . Text or graphics falling outside the imaging area will be clipped. (These operators do NOT affect tray selection).

letter – letter
Establishes an imaging area of 8.0 x 10.5 inches centered on an 8.5 x 11.0 inch page.

legal – legal
Establishes an imaging area of 8.0 x 13.5 inches centered on an 8.5 x 14.0 inch page.

executivepage – executivepage
Establishes an imaging area of 6.72 x 10.00 inches centered on a 7.25 x 10.50 inch page.

a4 – a4
Establishes an imaging area of 197.8 by 284.5 mm centered on a 210 by 297 mm page.

com10envelope – com10envelope
Establishes an imaging area of 3.63 x 9.00 inches centered on a 4.125 x 9.50 inch envelope.

monarcenvelope – monarcenvelope
Establishes an imaging area of 3.36 x 7.00 inches centered on a 3.875 x 7.50 inch envelope.

c5envelope – c5envelope
Establishes an imaging area of 5.87 x 8.51 inches centered on a 6.38 x 9.01 inch envelope.

dlenvelope – dlenvelope
Establishes an imaging area of 97.54 by 207.3 mm centered on a 110 by 220 mm envelope.

Tray Selection Operators

HP LaserJet printers have the ability to print several media sizes and types for paper, envelopes, and transparencies. In addition, the IIP, IID, IIID, and IIIP printers can print using the upper or MP tray, the lower tray or either tray. Also, with the IID and IIID printers, an automatic envelope feeder may be added as a third input tray. The following operators are used for input tray selection.

setdefaultpapertray* – *integer* setdefaultpapertray
Selects the default tray. Paper is taken from the default tray unless otherwise specified. Possible values are: Ø = upper or MP tray, 1 = lower tray, 2 = automatic envelope feeder (applies only to the IID and IIID printers). At the beginning of each job, **papertray** is set to the default value and the page type is set according to what size media is selected for the default tray. The default paper tray can also be selected using the printer's Control Panel. The factory default is Ø.

defaultpapertray – defaultpapertray *integer*
Returns an *integer* indicating the default paper tray. Possible values are: Ø = upper or MP tray, 1 = lower tray, 2 = automatic envelope feeder.

setpapertray – *integer* setpapertray
Establishes which input tray to take paper from and sets the imaging area according to what size media is selected. Possible values are:
Ø = upper or MP tray, 1 = lower tray, 2 = automatic envelope feeder (applies only to the IID and IIID printers). Since this operator establishes a new imaging area, it should be executed

BEFORE any marks are placed on the current page. This operator overrides the default paper tray for the current job. After the current job, the paper tray is set to that specified by **defaultpapertray**.

papertray – papertray *integer*
Returns an *integer* indicating which tray to take paper from for the current job. Possible values are: Ø = upper or MP tray, 1 = lower tray, 2 = automatic envelope feeder.

setdefaulttrayswitch* – *boolean* setdefaulttrayswitch
Sets the **defaulttrayswitch** in non-volatile memory to on or off. The **trayswitch** value is used to turn automatic tray selection on or off. Automatic tray selection means that the printer will take paper from any tray containing the proper paper size. The factory default is on. This default value can also be set using the printer's Control Panel; e.g. select TRAY=ANY. This operator applies only to the HP LaserJet IID, IIP, IIID, and IIIP printers.

defaulttrayswitch – defaulttrayswitch *boolean*
Returns a *boolean* which indicates whether **defaulttrayswitch** is on (*true*) or off (*false*). This operator applies only to the LaserJet IID, IIP, IIID, and IIIP printers.

settrayswitch – *boolean* settrayswitch
Turns automatic tray selection on (*true*) or off (*false*). When automatic tray selection is on, the printer will take paper from any tray containing the proper paper size. This operator only affects the current job. At the end of the current job, automatic tray selection is set according to the value of **defaulttrayswitch**. This operator applies only to the HP LaserJet IID, IIP, IIID, and IIIP printers.

trayswitch – trayswitch *boolean*
Returns a *boolean* which indicates whether automatic tray selection is on (*true*) or off (*false*). This operator applies only to the HP LaserJet IID, IIP, IIID, and IIIP printers.

manualfeed – manualfeed *boolean*
Controls whether paper is fed manually (*true*) or from a paper tray (*false*). Note that **manualfeed** is not an operator. It is a variable defined in statusdict. This value can be changed using any of the operators **put**, **store**, or **def**, e.g., /**manualfeed** *true* **def**. The default value for **manualfeed** is set using the printer's Control

Panel. NOTE: The **manualfeed** operator cannot turn off the manual feed function turned on from the printer's Control Panel.

lettertray – lettertray
Causes the printer to look for a tray containing letter size paper. If one is found, the page type is set to **letter** and **papertray** is set to that tray. If one is not found, a rangecheck error occurs and the page type and **papertray** values are not changed.

legaltray – legaltray
Causes the printer to look for a tray containing **legal** size paper. If one is found, the page type is set to legal and **papertray** is set to that tray. If one is not found, a rangecheck error occurs and the page type and **papertray** values are not changed.

executivetray – executivetray
Causes the printer to look for a tray containing executive size paper. If one is found, the page type is set to **executivepage** and **papertray** is set to that tray. If one is not found, a rangecheck error occurs and the page type and **papertray** values are not changed.

a4tray – a4tray
Causes the printer to look for a tray containing A4 size paper. If one is found, the page type is set to **a4** and **papertray** is set to that tray. If one is not found, a rangecheck error occurs and the page type and **papertray** values are not changed.

com10envelopetray – com10envelopetray
Causes the printer to look for an envelope tray. If one is found and COM10 was selected using the Control Panel (within 10 seconds after envelope insertion), the page type is set to **com10envelope** and **papertray** is set to that tray. If one is not found, a rangecheck error occurs and the page type and **papertray** values are not changed.

monarcenvelopetray – monarcenvelopetray
Causes the printer to look for an envelope tray. If one is found and MONARCH was selected using the Control Panel (within 10 seconds after envelope insertion), the page type is set to **monarcenvelope** and **papertray** is set to that tray. If one is not found, a rangecheck error occurs and the page type and **papertray** values are not changed.

c5envelopetray – c5envelopetray
Causes the printer to look for an envelope tray. If one is found and C5 was selected using the Control Panel (within 10 seconds after envelope insertion), the page type is set to **c5envelope** and **papertray** is set to that tray. If one is not found, a rangecheck error occurs and the page type and **papertray** values are not changed.

dlenvelopetray – dlenvelopetray
Causes the printer to look for an envelope tray. If one is found and DL was selected using the Control Panel (within 10 seconds after envelope insertion), the page type is set to **dlenvelope** and **papertray** is set to that tray. If one is not found, a rangecheck error occurs and the page type and **papertray** values are not changed.

Related Documentation

If you are interested in learning more about the PostScript language, the following books are available at book stores or from their publishers in the U.S.A.:

Adobe Systems Incorporated . *PostScript Language Program Design*. Menlo Park: Addison-Wesley Publishing Company , Inc., 1988.

Adobe Systems Incorporated. *PostScript Language Reference Manual*. Menlo Park: Addison-Wesley Publishing Company, Inc., 1985.

Adobe Systems Incorporated. *PostScript Language Tutorial and Cookbook*. Menlo Park: Addison-Wesley Publishing Company, Inc., 1985.

Holzgang, David A. *Understanding PostScript Programming*, 2nd ed. San Francisco: Sybex, Inc., 1988.

Roth, Stephen F. , ed. *Real World PostScript*. Menlo Park: Addison-Wesley Publishing Company, Inc., 1988.

Smith, Ross , *Learning PostScript, A Visual Approach*. Berkeley, CA: Peachpit Press, 1990.

Translated Documentation

The Adobe PostScript Language titles, listed on the previous page, are available in several languages. If you are interested in purchasing one of these books, you may also write to one on the addresses given below:

English editions:	Addison-Wesley Publishers, Ltd. Finchampstead Road Wokingham, Berkshire RG11 2NZ, ENGLAND
	Addison-Wesley Publishers, B.V. P.O. Box 5598 1007 AN Amsterdam, Netherlands
French translation:	InterEditions, Paris 25 rue LeBlanc 75842 Paris Cedex 15, FRANCE
German translation:	Addison-Wesley Verlag Poppelsdorfer Allee 32 5300 Bonn 1, WEST GERMANY
Italian translation:	Tecniche Nuove Via C. Menotti 14 20129 Milan, ITALY
Japanese translation:	ASCII Corporation 6-12-1 Minami Aoyama Minato-ku, Tokyo 107, JAPAN

D

Printer Default Settings

The following tables provide printer Control Panel default settings for the LaserJet IIID, III, IID, IIP or IIIP:

LaserJet IIID

The following tables provide printer Control Panel default settings for the Printing Menu and the Configuration Menu:

Printing Menu

Table D-1. LaserJet IIID Default Settings - Printing Menu

MENU ITEM	FACTORY DEFAULT	RANGE OF SETTINGS
COPIES	1	1 through 99
DUPLEX	OFF	ON or OFF
BIND [1]	LONG EDGE	LONG EDGE or SHORT EDGE
TRAY	ANY	UPPER, LOWER or ANY
MANUAL FEED	OFF	ON or OFF

1 This menu item appears only when duplex is selected.

Configuration Menu

Table D-2.
LaserJet IIID Default Settings - Configuration Menu

MENU ITEM	FACTORY DEFAULT	RANGE OF SETTINGS
AUTO CONT	ON	OFF or ON
I/O	PARALLEL	PARALLEL, SERIAL, APPLETK [1], or OPTIONAL [2]
STARTPAGE	ON	ON or OFF
LANGUAGE	ENG	ENG, FRANCAIS, DEUTSCH, ITALIANO or ESP
SERIAL [3]	RS-232	RS-232 or RS-422
BAUD RATE [3]	9600	300, 600, 1200, 2400, 4800, 9600 or 19200
ROBUST XON [3]	ON	ON or OFF
DTR POLARITY [3]	HI	HI or LO
RET	MEDIUM	DARK, MEDIUM, LIGHT or OFF

1 Appears only if an AppleTalk I/O card is installed.

2 Appears only if an optional I/O card is installed.

3 Appears only if Serial I/O is selected.

LaserJet III

The following tables provide printer Control Panel default settings for the Printing Menu and the Configuration Menu:

Printing Menu

Table D-3. LaserJet III Default Settings - Printing Menu

MENU ITEM	FACTORY DEFAULT	RANGE OF SETTINGS
COPIES	1	1 through 99
MANUAL FEED	OFF	ON or OFF

Configuration Menu

Table D-4.
LaserJet III Default Settings - Configuration Menu

MENU ITEM	FACTORY DEFAULT	RANGE OF SETTINGS
AUTO CONT	ON	OFF or ON
I/O	PARALLEL	PARALLEL, SERIAL, APPLETK [1], or OPTIONAL [2]
STARTPAGE	ON	ON or OFF
LANGUAGE	ENG	ENG, FRANCAIS, DEUTSCH, ITALIANO or ESP
SERIAL [3]	RS-232	RS-232 or RS-422
BAUD RATE [3]	9600	300, 600, 1200, 2400, 4800, 9600 or 19200
ROBUST XON [3]	ON	ON or OFF
DTR POLARITY [3]	HI	HI or LO
RET	MEDIUM	DARK, MEDIUM, LIGHT or OFF

1 Appears only if an AppleTalk I/O card is installed.

2 Appears only if an optional I/O card is installed.

3 Appears only if Serial I/O is selected.

LaserJet IID

The following tables provide printer Control Panel default settings for the Printing Menu and the Configuration Menu:

Printing Menu

Table D-5. LaserJet IID Default Settings - Printing Menu

MENU ITEM	FACTORY DEFAULT	RANGE OF SETTINGS
COPIES	1	1 through 99
DUPLEX	OFF	ON or OFF
BIND [1]	LONG EDGE	LONG EDGE or SHORT EDGE
TRAY	ANY	UPPER, LOWER or ANY
MANUAL FEED	OFF	ON or OFF

1 This menu item appears only when duplex is selected.

Configuration Menu

Table D-6.
LaserJet IID Default Settings - Configuration Menu

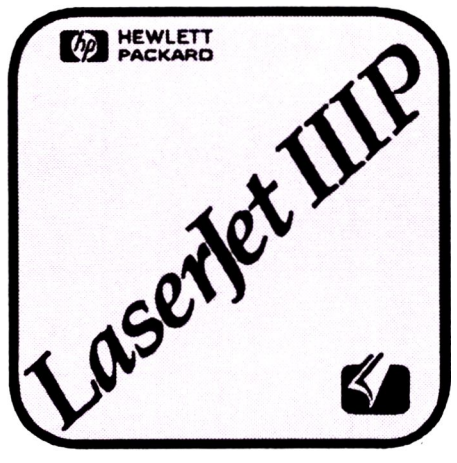
MENU ITEM	FACTORY DEFAULT	RANGE OF SETTINGS
AUTO CONT	ON	OFF or ON
I/O	PARALLEL	PARALLEL, SERIAL, APPLETK [1], or OPTIONAL [2]
STARTPAGE	ON	ON or OFF
LANGUAGE	ENG	ENG, FRANCAIS, DEUTSCH, ITALIAN or ESP
SERIAL [3]	RS-232	RS-232 or RS-422
BAUD RATE [3]	9600	300, 600, 1200, 2400, 4800, 9600 or 19200
ROBUST XON [3]	ON	ON or OFF
DTR POLARITY [3]	HI	HI or LO

1 Appears only if an AppleTalk I/O card is installed.

2 Appears only if an optional I/O card is installed.

3 Appears only if Serial I/O is selected.

LaserJet IIP or IIIP



The following tables provide printer Control Panel default settings for the Printing Menu and the Configuration Menu:

Printing Menu

Table D-7.
LaserJet IIP or IIIP Default Settings - Printing Menu

MENU ITEM	FACTORY DEFAULT	RANGE OF SETTINGS
MP SIZE [1]	LETTER	LETTER, LEGAL, EXEC, A4, COM10, MONARCH, DL or C5
COPIES	1	1 through 99
TRAYS [2]	ANY	ANY, LC TRAY or MP TRAY
MANUAL FEED	OFF	ON or OFF
DEVICE CONFG	(ENTER)	Press the (ENTER) key to enter the Configuration Menu

1 Menu item appears except when an optional Lower Cassette is installed and the **TRAYS** item is set to **TRAYS**

2 The **TRAYS** item only appears if the optional Lower Cassette is installed.

Configuration Menu

Table D-8.
LaserJet IIP/IIIP Default Settings - Configuration Menu

MENU ITEM	FACTORY DEFAULT	RANGE OF SETTINGS
AUTO CONT	ON	OFF or ON
I/O	PARALEL	PARALEL, SERIAL, or APPLETK [1]
STARTUP PG	ON	ON or OFF
LANGUAGE	ENGLISH	ENGLISH, FR, DEUTSCH, ITALIAN or Espanol
BAUDRATE [2]	9600	300, 600, 1200, 2400, 4800, 9600 or 19200
ROBUST XON [2]	ON	ON or OFF
DTR POLAR [2]	HI	HI or LO
RET [3]	MEDIUM	OFF, LIGHT, MEDIUM, DARK

1 Appears only if an AppleTalk I/O card is installed.

2 Appears only if Serial I/O is selected.

3 Appears only on the LaserJet IIIP Printer.

Glossary

AppleTalk

Refers to the Apple Macintosh standard communication protocol.

Application

A software program or group of programs used for word processing, desktop publishing, accounting, etc.

Attendance Message

Control panel display messages asking that you perform a specified task, such as loading paper, before printing continues.

Auto Continue

When a system or PostScript program error occurs, the printer will go off-line and an error message will be displayed. If the auto continue feature is on (AUTO CONT=ON), these error messages will appear in the display window for about 10 seconds. Then, the printer will return on-line and resume operation. The factory default is AUTO CONT=ON.

Baud Rate

The data transfer rate between the computer and the printer in bits per second. The computer and the printer must be configured at the same baud rate. The rate can be set from 300 to 19,200 baud depending on the type of computer used. Baud rate applies only to serial interfaces.

Centronics

An industry standard parallel input/output (I/O) interface. In PostScript mode, the parallel interface is an input-only channel. This means you will not be able to receive any communication back from the printer (see *Parallel Interface*).

Character

A single letter, number, punctuation mark, space, or symbol.

Character Set

A unique subgrouping of all the available characters in a font. The standard character set for your cartridge's text typefaces is ISOLatin1. The ITC Zapf Dingbats and Symbol typefaces are displayed in non-standard character sets. These non-standard character sets consist of symbols rather than text characters.

Clipping Path

Defines the region of the page that may be used for printing. A clipping path may be thought of as a stencil sheet placed on a piece of paper. You may only print within the clipping path. The area outside the clipping path is not affected.

Configuration

The process of specifying certain settings to allow your computer and printer to communicate. For example, interface selection (serial or parallel) is part of printer configuration. The printer is configured through the control panel. The computer is configured through **MODE** commands in the **AUTOEXEC.BAT** file.

Configuration Menu

The Configuration Menu is one of two control panel menus accessed using the MENU key. The selections in the Configuration Menu setup the printer to receive data from the computer.

Default

A printer control panel setting used in the absence of a software application selection (see also *Factory Default*).

Display Type

Type which, by its size or weight, is used to attract attention; usually 14 point or larger.

Drivers

(See *Printer Driver*).

Duplex

Duplex printing allows both sides of a page to be printed. Two-sided printing.

Duplex Lever

(See *Output Selector Knob*).

Factory Default

Control panel menu settings permanently stored in the printer memory. These settings are in use unless you override them by selecting alternative settings from the control panel or from within a software application.

Fixed Spacing

Uniform horizontal spacing between characters and symbols in a font. The width allowed for each character is exactly the same. For example, any **i** has the same space allotment as a **w**. Fonts with fixed spacing have a specific number of characters per inch called pitch (see *Pitch* and *Proportional Spacing*).

Font

A font is a set of characters that have similar characteristics. A font has an assigned name, typeface, and is further described by its character set, pitch, point size, spacing, stroke weight, and style. For example, the name of the font used for this text is *Century Schoolbook*; its height is 10 point, its stroke weight is medium, and its style is upright.

Interface Port

The HP *LaserJet IID*, *IIP*, *III*, *IIID*, and *IIIP* printers come with two interface ports, serial and parallel. The cable that attaches your computer to your printer is connected here.

Job

A specific piece of work to be batch-processed by a computer or a peripheral device such as a printer.

Landscape Orientation

(See *Orientation*).

Long-edge Binding

A description of joining printed materials along the length of the page. A control panel selection of BIND=LONG EDGE causes the second side of a duplex page to have the same orientation as the first side (see *Short-edge Binding*).

Megabyte

Approximately one million bytes (1,048,576 bytes). Refers to an amount of computer or printer memory, or disk space (one byte = eight bits).

Menu

Menus list items that can be selected from the printer's control panel. The printer has two menus: the Printing Menu and the Configuration Menu. The Printing Menu lets you select print options such as the number of copies to print and manual feed options. The Configuration Menu lets you select configuration items, such as parallel or serial I/O port configuration.

MP Size

The Multi-Purpose (MP) tray for the HP *LaserJet IIP* or *IIIP* printer does not have paper-size sensors. MP SIZE is a control panel selection item that you must use to tell the printer the physical size of the paper you load in the MP tray.

Off-Line

When the printer is off-line, it will not accept data from the computer. The printer is taken off-line by pressing the ON LINE key. When the printer is off-line, the message OFFLINE is displayed.

On-Line

When the printer is on-line, it will accept and process data from the computer. The printer is on-line when the ON LINE key is pressed and the ON LINE indicator light is on.

Orientation

Refers to the direction of print on a page. Printing across the length of a page is called landscape orientation. The term **landscape** is derived from pictures of the landscape which are usually horizontal in format. Printing across the width of a page is called portrait orientation. The term **portrait** comes from portraits of people which are usually vertical in format.

Output Selector Knob

The name of the knob located in the rear of the HP *LaserJet IID* or *IIID printer* used to adjust the paper path for duplex printing. This knob is also used for simplex printing to select whether pages will be output in correct or reverse order.

Page Buffer

The area within the device's internal random access memory (RAM) where print information is stored.

Parallel Interface

A connection between the computer and printer that simultaneously transmits a byte (8 bits) of information at a time. Centronics is an industry-wide standard form of a parallel interface. In PostScript mode, the parallel interface is an input-only channel. This means you will not be able to receive any communication back from the printer.

PCL Printer Language

Hewlett-Packard's proprietary set of escape sequence commands that direct the operations of the LaserJet family of printers. The PCL printer language controls the appearance of text and graphics on the page. It is the HP LaserJet printer's native language; *i.e.* the language the printer uses when it is in its standard operating mode.

Peripheral Device

Refers to devices, such as a printer, which are connected to the host computer.

Persistent Parameters

Values which control the printer's behavior. These values remain in effect from job to job and even when the printer is turned off. PostScript operators may be used to access and change most of these values.

Pitch

The number of characters printed per horizontal inch. For example, 12 pitch means that 12 characters will be printed per horizontal inch. Pitch is only applied to fonts with fixed spacing.

Point Size

The height of a character or symbol in a font is measured by point size. There are 72 points per inch. For instance, this text is printed using a 10-point font.

Port

The communications connection between your computer and your printer. A place to connect a cable to enable your computer to communicate with other devices.

Portrait Orientation

(See *Orientation*).

PostScript

A page description language created by Adobe Systems Inc. specifically for describing the appearance of text and graphics on a page.

Printer Driver

Software that translates the output of an application into the format required by the printing device.

Printing Menu

One of two menus accessed from the printer's control panel. Certain print options such as the number of copies to print and manual feed options may be selected from this menu (see *Configuration Menu*).

Proportional Spacing

Refers to the horizontal spacing between characters and symbols in a font. The width of each character varies depending upon the character. For example, an **i** takes up much less horizontal space than a **w** (see *Fixed Spacing*).

RAM

Random access memory (RAM). Memory used by your printer to store print data and downloaded fonts. Information or data in RAM is lost when the power is turned off.

Resolution

A measurement of print quality in dots-per-inch (dpi) in output material. HP *LaserJet printers* have 300 dpi resolution.

RET

Resolution Enhancement Technology (RET). An HP *LaserJet III*, *IIID*, or *IIIP* printer feature that improves the 300 dots-per-inch (dpi) print quality standard.

Robust-Xon

A transmission protocol used in serial communications. When Robust-Xon is ON, the printer sends ready messages at 1 second intervals to the computer. When Robust-Xon is OFF, the printer sends only one ready message. Robust-Xon is recommended.

RS-232-C, RS-422-A Interface

The standard modes of serial communication between computers and peripherals. RS-232-C is used when you need to locate your printer more than 10 feet (and up to 50 feet) from your computer. RS-422-A is designed for long distance (up to 4000 feet) communications (see *Serial Interface*).

Scaling

Enlarging or reducing text or graphics.

Semi-persistent Parameter

Values which control the printer's behavior. These values remain in effect from job to job but not when the printer is turned off. PostScript operators may be used to access and change these values.

Serial Interface

A connection between computers and printers that transmits character information sequentially; *i.e.* bit-by-bit. RS-232-C is an industry-wide standard form of a serial interface.

Service Error Message

Control panel messages displayed when the printer has encountered some difficulty. While service errors are displayed, the keypad is non-functional. After the problem has been corrected, the printer must be turned off and then back on to clear the message.

Short-edge Binding

A description of joining printed materials along the width of the page. A control panel selection of BIND=SHORT EDGE causes the second side of a duplex page to be printed upside-down in comparison to the first side (see *Long-edge Binding*).

Simplex

With simplex printing, only one side of a page is printed.

Software Application

Any word processing, programming or special application package that can be installed in your computer system. Microsoft Word ® and Lotus 1-2-3 ® are examples of software packages.

Spacing

Fonts have either fixed or proportional spacing. Fixed spaced fonts are allotted the same width. In proportional spacing, character width depends on the character size, and the number of characters per line varies.

Status Message

These are control panel display messages that keep you informed of the printer's current operating condition.

Stroke Weight

The thickness of the elements of a character or symbol in a font. Light, medium, bold, black, and condensed are names of different weights.

Style

Style, or character style, refers to either upright or italic print of a font. *Italic* is often used to add emphasis.

System Error Message

Control panel messages displayed when the printer has encountered some difficulty. Use the CONTINUE key or the auto continue feature to clear the message. Chapter 4 lists system error messages along with recommended actions.

System Parameters

Values which control the printer's behavior. PostScript operators may be used to access and change these values.

Toner

The powdered substance used in the printing process. The toner supply for the HP *LaserJet IID*, *III*, and *IIID printers* is contained inside the disposable EP-S cartridge. The HP *LaserJet IIP* or *IIIP* printer uses the EP-L cartridge.

Caution

Toner can stain fabric. Remove toner from fabric with a dry cloth; then wash the fabric with cold water.

Typeface

Typeface refers to the design of printed characters. For instance, Courier, Helvetica, and Palatino typefaces each print characters of different designs.

Typeface Family

A range of typeface designs that are all variations of one basic style. Common components of a typeface family are italic and bold. Families can also include variations in width (condensed or extended) and in weight (light to extra bold). Some families have many versions.

Index

A

a4, C-11
a4tray, C-14
Addison-Wesley Publishing Company, C-15
Adobe Systems Incorporated, C-15
AppleTalk Interface, 2-6
appletalktype, C-3
assistance, 5-11
attendance messages, printer, 4-5

C

c5envelope, C-12
c5envelopetray, C-15
cartridge
  PostScript, 1-4
  replacement, 5-12
  slot, LaserJet IID, III or IIID, 2-10
  slot, LaserJet IIP/IIIP, 2-11
cartridge removal, 2-22
character set tables, B-1
checklist, troubleshooting, 5-1
checkpassword, C-3
com10envelope, C-11
com10envelopetray, C-14
computer configuration, verifying , 2-21
computers, 2-1
configuration menu settings, 3-8

D

dealer support, 5-9
debugging PostScript programs, C-5
defaultduplexmode, C-10
defaultpapertray, C-12
defaulttimeouts, C-9
defaulttrayswitch, C-13
defaulttumble, C-10
device-specific operators, C-1
dlenvelope, C-12
dlenvelopetray, C-15
doautocontinue, C-4
documentation, related, C-15
documentation, translated, C-16
doidlefonts, C-4
dojamrecovery, C-5
doprinterrors, C-5
doret, C-5
dostartpage, C-5
drivers, printer, 2-4
duplexmode, C-10
duplex operators, C-10

E

environment, save/restore, C-2
error messages, C-5

PostScript, 4-13
service, 4-16
system, 4-11
executivepage, C-11
executivetray, C-14
exitserver, C-2, C-3

F

firstside, C-11
font caching, C-4
fonts
courier, A-2
helvetica, A-3
helvetica narrow, A-3
ITC avant garde gothic, A-1
ITC bookman, A-2
ITC zapf chancery, A-6
ITC zapf dingbats, A-6
new century schoolbook, A-4
page, printing, 3-10
palatino, A-4
symbol, A-5
times, A-5

H

help, calling for, 5-9
Holzgang, David A., C-15

I

idlefonts, C-4
imaging area, C-5, C-11
interface, 2-5
AppleTalk, 2-6
parallel, 2-5
serial, 2-5

J

jam recovery, C-4
jobtimeout, C-9

L

language, printer control panel, LaserJet IID, 2-13
language, printer control panel, LaserJet IIP/IIIP, 2-16
legal, C-11
legaltray, C-14
letter, C-11
lettertray, C-14

M

manualfeed, C-13
manual feed timeout, C-9
manualfeedtimeout, C-9
margins, C-6
memory, printer, 2-2
memory, verifying, 2-8
menus, 3-2
menu settings
configuration, 3-7
printing, 3-5, 3-7
messages, attendance, 4-5
messages, status, 4-2
mode, PostScript, 2-22
monarcenvelope, C-12
monarcenvelopetray, C-14

N

non-volatile memory, C-7
non-volatile memory, non-volatile, C-7

O

operators, C-1
device-specific, C-1
duplex, C-10
page type, C-11
timeout, C-9
tray selection, C-12
operators, system setup, C-3

P

pagecount, C-6
pagestackorder, C-6
page, startup, 2-13
page type operators, C-11
paper and envelope sizes, 2-7
papertray, C-13
Parallel Interface, 2-5
parameters
  changing, C-2
  persistent, C-2
password, C-2
persistent parameters, C-6
personal peripheral assist line, 5-11
PostScript, C-1
  cartridge, about, 1-4
  error messages, 4-13
  interpreter, C-7
  language commands, C-1
  language, learning, C-15
  mode, leaving, 2-22
  operators, C-1
printer
  attendance messages, 4-5
  configuration, verifying , 2-20
  default settings, LaserJet IID, D-6
  default settings, LaserJet III, D-4
  default settings, LaserJet IIID, D-1
  default settings, LaserJet IIP/IIIP, D-8
  drivers, 2-4
  memory, 2-2
  status messages, 4-2
printer memory, verifying, 2-8
printername, C-7
printers, 2-1
printing
  menu settings, activating, 3-7
  menu settings, default, 3-7
  PostScript fonts page, 3-10
  PostScript test page, 3-12
product, C-7
programming, C-1

R

related documentation, C-15
requirements, system, 2-1
resolution enhancement, 3-14
RET settings, 3-14
revision, C-7
Roth, Stephen F., C-15

S

sales and service offices, worldwide, 5-11
save/restore environment, C-2
sccbatch, C-8
self test page, 2-8
serial interfaces, 2-5
service error messages, 4-16
setdefaultduplexmode, C-10
setdefaultpapertray, C-12
setdefaulttimeouts, C-9
setdefaulttrayswitch, C-13
setdefaulttumble, C-10
setdoautocontinue, C-4
setdoidlefonts, C-4
setdojamrecovery, C-4
setdoprinterrors, C-5
setdoret, C-5
setdostartpage, C-5
setduplexmode, C-10
setjobtimeout, C-9
setmargins, C-5

setpapertray, C-12
setpassword, C-3
setprintername, C-7
setsccbatch, C-8
settrayswitch, C-13
settumble, C-11
setup operators, system, C-3
Smith, Ross, C-15
startup page, 2-13
statusdict, C-1
  entering, C-2
  operators, C-3
statusdict operators, C-1
status messages, printer, 4-2
system error messages, 4-11
system parameters, changing, C-2
system requirements, 2-1

T

tables, character set, B-1
test page, 2-8
test page, printing, 3-12
timeout operators, C-9
translated documentation, C-16
tray selection operators, C-12
trayswitch, C-13
troubleshooting checklist, 5-1
tumble, C-11
typeface offering, built-in , 1-5

W

waittimeout, C-9
warranty, limited, 5-12

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