# Inside This Manual

## What You Can Learn From This Manual

Printer Job Language (PJL) was developed by Hewlett-Packard to provide a method for switching printer languages at the job level, and for status readback between the printer and the host computer. PJL offers application programs an efficient way to remotely control Hewlett-Packard printers. Using PJL, developers can provide applications with the ability to programmatically switch printer languages, monitor printer status, request the printer model and configuration, change control panel default settings, modify control panel messages, and more.

This manual is written for experienced users such as application developers and technical support personnel. Before using PJL commands, programmers should be familiar with the introductory information in Chapters 1, 2, and 3, and with the programming tips in Chapter 11. In addition, users of this manual should be acquainted with the HP LaserJet printer language (PCL) and with LaserJet printer features.

## Application Developers

This *PJL Technical Reference Manual* provides developers with all the information necessary to add PJL to their applications. Examples are used throughout the manual to help developers write efficient and properly functioning code.

## Technical Support Personnel

This manual provides reference information for network administrators and other technical support personnel who manage multi-user systems. PJL provides the potential for significantly enhancing network printer operation.

## Non-Technical Users

Non-technical users can use the features of PJL by using *HP Explorer Software*, or by using software that supports PJL. Since improperly used PJL commands can cause problems in a network situation, inexperienced users are advised against using PJL commands on any system other than a dedicated workstation.

# Manual Organization

This manual is comprised of eleven chapters and four appendices. The first three chapters introduce you to the range of PJL features, PJL syntax and format, some rules about using PJL, and a brief description of each command. Chapter 4 explores the essential “kernel” commands—those commands that are part of almost every PJL job. Chapters 5 through 10 each describe a separate group of related commands. The remaining chapters cover programming tips and related PJL information. A brief description of each chapter is provided below.

## Chapter 1. Introduction to PJL

This chapter explains what PJL is, who should use PJL, and the benefits of using PJL in application programs. It also covers compatibility with non-PJL printers, which includes older models of HP LaserJet printers, HP DeskJet printers, and HP DesignJet plotters and printers.

## Chapter 2. PJL Command Syntax and Format

Chapter 2 explains the conventions used to describe PJL command syntax. The chapter also explains the formats that PJL commands follow and describes what happens when the printer receives an illegal command.

## Chapter 3. Using PJL

This chapter explains how PJL commands are used, including the requirements of a PJL job and examples showing basic PJL command structure. In addition, the chapter categorizes the PJL commands in this manual by their functionality, along with a brief command summary.

## Chapter 4. Kernel Commands

This chapter explains the three core commands used in most PJL jobs: the Universal Exit Language (UEL) command, the COMMENT command, and the ENTER command. The chapter also describes the related topics of implicit and explicit printer language switching.

## Chapter 5. Job Separation Commands

Chapter 5 describes the JOB and EOJ commands, which are used in combination to define job boundaries and provide job-related feedback, such as job completion.

## Chapter 6. Environment Commands

This chapter explains setting the printer to a known state. The DEFAULT, INITIALIZE, RESET, and SET commands are explained here.

## Chapter 7. Status Readback Commands

Chapter 7 describes status readback, the format of status readback responses, using software tools to interpret status readback, and the commands associated with status readback (INQUIRE, DINQUIRE, ECHO, INFO, USTATUS, and USTATUSOFF). This chapter also covers the processes involved in job recovery and monitoring the printer control panel.

## Chapter 8. Device Attendance Commands

Chapter 8 describes the commands used to display messages on the printer control panel: the RDYMSG, OPMSG, and STMSG commands.

## Chapter 9. PJL File System Commands

Chapter 9 describes the commands used for managing a printer-based disk drive, or other printer-based mass storage. The commands include FSAPPEND, FSDIRLIST, FSINIT, FSMKDIR, FSQUERY, FSUPLOAD, FSDOWNLOAD, and FSDELETE. These commands provide the capability to initialize the mass storage, make directories, list directories, and download, upload, delete, and append files.

## Chapter 10. Job Management

Chapter 10 describes the job management features found on the HP LaserJet 8100 and 8500 printers.

## Chapter 11. Programming Tips for Using PJL

This chapter demonstrates how to create well-formed jobs and discusses common problems and things to watch for when using PJL commands. Samples are included to demonstrate different types of applications.

## Appendix A. Product-Specific Feature Support

This chapter lists all of the PJL commands and shows which commands are supported by the different PJL printers. It also shows which environment variables are supported, and includes printer-specific information about several PJL printers.

## Appendix B. PJL Command Summary

This appendix lists all of the PJL commands in alphabetical order, and shows the format of each command.

## Appendix C. Programming Examples

Appendix C shows an example of a PJL job in both the generic format used in the rest of this manual, and in the C programming language. The appendix also includes a batch file that modifies the control panel display message during job processing.

## Appendix D. PJL Status Codes

This appendix describes the status code information available when using status readback.

## Index

This manual includes an index for easy access to PJL information.

# Related Documents

The following documents provide related information about Hewlett-Packard PCL 5 printers.

## PCL 5 Printer Language Technical Reference Manual

The *PCL 5 Printer Language Technical Reference Manual* provides a description of the printer command language that controls PCL 5 printers. The manual provides explanations of each PCL command, and examples demonstrating how the commands are used to control the printer. A large portion of the manual is devoted to HP-GL/2, the vector-based graphics language that is part of all PCL 5 printers.

## PCL 5 Comparison Guide

This document provides printer-specific information on paper handling, internal fonts, PCL command support, and control panel information. It identifies feature differences between the PCL 5 printers, and how the printers implement the commands described in the *PCL 5 Printer Language Technical Reference Manual*.

## PCL/PJL Technical Quick Reference Guide

This booklet is designed to provide quick access to the syntax of each PCL and PJL command. The commands are grouped by their function so that those familiar with PCL and/or PJL can find the syntax of a specific command without opening the manual.

# Manual Conventions

This manual uses the following conventions:

- Items in *italics* indicate names of variables.
- Items in UPPERCASE letters indicate PJL command names and words you type verbatim. PJL command names referred to in text are also in uppercase.
- Items in square brackets [ ] indicate optional parameters. The brackets themselves are not typed.
- Items in brackets < > indicate a control code character (for example, <CR> for carriage return) or a special defined identifier.
- A vertical bar (|) indicates there is more than one optional parameter.

**Note** Throughout this manual, the term printer also includes any relevant DesignJet plotters and printers.