




The Hewlett Packard LaserJet Printer Handbook



Alfred E. Poor II



Dow Jones • Irwin Desktop Publishing Library

The Hewlett Packard

LaserJet Printer

Handbook

江苏工业学院图书馆
藏书章

**The Hewlett Packard
LaserJet Printer
Handbook**

By Alfred E. Poor II, Ph.D.

**Dow Jones-Irwin
Homewood, Illinois 60430**

Trademarks used in this book are listed on page 247.

© New York Communications Systems, Inc., 1989

Dow Jones-Irwin is a trademark of Dow Jones & Company, Inc.

All rights reserved. No part of this work may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the copyright holder, with the exception that the program listings may be entered and executed in a personal computer system; but they may not be reproduced, duplicated or distributed in any way.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the copyright holder is not engaged in rendering legal, accounting, or other professional service. If legal advice or other expert assistance is required, the services of a competent professional person should be sought.

From a Declaration of Principles jointly adopted by a Committee of the American Bar Association and a Committee of Publishers.

Library of Congress Cataloging-in-Publication Data

Poor, Alfred E.

The Hewlett Packard LaserJet printer handbook.

Includes index.

1. HP LaserJet printers—Handbooks, manuals, etc.

I. Title.

TK7887.7.P67 1989 621.398'7 88-25667

ISBN 1-55623-156-3 (pbk.)

Sponsoring editor: Susan Glinert Stevens, Ph.D.

Project editor: Gladys True

Cover Designer: Mark Swimmer

Printer: Arcata Graphics/Kingsport

Printed in the United States of America

2 3 4 5 6 7 8 9 0 K 5 4 3 2 1 0 9 8

Acknowledgements

I want to express my thanks for the help from all the many people who were involved in helping make this book a success. I am grateful to the many product vendors who provided vital information, product samples, and the time to answer my many questions. Hewlett Packard was particularly helpful, through the able efforts of LaVon Collins who patiently unraveled snagged problems. I wish to thank Joe King for the way in which he shepherded the process with suggestions and insights, raising the role of "editor" to a new plane.

Finally, I want to thank Bebe, Anna, and Alex, who shared the long hours and the frustrations and the joys. Without their support, the project would not have been possible.

Contents

Introduction.....	11
Part I: Getting to Know the LaserJet	13
A Brief History of Printed Communication	15
The Light Fantastic	15
An Introduction to the LaserJet	17
The Inner Machine.....	17
Cables.....	21
Shake Hands and Come Out Printing.....	23
Testing, Testing	27
Part II: Controlling Your LaserJet.....	31
Deciphering the Code	33
The Dark Ages.....	33
Getting down to BASIC.....	36
ESCAPE to Variety	43
Page Formatting	44
Marginal Results	48
Options in Space	51
Choosing Your Type.....	55
Orientation.....	56
Primary and Secondary Fonts.....	58
Symbol Set.....	59
Spacing Style.....	62
Print Pitch.....	65
Character Height.....	68
Character Style.....	70
Stroke Weight	72
Typeface	73
Command Shortcuts.....	76
Switching Between Primary and Secondary Fonts	78
Underlining	80
Summary	82

Special Features.....	83
Manual Feed.....	83
Printing an Envelope	85
Multiple Copies	87
Cursor Control.....	89
LaserJet Plus and LaserJet II Features.....	93
Downloadable Fonts.....	93
Form Graphics.....	96
Macros	102
Summary	104
 Part III: Using the LaserJet with Your Favorite Program	107
General Tips	109
Printer Configuration	109
Controlling the Format Options.....	110
The Inside Track	113
Walking from the Top	114
Database Programs.....	117
dBASE III	117
R:base 5000.....	121
pfs:File and :Report, and IBM Filing and Reporting Assistant	125
Spreadsheets and Integrated Programs.....	127
Lotus 1-2-3 and Symphony.....	127
Framework II	130
Enable	133
Word Processing Programs	135
Word Perfect	136
Microsoft Word	137
MultiMate.....	138
XyWrite	138
PC-WRITE	139
 Part IV: Add-on Products for Your LaserJet Printer	141
Introduction.....	143
Search for Excellence	143
Hardware Products.....	145
Face-down Paper Tray	145
Larger Paper Feed Trays	147
Multiple Bins	148

Serial to Parallel Converters	149
Intelligent Sharing Devices.....	153
LaserJet to LaserJet Plus Upgrade.....	157
Other Items of Interest.....	158
Software Products.....	159
Setup Programs and Font Management.....	160
Emulation Utilities	164
Runoff Programs and Varied Fonts.....	168
Graphics Programs	175
Graphics with Text	183
Late Developments	187
Where Do We Go from Here?	188
Appendixes.....	189
A: Escape Command Summary.....	191
B: Default Settings.....	195
C: ASCII Table.....	197
D: Serial Cables	205
E: Cauzin Reader SoftStrips.....	207
Index of Illustrations.....	221
Index of Programs.....	223
INDEX	227

Introduction

Why this book?

If you have a LaserJet, you probably know some of the information in this book already. If you are thinking about getting one, then this information may help you make up your mind. In either case, you will find a treasure of details, explanations, tips, and tricks designed to help you get the most out of your investment.

When I started this book, there were three different LaserJet printers. The original LaserJet created a revolution in microcomputing. The LaserJet Plus added memory for advanced features and power. There are thousands of each model currently in use. The third machine, the LaserJet Plus 500, provides additional paper capacity (two 250 sheet bins instead of a single 100 sheet one), but is essentially the same as the LaserJet Plus. A fourth model has recently appeared -- the LaserJet Series II (or, as I refer to it, the LaserJet II). Lighter, smaller, more powerful and considerably less expensive, it has replaced the original LaserJet and LaserJet Plus.

Overall, the four models are more alike than they are different, and thus this book covers all. Each new model represents some advancement over the preceding ones, but the commands are all the same from the original LaserJet right through the LaserJet II. As a result, I will explain the common features first, and then cover any additional advanced options in later sections.

Organization

This book is organized so that you can proceed directly to the section that contains the information you need to know now. Most people will find it useful to read the entire book eventually, but you may want to skip portions at first. Here are some guidelines to help you get the most from this book.

The first section provides some background on the LaserJet printers, and an introduction to the basic points you will need to cover in setting up your LaserJet. Since this section also includes some points on maintenance, cables, troubleshooting, and handy batch files for IBM PC compatible machines, even experienced users should at least skim this section.

The second section of the book covers the mysteries of the esoteric Escape codes. Hewlett-Packard has made a valiant effort to cover these in the user manuals, but this is a topic that often appears to be much more difficult than it looks. **YOU DO NOT NEED TO READ THIS SECTION TO MAKE YOUR PRINTER WORK.** This section will, however, make the technical workings of the printer more clear to you, and will help you learn to control all the different features. The section includes simple examples in BASIC that you can type in and run to illustrate the different Escape sequences. (The programs are also available on disk for \$15 from Soft Industries, 92 North Summit Street, Southington, CT 06489.)

The third section shows you how to make the best use of the most popular programs, such as WordStar, dBase III, and Lotus 1-2-3. Some of these already offer some support for the LaserJet, but you will learn how to tailor each one to your individual needs.

If your program does not support the LaserJet and you do not want to deal with the Escape codes, there are dozens of programs and utilities to make the process easier. The last section reviews a representative sample of these. Some are designed to work with a specific program, like WordStar, while others are general purpose tools. This section will help you find out which ones are worth your money and time, and what you can expect from them.

This book has something for everyone, from novice to expert; it is designed to help you get the most out of this outstanding printer. With this book and some time to practice and experiment, you should be able to produce the type of printed output that you expected when you first bought your LaserJet.

PART I

Getting to Know the LaserJet

Chapter 1

A Brief History of Printed Communication

From our earliest days as hunters living in caves, we have looked for ways to record our thoughts and experiences. Pictures made with colored powders on cave walls were one of the earliest technologies, followed by scratches on clay tablets. Over the centuries that followed, innovations revolutionized the process of recording ideas: paper, moveable type, and typewriters.

With the advent of microcomputers, we have made it possible for one person to generate reams of printed paper. Until recently, all the popular printers were based on technology similar to the early teletype machines. Whether daisywheel or dot matrix, they accept individual characters a line at a time from the computer, and print them out on the paper. Some can print back and forth, to save time, but they still only can print one line at a time. There are limits to the speed these machines can achieve. They tend to be a bit noisy, since most are based on a similar technology: banging a pin or type element into an inked ribbon to transfer an image onto the paper.

The Light Fantastic

In 1984, the world of microcomputer printers changed dramatically. Hewlett-Packard and Canon teamed up to create a new breed of printers: the laser printer. This new printer was substantially different in two major ways. It waits until it has a full page of text, rather than just a line, before it prints. As a result, it is referred to as a "page printer," rather than the traditional "line printer." The other difference is that the image is formed by light from a small laser instead of the physical impact of something striking an inked ribbon. The result is a much quieter printer than the popular dot matrix and daisywheel designs. The bottom line is that you get a blazingly fast printer that makes less noise than most copy machines.

This new technology pays other dividends as well. Until now, you had to choose between graphics and letter quality. Daisywheel printers use fully-formed characters to produce high-quality print, but they are slow and cannot produce graphics. You are also limited to the characters available on a single printwheel.

Dot matrix printers can produce individual dots to make characters and graphics images, but they do not equal the fully-formed character quality since most have a resolution of only 150 to 200 dots per inch. They can produce different character types, but the variety is not very valuable if you cannot get adequate print quality.

Both dot matrix and daisywheel printers are designed to handle either cut sheets or tractor feed paper. Tractor feed paper is essential for long runs or where careful alignment is required (such as preprinted forms). Cut sheet paper is better for individual pages like letterhead. Unfortunately, while tractor feeds are inexpensive and reliable, cut sheet feeders are just the opposite.

The LaserJet responds to all these areas. It is technically a dot matrix printer, since its images are composed of tiny dots. Since the resolution is 300 dots per inch (vertically and horizontally), it produces characters that are nearly indistinguishable from fully-formed print. It also can make graphics with this same high resolution, which surpasses just about every dot matrix on the market. As for paper handling, it uses a paper cassette like a desktop copier, so it does an excellent job of feeding cut sheets. You can thus use letterhead and plain sheets with equal ease, without having to switch between tractor and cut sheet feeders. The two drawbacks are that the cassettes only hold about 100 sheets of paper, and since it does not use impact technology, you can't make carbons. There are a number of work-around solutions for these problems, which you will find later on in this book.

Blazing speed, near-typeset quality text and graphics, and silent operation all add up to an outstanding printer. The next chapter reviews some of the basic concepts that you need to know to set up and operate the printer.