Pascal 3.0 Documentation Guide and Master Index

for the HP 9000 Series 200 Computers

Manual Part No. 98615-90015

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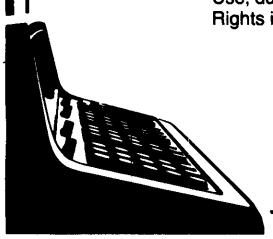

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Printing History

New editions of this manual will incorporate all material updated since the previous edition. Update packages may be issued between editions and contain replacement and additional pages to be merged into the manual by the user. Each updated page will be indicated by a revision date at the bottom of the page. A vertical bar in the margin indicates the changes on each page. Note that pages which are rearranged due to changes on a previous page are not considered revised.

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Index was updated to include references to HP 46020 Mouse installation and use.

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Documentation Guide and Master Index

Introduction

This guide takes you on "sight-seeing tours" of the Pascal 3.0 manuals. Here is what it contains:

- A list of the manuals in this set.
- A "sight-seeing tour" of each manual.
- A look at the Master Index.

Pascal 3.0 Manuals

Here are the manuals provided with the Pascal 3.0 Workstation system:

- *Pascal 3.0 User's Guide*
- *An Introduction to Programming and Problem Solving with Pascal*
- *Pascal 3.0 Workstation System*
- *Pascal 3.0 Procedure Library*
- *Pascal 3.0 Graphics Techniques*
- *HP Pascal Language Reference for Series 200 Computers*
- *MC68000 User's Manual*

Individual Manual "Tours"

The following paragraphs describe the purpose and contents of each manual.

Note

You are highly encouraged to pick up and leaf through each manual as you read through its description. This exercise will help you to quickly familiarize yourself with their content and organization.

***Installation Guide* (for your model of computer)**

One of these manuals is shipped with your computer (*not* with the Pascal System). It describes setting up computer hardware and peripheral devices. It will take you up to the point where you are ready to load the Pascal system into the computer. These manuals are mainly task-oriented manuals. Here is what the manuals will help you to do:

- Put the computer hardware together.
- Configure and install memory and interface cards.
- Configure and install peripheral devices (such as printers).
- Run self-tests.

Pascal 3.0 User's Guide

This begins where your computer's *Installation Guide* left off. It describes how to load the Pascal System and get it "up and running." It also takes you on a "tour" of the system and its subsystems, as well as shows you how to enter and run a short Pascal program. This manual is also a task-oriented manual.

- Chapter 1 discusses a "little-known secret to success." (If you don't read the chapter, it will be still "little-known.")
- Chapter 2 shows you how to load the Pascal system.
- Chapter 3 shows you how to prepare blank discs for use and how to make back-up copies of the system discs.
- Chapter 4 describes using the keyboard and display. You need only read the section that describes your computer's keyboard.
- Chapter 5 shows you how to begin using commands.
- Chapter 6 introduces you to the Editor, which you will use to enter a document.
- Chapter 7 introduces you to the Filer, which you will be using to manage the files in which you will be storing documents and programs.
- Chapter 8 describes using the Compiler, which you will be using to transform a source program into a form that the computer can execute.
- Chapter 9 briefly discusses the Assembler, Librarian, and Debugger subsystems.
- Chapter 10 is devoted to helping you set up your programming "environment."
- In Chapter 11, you will be entering, storing, compiling, and running a short Pascal program.
- The Task Reference briefly summarizes the steps for common procedures.
- There is also a subject index at the rear of this manual.

An Introduction to Programming and Problem Solving with Pascal

This is a textbook that will teach you the Pascal programming language. You should read it if you have not previously programmed using the Pascal language before, or if you have never programmed before. It is a combination of task-oriented information (such as discusions of how to solve particular programming problems) and object-oriented information (such as descriptions of reserved words and standard procedures).

- The STYLE CLINICS section lists the programming style tips given throughout the book.
- Chapter 1 describes the steps involved in developing programs in any computer language.
- Chapter 2 takes a closer look at developing algorithms. A thorough understanding and *application* of these principles will help you to become a good programmer as quickly as possible. You should memorize and follow the maxim:

  "Think First, Code Later."
- Chapters 3 through 10 present lots of advice and examples of Pascal programming.
- Chapter 11 presents a well organized summary of the "program design methods" that have been taught in the book.
- Appendices include the following: syntax diagrams, a list of standard identifiers, character sets, bibliography, selected answers to exercises, and subject index.

Pascal 3.0 Workstation System

This manual describes the HP Series 200 Pascal Workstation system. By reading it, you will learn how to use individual commands as well as how to use the subsystems (Editor, Filer, etc.). The chapters that describe the subsystems first take a task-oriented approach at introducing you to using the subsystem, and then provide an object-oriented discussion of each command at the end of the chapter. The last two chapters provide more task-oriented discussions of standard and special configurations and "non-disc" mass storage devices.

- Chapter 1 begins with an overview of the manual. It then provides a quick reference and detailed descriptions of Main Level commands.
- Chapter 2 describes the File System of the Pascal Workstation system, and provides some notes about file access from Pascal programs.
- Chapters 3 through 8 describe the subsystems of the Workstation system: Editor, Filer, Pascal Compiler, Assembler, Librarian, and Debugger. The first part of each chapter describes using the subsystem, while the latter part describes each command. Pay special attention to the concept of program *modules*, because the system itself is composed of modules. An understanding of these structures will greatly increase your ability to use the system to the fullest extent.
- Chapter 9 discusses first how the system boots itself and then describes how you can alter this "standard" configuration.
- Chapter 10 describes using "non-disc" mass storage devices: EPROM and Magnetic Bubble Memory cards, and cartridge tape drives.
- Appendices discuss these topics: System History, file interchange between Series 200 language systems, physical and software memory maps, command summaries, glossary, error messages, and subject index.

Pascal 3.0 Procedure Library

This manual describes the procedures and functions provided with the Workstation System. It begins with an overview of modules and the mechanics of using them. The I/O Procedure Library is then covered in detail using a task-oriented approach. Several general and specific examples are provided. The last section of the book provides an object-oriented discussion of each procedure and function in the Procedure Library.

- Chapter 1 provides an overview of using the procedures and functions provided in the Procedure Library. You **must** read this chapter (or be familiar with the concepts) if you want to painlessly use the rest of the manual.
- Chapters 2 through 9 describe general I/O programming techniques.
- Chapters 10 through 13 describe specific techniques for using the HP-IB, Datacomm, Serial, and GPIO interfaces.
- Chapter 14 is an *advanced* programmer's tutorial on using the "system devices" such as the beeper, softkeys, clock, timers, and other built-in hardware features.
- Chapter 15 is also an *advanced* programmer's tutorial on how to segment large programs into smaller ones at run time (to decrease memory requirements).
- The Procedure Library Reference section describes individual procedures and functions provided by thw Procedure Library.
- There is also a glossary and subject index at the end of the manual.

Pascal 3.0 Graphics Techniques
This manual describes graphics concepts and then graphics programming techniques. It is mostly a task-oriented manual, although it does contain an object-oriented Graphics Procedures Reference appendix which describes the procedures and functions provided by the GRAPHICS modules.

- This manual begins in Chapter 1 by describing some fundamental graphics concepts and programming techniques.
- Chapter 2 continues with additional concepts and techniques.
- Chapter 3 describes color graphics and interactive graphics programming techniques.
- Appendix A provides several program listings.
- Appendix B provides desriptions of GRAPHICS procedures and functions provided in the Procedure Library (these descriptions are *exact* copies of descriptions found in the Reference section of the *Pascal Procedure Library* manual).
- This manual also has a subject index.

HP Pascal Language Reference for Series 200 Computers
This manual describes Pascal reserved words, standard identifiers, procedures, and functions, and terms relevant to the Pascal programming language. It is entirely an object-oriented manual.

- The Keyword Dictionary section describes these topics: manual organization; symbols, identifiers, reserved words, operators, statements, procedures, and other features of the HP Standard Pascal language.
- The HP-UX Implementation section describes the specific features of the Series 200 HP-UX Pascal Compiler (which is irrelevant *unless* you also have a Series 200 HP-UX system).
- The Workstation Implementation section describes these specific features of the Series 200 Pascal Workstation System: Compiler options, implementation restrictions, UCSD Pascal extensions, Series 200 system programming extensions, Series 200 Pascal Workstation File System, heap management, and error messages.

MC68000 User's Manual
This manual describes the hardware operation, Assembler language, and machine language of the Motorola MC68000 family of microprocessors. You will only need to read it if you are going to be programming in Assembler language. It is mostly an object-oriented manual.

- Section 1 describes the hardware architecture of the MC68000 family of processors. (Note that only 68000 and 68012 processors, not 68008 or 68010 processors, are used in Series 200 machines.)
- Section 2 describes addressing modes and data organization.
- Section 3 details the instruction set.
- Section 4 describes how "exceptions" are processed.
- Appendix A discusses condition codes in detail.
- Appendix B provides an alphabetical reference of the Assembler language instructions, and Appendix C summarizes the format of these instructions.
- Appendices D, E, and F show how to determine the time required to execute instructions for different processors in the MC68000 family.
- Appendix G discusses the looping instructions available with the MC 68010 processor.

The Master Index

The Master Index is a merger of the indexes in the individual manuals in this set. This section describes the notation used in the index.

Referencing Scheme

Since the Master Index references more than one book, it must indicate which book the referenced subject exists in. Here is the notation used to specify where the subject is covered.

UG: *Pascal 3.0 User's Guide*
WS: *Pascal 3.0 Workstation System*
PL: *Pascal 3.0 Procedure Library*
GT: *Pascal 3.0 Graphics Techniques*

Note that the following manuals are **not** referenced in the Master Index:

- *Programming and Problem Solving with Pascal*
- *HP Pascal Language Reference for HP Series 200 Computers*
- *MC68000 User's Manual*

The Pascal programming text has its own index. The language reference does not need an index, since topics are listed in alphabetical order. The 68000 manual has no index.

Here is a sample of index entries:

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Note the following characteristics of this notation:

- The acronym that identifies each manual (such as **UG:** or **WS:**) *always* precedes all page numbers for a given topic.
- When a topic is found in more that one manual, then each list of page numbers begins on a separate line and is preceded by the acronym.

Happy Programming!

Manual Comment Sheet Instruction

If you have any comments or questions regarding this manual, write them on the enclosed comment sheets and place them in the mail. Include page numbers with your comments wherever possible.

If there is a revision number, (found on the Printing History page), include it on the comment sheet. Also include a return address so that we can respond as soon as possible.

The sheets are designed to be folded into thirds along the dotted lines and taped closed. Do not use staples.

Thank you for your time and interest.

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MANUAL COMMENT SHEET

Pascal 3.0 Documentation Guide
and Master Index
for the HP 9000 Series 200

98615-90015

April 1985

Update No. _____

(See the Printing History in the front of the manual)

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Comments: _____

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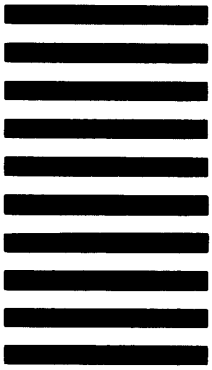

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