

# USING WINDOWS

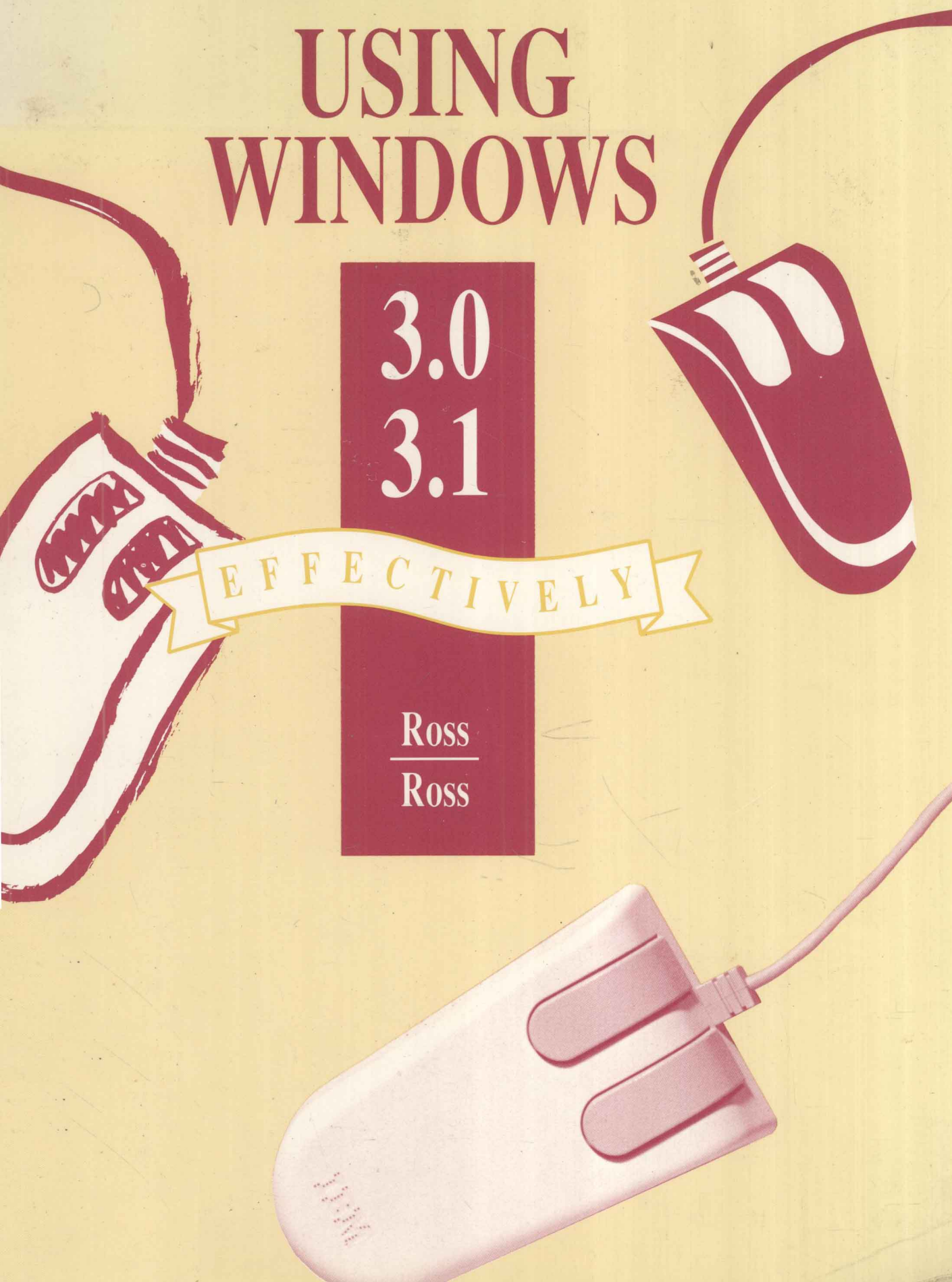
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Windows 3.1 is one of the most useful programs for an IBM PC or compatible that you can own. Windows 3.1, developed by Microsoft Corporation, holds true to Microsoft's established record for producing high quality software. Yet, unless you have some skill in using MS-DOS or PC-DOS, Windows 3.1 is difficult to use effectively.

This book will attempt to remedy the problem. Upon completion of reading this book, you will have an excellent understanding of the underlying MS-DOS environment, and how Windows 3.1 interacts with that environment. In addition, you will be able to install and customize the Windows environment to meet your specific needs, both to run Windows applications and conventional MS-DOS software.

### **About this Book**

This book is intended for many different kinds of computer users. It is intended primarily to act as a supplementary text in any course using Windows 3.1. We assumed that the user is modestly familiar with computer use, at least at the level of booting their computer, understanding the fundamental operations of MS-DOS or PC-DOS, and can load and run applications programs. The text will not assume a familiarity with a windowed environment, or the use of a mouse. This book does not cover every detailed aspect of Windows 3.1. That is the purpose of the reference manual. This book is intended as a limited guide to the most useful and important features of Windows; how to install it, use it, and customize it to be an effective tool to enhance your computing power.

Of course we can ask, "Why Windows?" The answer is easy. Windows 3.1 provides you with an easy-to-use, graphically oriented interface to your computer. You can forget all the agony of remembering obscure commands in DOS and replace them with the icon and menu system of Windows. The objective of this book is to allow the user to go beyond "just getting by," and tap into the real power that Windows 3.1 offers.

Some readers may still be using the earlier version of Windows, Windows 3.0. If that is the case, you may find some of the screens and functional details slightly different from what is shown or discussed in this book. If that is the case, and you are

confused, you should make use of the Help screens in Windows 3.0, or make use of the reference manuals that came with your copy of Windows 3.0.

The text follows this plan:

### **Chapter 1 - A Review of DOS Concepts**

This chapter gives a brief review of some important features and concepts in MS-DOS, including disk usage, files, directories, and paths. In addition, the use and contents of the AUTOEXEC.BAT and CONFIG.SYS files are reviewed.

### **Chapter 2 - Installing and Starting Windows**

This chapter introduces the reader to Windows 3.1. Hardware issues, including processor type, memory requirements, and memory management are discussed. The reader is coached through the installation and configuration process for Windows 3.1.

### **Chapter 3 - The Mouse and the Windows Interface**

Now that Windows 3.1 has been installed, you will learn how to use the Windows desktop and the mouse. Alternatively, there are keyboard alternatives to many of the mouse functions that are useful to know. With these, you can speed your use of Windows. You will also learn how to manipulate the desktop.

### **Chapter 4 - Windows Applications; An Overview**

This chapter introduces you to the inner workings of Windows, including the Program Manager, the File Manager, and the Control Panel. You will also find out how to leave Windows temporarily and access the familiar DOS prompt. The elementary use of the Clipboard, Windows Setup, Print Manger, and other major Windows accessories will be covered.

### **Chapter 5 - The File Manager**

This chapter gives a more detailed discussion of the use of the File Manager. The use of Directory Trees, and how to move, delete, and copy files will be covered.

## **Chapter 6 - Printers and the Print Manager**

The Print Manager is discussed in this chapter. You will learn how to install and change printers. The Print Spooler is discussed, which allows you to print output and continue to use your computer even though the print task has not completed. Fonts are also covered in this chapter.

## **Chapter 7 - Customizing the Windows Control Panel**

You can customize much of the appearance of your Windows environment. This chapter will cover how to change screen component colors, the display of dates and times, and the behavior of the mouse.

## **Chapter 8 - Running Applications Under Windows**

Running applications under Windows, be they programs especially designed for Windows, or conventional DOS applications, are somewhat different than how you run programs and other applications in a conventional MS-DOS environment. The process of starting applications is discussed in detail. In addition, starting applications from batch and PIF (Program Information File) files are covered. The chapter also gives a detailed discussion of the use of the PIF Editor. The difference in operation between Windows and non-Windows applications is explored.

## **Chapter 9 - Windows Desktop Accessories - An Overview**

Many useful utility programs, called Desktop Accessories, are provided with Windows. These include the NotePad, Calculator, Cardfile, Calendar, Clipboard, and Recorder. An explanation will be given of the use and operation of each of these important features.

## **Chapter 10 - Windows Write**

Windows contains an excellent elementary word processor called Windows Write. For many writing applications, Windows Write will serve your needs well. This chapter covers the elements of word processing, saving and loading files, and printing your documents with Windows Write.

## **Chapter 11 - Windows Paintbrush**

Since Windows is a graphical environment, it contains a useful program for creating and editing drawings. This is Windows Paintbrush. With this component of Windows, you can create artwork to print directly or to include in Windows Write documents.

## **Chapter 12 - Windows Terminal**

If you have a modem connected to your computer, you can use it in conjunction with the Windows Terminal program to communicate with data services, computer bulletin boards, or mainframe computers. This chapter covers the operation of this useful Windows program.

## **Chapter 13 - Alternative Modes of Operation**

Windows is designed for operation on two different hardware environments. These include the Intel 80286 processor with 640 Kilobytes of memory and optional extended memory, or the Intel 80386 and 80486 processors running in 386 Enhanced Mode with optional extended memory. Operation of Windows, from the systems viewpoint, is slightly different on these two different hardware configurations. The details and advantages of these modes of operations will be discussed and explored in this chapter.

## **Chapter 14 - Customizing the Windows Environment**

Further customization in the Windows environment may be made by the advanced user. This final chapter covers the modification of the Windows .INI startup files, the use of print spoolers, disk caches, RAM disks, and memory management issues.

## **How to Use this Book**

This book is intended as a supplement to any college or university course that uses Windows, or as a convenient learning aid for anyone who needs to learn how to use Windows quickly and effectively.

If you are generally familiar with DOS, you can skim over Chapter 1. If Windows is already installed on your computer,

you can skip most of Chapter 2. If you are familiar with the use of a mouse, Chapter 3 should be used as a review to find out the peculiarities of mouse usage in a Windows environment.

Chapters 4, 5 and 6 should be read carefully in their entirety. Chapter 7 deals with customizing the Windows environment. You should read all of this chapter. Chapters 8 through 12 deal with the applications provided with Windows. These may be used in any order to meet your specific needs and interests. Chapters 13 and 14 treat advanced topics in the usage and optimization of the Windows environment. These should be read by the serious Windows user.

Each chapter provides an introduction, called *Looking Ahead*, which includes a list of learning objectives and a summary of the topics to be covered in the chapter. At the end of each chapter, there is a summary, a list of *Key Terms*, and a set of exercises for the reader called *Now Try This!* These exercises will help you to test your understanding of the material in the chapter by posing realistic problems in using the various features of the Windows system.

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Paul Werner Ross and Paul Whitcomb Ross

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<b>Preface</b>	<b>vii</b>
<b>Trademark Acknowledgments</b>	<b>xiii</b>
<b>Chapter 1 - A Review of DOS Concepts</b>	<b>1</b>
Looking Ahead	1
Disks, Files, and Paths	2
Directories	3
Creating and Removing Directories	5
Paths	8
The AUTOEXEC.BAT File	8
The CONFIG.SYS File	10
Chapter Summary	12
Key Terms	13
Now Try This!	13
<b>Chapter 2 - Installing and Starting Windows 3.1</b>	<b>15</b>
Looking Ahead	15
What is Windows 3.1?	16
System and Hardware Issues	19
Installation Procedure	20
Chapter Summary	26
Key Terms	26
Now Try This!	26
<b>Chapter 3 - The Mouse and the Windows Interface</b>	<b>29</b>
Looking Ahead	29
The Desktop	29
Basic Mouse Operations	33
Switching and Manipulating Windows	35
Keyboard Alternatives	40
Chapter Summary	42
Key Terms	42
Now Try This!	43
<b>Chapter 4 - Essential Windows Skills</b>	<b>45</b>
Looking Ahead	45
Windows	46
Dialog Boxes	49

Menus	53	
Windows Messages	55	
Chapter Summary	57	
Key Terms	58	
Now Try This!	58	
<b>Chapter 5 - The File Manager</b>		<b>59</b>
Looking Ahead	59	
Directory Trees	60	
Moving and Copying Files	64	
Deleting Files	66	
Other File Manager Features	67	
Chapter Summary	77	
Key Terms	77	
Now Try This!	78	
<b>Chapter 6 - Printers and the Print Manager</b>		<b>81</b>
Looking Ahead	81	
An Overview of the Print Manager	81	
Controlling Print Spooling and Queuing	82	
Installing New Printers and Changing Printers	84	
Fonts	89	
Chapter Summary	91	
Key Terms	91	
Now Try This!	91	
<b>Chapter 7 - Customizing with Windows Control Panel</b>		<b>93</b>
Looking Ahead	93	
Color	94	
Date and Time	98	
The Mouse	99	
The Desktop	101	
Other Utilities	107	
Chapter Summary	109	
Key Terms	109	
Now Try This!	109	
<b>Chapter 8 - Running Applications Under Windows 3.1</b>		<b>111</b>
Looking Ahead	111	
Windows, Non-Windows Applications and Pop-ups	112	

Starting Windows Applications	115
Program Information Files (PIF's) and the PIF Editor	116
Trouble Shooting and Special Situations	122
Chapter Summary	127
Key Terms	127
Now Try This!	128
<b>Chapter 9 - Windows Desktop Accessories - An Overview</b>	<b>129</b>
Looking Ahead	129
The Program Manager	129
The Clipboard	138
The Calculator	140
Calendar	143
Cardfile	149
Clock	152
Notepad	153
Chapter Summary	156
Key Terms	157
Now Try This!	157
<b>Chapter 10 - Windows Write</b>	<b>159</b>
Looking Ahead	159
What is Windows Write?	159
The Elements of Word Processing with Windows Write	160
Saving and Loading Files	165
Including Pictures in Your Document	167
Formatting Your Document	169
Printing Your Document	175
Chapter Summary	176
Key Terms	176
Now Try This!	176
<b>Chapter 11 - Paintbrush</b>	<b>179</b>
Looking Ahead	179
What is Paintbrush?	179
Paintbrush Program Concepts	181
Drawing Techniques	184
Text Techniques	195
Saving, Editing, and Printing Paintbrush Files	196
Chapter Summary	199

Key Terms	199
Now Try This!	200
<b>Chapter 12 - Windows Terminal</b>	<b>203</b>
Looking Ahead	203
Starting and Ending the Terminal Program	204
Hardware Requirements and the Remote Computer	206
Terminal Configuration	208
File Transfers and Printing	216
Programming the Function Keys	221
Trouble Shooting	223
Chapter Summary	226
Key Terms	226
Now Try This!	227
<b>Chapter 13 - Alternative Modes of Operation</b>	<b>229</b>
Looking Ahead	229
Processors and Memory	229
Standard Mode	234
386 Enhanced Mode	235
Chapter Summary	235
Key Terms	235
Now Try This!	236
<b>Chapter 14 - Customizing the Windows Environment</b>	<b>237</b>
Looking Ahead	237
Modifying the Initialization Files	238
SysEdit	241
Optimizing System Memory	243
Using SETUP for Maintenance	246
The RAM Disk	249
Disk Caching	251
Chapter Summary	254
Key Terms	254
Now Try This!	254
<b>Index</b>	<b>255</b>

**Chapter****1****A Review of DOS Concepts**

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**Looking Ahead**

This chapter is about elementary DOS concepts and commands. In particular, this chapter will be used to review the issue of file names, directories, and paths. This is important because Windows uses, and is limited by, the same system and file naming conventions that are used by DOS. Even though you may be a long-time DOS user, you should review this chapter carefully to refresh your understanding of DOS concepts. All of the DOS commands can be generated from within Windows, but it is useful to know what is going on behind the scenes.

An important topic that any DOS or Windows users should be familiar with is the form and uses of the AUTOEXEC.BAT and CONFIG.SYS files. This chapter will review these concepts, allowing you to make more effective use of your system, both when running in a conventional DOS mode, as well as in Windows 3.1. Later in this book, we will show you how to modify these files to improve the performance of Windows 3.1 on your computer.

The AUTOEXEC.BAT file that is used to control the start-up parameters for your systems will be examined. The discussions in this chapter will be directed toward systems fitted with a hard disk drive, as Windows 3.1 will not run on a system with only floppy drives and an Intel 8086/88 processor. In addition, we will assume that your computer is fitted with a mouse. Windows can be run without a mouse, but it is a more effective environment if a mouse is used. Version 5.0 of DOS is also assumed. If you have an earlier version of DOS, you may find some minor differences in DOS commands between this text and your system.

---

In this chapter you will understand:

- o How files and directories are named in DOS.
- o What a PATH is, how to set one up, and why its use makes the system easier to use.
- o What directories are, and how to use them effectively.
- o What the functions of the AUTOEXEC.BAT and CONFIG.SYS files are, and how they may be modified for specific purposes to enhance your use of your system.

If you are an experienced microcomputer user, this chapter will serve as a quick review of the more important aspects of microcomputer use. The operating system, which we will simply refer to as DOS, for Disk Operating System, is the program that allocates or manages the systems resources and runs other programs on your computer. The primary function of DOS is to help you manage the files on the various disks you will be using, and to interpret the commands given to the system.

## **Disks, Files, and Paths**

Information and program are stored in files. Some files, like those in DOS and certain applications packages, have an *extension*. If a *file name* has an extension, it must always be included to properly specify that file. For example, the BASIC language system often uses an extension .BAS for BASIC program files. Later, we will see how file names come into play in DOS commands.

Sometimes computer storage systems are compared to large file cabinets. Each disk you access is like a drawer in a file cabinet, and, like a file drawer, it contains many different file folders. You need to be able to tell the computer which file (and on which disk) specific information is located, just as you would need to know which file cabinet, drawer, and file folder to open. You will create more files as you use an applications package. These files, their names, and their location can quickly become confusing unless organized from the beginning.

---



A complete file name contains four elements:

1. The *name of the disk drive*. This is A: or B: for floppy drives, and C: or D: for fixed or hard drives. The drive designation can be omitted unless you want to refer to a file stored on another disk than the currently logged disk drive. If you have additional hard disk drives, they are named E:, F:, and so forth.
2. The *subdirectory name*. This optional feature is a name given to the storage area where there are a group of several similar files.
3. The *name of the file*. This is the essential way that we distinguish one file from another. The name of a file should be descriptive of its contents.

In DOS, a file name can have up to eight characters. Special characters like \$ and the underscore ( \_ ) should be avoided, as some software packages use these characters to name files used by that particular package. Also, there can be no embedded spaces in a file name.

4. The *file extension*. This is an optional three-character extension to the file name. For example, THISFILE.CUR and THISFILE.YTD might contain the current and year-to-date figures, respectively, on a given subject. The extension consists of a period followed by one to three characters. You have the option of including an extension on the files you create. Some software packages will provide an extension automatically for their own purposes.

## Directories

The first thing you need to be able to do after you boot your computer is to determine what information is stored on your disk. This is done with the *Directory* command. Every disk, whether hard or floppy, contains a *directory* of all the files stored on it. By typing the DOS command DIR after the DOS prompt and pressing the Enter key, you will get a list of all the files stored on the disk in the currently logged drive.