

OsborneMcGraw-Hill

pfs:Software

Made Easy

WRITE

FILE

REPORT

ACCESS

GRAPH

Carl Townsend

TP31
T4

8563690

pfs:[®] Software Made Easy



E8563690

CARL TOWNSEND



Osborne McGraw-Hill
Berkeley, California

Published by
Osborne McGraw-Hill
2600 Tenth Street
Berkeley, California 94710
U.S.A.

For information on translations and book distributors outside of the U.S.A., please write to **Osborne McGraw-Hill** at the above address.

A list of trademarks appears on page 259.

pfs:® Software Made Easy

Copyright© 1985 by McGraw-Hill, Inc. All rights reserved. Printed in the United States of America. Except as permitted under the Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a data base or retrieval system, without the prior written permission of the publisher, with the exception that the program listings may be entered, stored, and executed in a computer system, but they may not be reproduced for publication.

1234567890 DODO 8987654

ISBN 0-88134-147-9

Cynthia Hudson, Acquisitions Editor
Denise Penrose and Kevin Gleason, Technical Editors
David Kruglinski and Phil Fawcett, Technical Reviewers
Ted Gartner, Copy Editor
Deborah Wilson, Composition
Yashi Okita, Cover Design

Introduction

PFS:® SOFTWARE Made Easy is a tutorial that takes you step by step through the process of using PFS programs. It is designed to help you become a proficient user of programs produced by Software Publishing. Concepts are introduced, explained, and illustrated by examples that are of particular relevance to businesspeople and professionals.

How to Use This Book

Like any tutorial, this book is not just to be read. As you go through its chapters you should be sitting at your computer keyboard, trying the commands and functions as they are described. This “hands-on” experience is the best way to learn and master the PFS programs.

This book is divided into three parts. Part One describes five PFS programs in detail: PFS:WRITE, a word processing program; PFS:FILE, an information-management program; PFS:REPORT, a tabular report generator; PFS:GRAPH, a graphics program; and PFS:ACCESS, a telecommunications program.

Part Two is focused entirely on the many uses of PFS:FILE. You will learn how to design files, how to locate information stored in them and

to move that information to other files, and how to redesign files.

Part Three shows you how to increase the usefulness of PFS programs. A major feature of these programs is that they can be used together in various combinations, so Part Three will teach you how to use the programs as an integrated package. You will also learn how PFS programs can work with information that was generated by non-PFS programs. In addition, three programs from PFS:SOLUTIONS are described: MAIL LIST, TICKLER, and LEDGER.

Finally, there are seven appendixes. You can use some as convenient references. There is a compendium of useful terms; a table listing and defining the PFS commands; and detailed descriptions of the hardware requirements of each program. You can use the other appendixes to acquire additional information of various kinds: detailed instructions for “installing” the programs; a description of the equipment needed for using PFS:ACCESS; advice on naming files; and instructions for using PFS programs on the Apple and TI computers.

What You Will Need

The PFS programs described in this book will work on the IBM PC and PC XT computers, the Apple IIe, IIc, and III computers, and the TI Professional computer. For the programs to work on them, all of these machines must have at least 128K of memory, except the Apple IIe and IIc, which require 64K. (If you are unsure how much memory your machine has, consult your dealer.)

The discussions in this book assume you are using an IBM PC or PC XT. If you are using an Apple IIe, IIc, or III, or the TI, consult Appendix G to learn how to use the PFS programs on your machine.

To use the PFS programs you will need at least one disk drive—two are preferable—or a hard disk system. You will also need a monitor (monochrome or color) and a printer. Your operating system (the program that enables your machine to perform and to run your PFS programs) must be MS DOS or PC DOS.

In each chapter that introduces a PFS program, you will be reminded that the program should already be “installed” for your system. Installation is the process of setting up your PFS program for your specific monitor, disk drive, and printer. Often your dealer will have installed the program for your system at the time of purchase. If this is not the case, refer to Appendix C, which describes how to install each of the programs covered in the book.

PART
ONE

Mastering PFS Programs

Table of Contents



<i>Introduction</i>	v
<i>Part One Mastering PFS Programs</i>	
Chapter 1 Getting Started With PFS	1
Chapter 2 Using PFS:WRITE	11
Chapter 3 Using Advanced Features of PFS:WRITE	29
Chapter 4 Using PFS:FILE	51
Chapter 5 Using PFS:REPORT	69
Chapter 6 Using PFS:GRAPH	83
Chapter 7 Using PFS:ACCESS	105
<i>Part Two Working With PFS:FILE Databases</i>	
Chapter 8 Designing Files With PFS:FILE	129
Chapter 9 Merging and Extracting Records With PFS:FILE	137
Chapter 10 Changing a File Design With PFS:FILE	153
<i>Part Three Advanced PFS Applications</i>	
Chapter 11 Integrating PFS Software	167
Chapter 12 Using PFS Software With Other Systems	189

Chapter 13	Using PFS SOLUTIONS Programs	203
Appendix A	Useful Terms	213
Appendix B	PFS Hardware Requirements	218
Appendix C	Installing PFS Products	222
Appendix D	Peripherals for Telecommunicating With PFS:ACCESS	238
Appendix E	PFS Command Tables	245
Appendix F	File-Naming Conventions	248
Appendix G	Using PFS Products With Other Computers	250
	<i>Index</i>	261

CHAPTER ONE

Getting Started With PFS

We live in a world that is exploding with information. Each of us accesses and assimilates large amounts of information daily. This information can change almost as rapidly as we use it. Many futurists say we have moved into an *information age* or *communication age*. Our ability to access, use, and manage information can determine our success in this new age. The PFS family of software is a tool to help you use and control information.

PFS software products are simple but powerful programs for information management using a personal computer. Here are the five members of the PFS software family that are described in detail in this book:

- PFS:WRITE is an easy-to-use word processing program that still gives you some of the power of a dedicated word processor.
- PFS:FILE is an information management program with comprehensive filing, sorting, and searching capabilities.

- **PFS:REPORT** is a report generator program that can be used with the files created by **PFS:FILE** to summarize data, perform calculations, and report the data in a convenient form.
- **PFS:GRAPH** is a graphics program that draws presentation-quality bar, line, or pie charts from data created by **PFS:FILE**, Lotus 1-2-3, or VisiCalc files.
- **PFS:ACCESS** is a program for sending and receiving information from another computer system by telephone lines.

All of these programs are *integrated*, which means that information can be moved from one program to another. For example, a document created with **PFS:WRITE** can include reports compiled by **PFS:REPORT** and graphs generated by **PFS:GRAPH**. Integration enhances the usefulness of any piece of information: once it has been entered into a program, it never needs to be entered again, and it can be used in a variety of ways. Chapter 11 describes how all the PFS programs work together.

Another PFS software product, **PFS:SOLUTIONS**, is a collection of application packages that interface with the other PFS programs. **PFS:SOLUTIONS** includes the applications **MAIL LIST**, **INVENTORY**, and **LEDGER**. These programs are examined in Chapter 13.

APPLICATIONS FOR PFS SOFTWARE

Most of the information we use each day is dynamic—constantly changing. Such change makes proper information management all the more critical. For example, one computer vendor discovered that a client was using seven address files with many duplications among the files. When a customer's address changed, it was updated in some files but not in others. Anyone needing the customer's most recent address could not determine which address was correct. With **PFS:FILE**, all of those addresses could have been kept current in a single file.

This next example shows another type of problem PFS software is designed to avoid. If you are a typical businessperson, you will write many reports and perhaps duplicate material from one report to the next. Graphs and charts can help reinforce a conclusion but are time-consuming to create. Often the same data is used to create additional charts with only slight changes to keep them timely. **PFS:GRAPH** will

eliminate the need to draw even the first graph or chart. All you need do is decide on the information to be charted and then see which type of chart best displays that information.

PFS:FILE helps locate specific information quickly. If you often are the speaker at meetings or luncheons, you might want to have a quotation file with quotations stored by keywords. Using PFS:FILE, you can quickly locate those quotations and print them in the draft of your speech, which you are creating with PFS:WRITE.

PFS software can improve productivity in almost any application involving the management of information. PFS software is easy to learn and use and easy to relearn as well if you only use the programs occasionally.

All of the PFS programs are menu-driven, so you do not have to remember *function* and *option* names to use the programs. The programs are all inexpensive and have excellent error recovery if things do not go as you expected.

You can use PFS:FILE with PFS:REPORT for many applications: financial applications include general ledger, accounts receivable, accounts payable, job costing, invoicing, payroll, and budgeting. Other business applications include mailing list management, tickler files, employee record maintenance, inventory control, purchase order systems, project management, time scheduling, and order entry systems. Home applications include checkbook balancing, mailing list management, budgeting, stock portfolio management, nutritional management, recipe files, budget analysis, and cataloging.

USING PFS SOFTWARE

Before you learn the individual PFS programs, there are procedures you will need to become familiar with because they apply to PFS in general.

The PFS Keyboard

PFS programs use the computer keyboard differently than other similar software products. (Figure 1-1 shows the IBM PC keyboard.) The ENTER (or carriage return) key has no special command properties. Instead, the F10 key is the important key. If you are used to programs

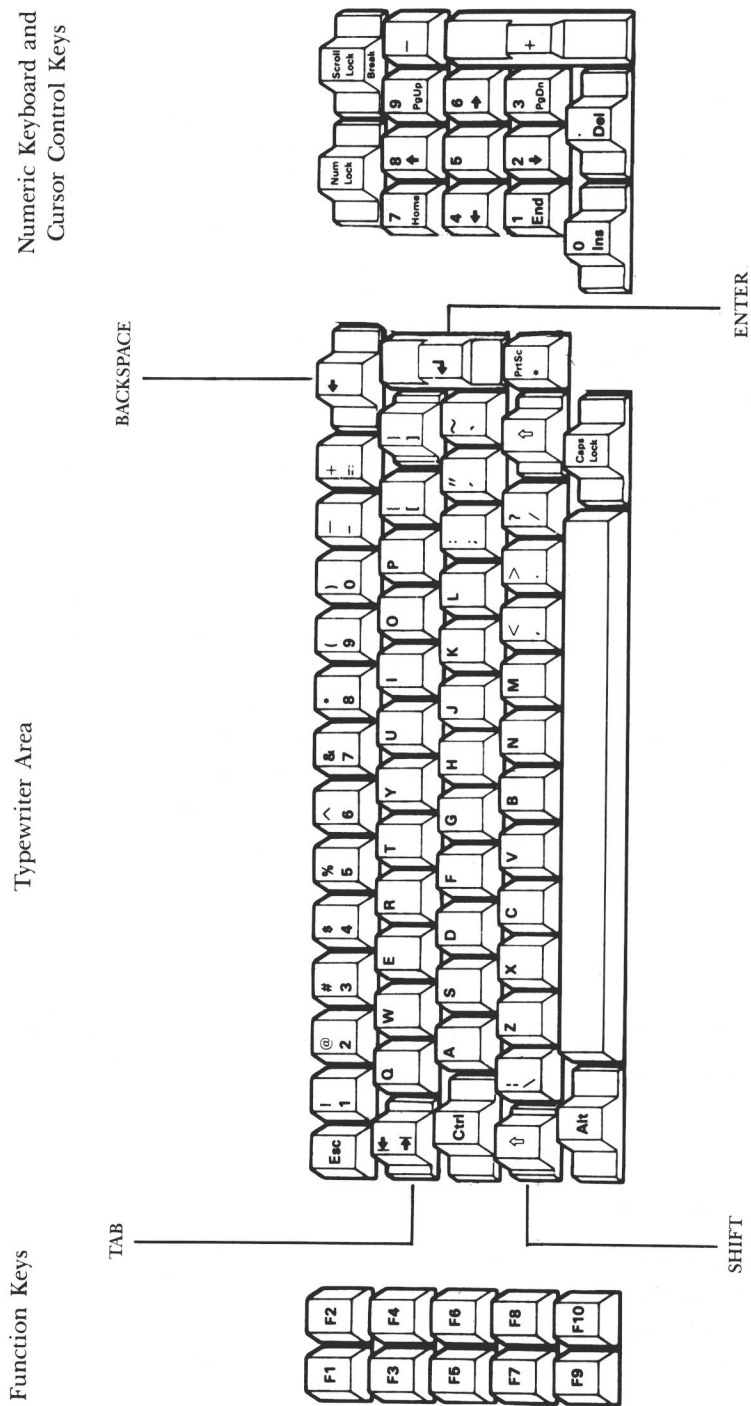


Figure 1-1. *The IBM PC keyboard*

made by other manufacturers, you may have some difficulty using the F10 key as the primary key in the PFS programs.

You move through the PFS program menus with the TAB key, and when you get where you are going, you press F10 to begin your task. The arrow keys and the PGUP, PGDN, and BACKSPACE keys work as you would expect them to work. The DEL key deletes the character the cursor is over, not the character to the left of the cursor as it does in some programs. Each repeated use of the DEL key deletes the character under the cursor and moves the next rightmost character to the left and under the cursor. Holding down the DEL key will continuously delete characters.

Disks and DOS

If you are running PFS on an IBM PC, you are also using either MS DOS or PC DOS as your operating system. PC DOS is designed specifically for the PC, and MS DOS is used on a wide variety of computers, including machines that are IBM-compatible. The different versions of MS DOS have various degrees of compatibility with PC DOS, so if you have an IBM-compatible system that uses some version of MS DOS, your system may or may not work with PFS programs. Check with your dealer or computer manufacturer to be sure.

If you are using PC DOS version 2.0 with floppy disk drives, you should be aware that some PFS programs are so large that you will not be able to install the operating system on the program disk. This is not a serious problem; however, it means that you start your computer with a DOS disk and then replace that disk with a PFS disk.

Although running PFS programs on a computer with a single disk drive is not impossible, some of the programs are more difficult to use this way. Not only will you have to do many disk swaps, but you will also have difficulty in backing up the data disks, since the sorting and copying functions in the PFS programs will not work with a single disk drive. (The backup procedure is described later in this chapter.)

Backing up your data disks is highly recommended, but backing up most of your PFS program disks is impossible if you have floppy disk drives. All PFS program disks but one *cannot* be copied. The one exception is PFS:ACCESS, of which you can make one copy. Some programs are sold with a copy of the program disk to give you a margin of safety. The programs can be installed on a hard disk by means of a special utility program.

After you have used the PFS programs a while, you are likely to have a great deal of data stored on many disks, even if you are using a hard disk system. As a rule, you should not mix data types on a single data disk (except, of course, on a hard disk). Mixing data types may seem harmless enough at first, but doing so will cause increasing inconvenience and confusion as you accumulate data. For example, if you are creating a mailing list, your file may start out small, and you may wish to put another file, such as a schedule of your appointments, on the disk with it. But the mailing list file will grow and you will eventually need the space occupied by the schedule. Removing it to another file will be a tedious process. Mixing a wide variety of types of information also makes it difficult to label a disk properly.

Be sure to use labels to identify your disks. These labels can be put on before or after the files are created on a disk. Once a label has been placed, be sure to use only a felt tip pen to add information—no pencils or ballpoint pens, which can damage the internal magnetic disk. Refer to Chapter 11 for further help with file management.

Naming Files

All PFS programs store information in *files* on disks. The PFS programs use part of DOS to create and manage these files. You use the DOS DIR command to see the names of the files on your floppy or hard disk. A detailed description of how this and other operating system commands work is beyond the scope of this book. Before you use PFS software, you should be familiar with the basic operating system commands like FORMAT, COPY, and DIR used to manage disks and files. Be sure you understand your operating system before doing the examples in this book. Read the manual that came with your system or consult any books available on it.

Each file stored on a disk has a name. Each file name on the disk must be unique and not used for any other file on that disk. This name is used to access or change the file. Each file name is made up of two parts, which are separated by a period: for instance,

MODEMS.BAK

The first part of the name can have as many as eight characters, which can be letters or numbers or both. It makes sense to give a file a name

that indicates something about its contents. In the previous example, MODEMS indicates that the file contains information about modems. You should avoid special characters like "?", "<", or "[" in your file names because many of these characters are used by the operating system for other purposes. The operating system will automatically capitalize any lowercase letters you use in the name.

The second part of the name, called the *extension* and consisting of no more than three characters, generally indicates something about the *type* of file. For example, BAK indicates backup files. You can create your own extension conventions if you like (such as LTR for letters), but you should avoid using those that the system already uses for other purposes (such as COM, EXE, and BAS). Appendix F lists extension names that should not be used for PFS data files and lists suggested names.

You can name your files without giving them extensions. (The examples in your PFS program manuals do not use them.) However, extensions will give you better control over your files. For example, if you want to copy all files of a certain type and you have given them the same extension, you can copy them all with a single command. Using consistent extension names also helps you identify immediately the types of files stored on the disk (such as LTR for a letter file).

Disk Drive Designators

Whenever you want to store or retrieve a file, you should specify the disk drive where the file is to go or be found. That is, specify the drive with the data disk. For example, if your MODEMS.DAT file is on the data disk in Drive A, you can indicate this by using "A:" in front of "MODEMS.DAT":

A:MODEMS.DAT

If you do *not* specify any disk drive, the operating system will assume the drive for the data disk is the *same* as the program disk drive, which is correct only if you are using a hard disk or a system with a single disk drive. As a precaution, always use drive designators so you will always know *where* the information will be stored. In some cases you may write a file to the disk on one drive (say, B:MODEMS.DAT) and then read it

from another drive (A:MODEMS.DAT). The designator is *not* a part of the file name, but only tells the operating system where to send or find the file.

Backup Procedures

Information stored on a disk has value—not only the value of the information itself, but also the monetary value of the time it took you to load the information to the disk. Often the loss of a file can mean the loss of many hours. On a typical IBM PC floppy disk, you can store a complete book manuscript. Imagine the time it would take to reenter this information if the disk were to become damaged.

Information can be lost in two ways. The most common cause is an operator error. For example, you might enter a document to PFS:WRITE and then leave the program without saving the document; or you might inadvertently erase an important file. (The ERASE command can erase an entire disk in seconds without so much as a cautionary note to the operator.) The second cause of information loss is a true hardware error or an error caused by an external environmental event. For example, a power surge could destroy a document you were creating with PFS:WRITE and had not yet stored on disk.

Because information can be easily lost or erased, save it periodically and back up your disks. Disks are cheap compared with your time. In creating documents with PFS:WRITE, take the time to stop and use the Save function to write the document to the disk periodically. (With PFS:FILE, the file is created on the disk as you enter the information.) Whatever PFS program you are using, after a work session (perhaps every four hours), back up the disk; that is, create a copy of any disk you have updated. Backing up the disk is a fundamental procedure of good management in any computer installation, regardless of the size of the computer.

With an IBM PC, back up your disks with the COPY command that is part of the operating system. Also verify any copies you make. *Verification* is the comparison of the copy with the original to be sure that no errors were created during copying. Verification can be done in any of three ways. One way is to use the “V” (for verify) option when you execute the COPY command. A second way is to use the VERIFY ON command before starting the copy or when first starting the system by putting the VERIFY ON command in the AUTOEXEC.BAT file (refer to your operating system manual for help). The third method to verify

is to use **DSKCOMP** to check the new disk you have created. This third method is useful if you have used **DSKCOPY**, a program that can copy disks but that does not verify after copying. Be sure you use the right combination of **COPY** command and Verification option. With a hard disk, you can use the **BACKUP** command to create a backup of the hard disk. This, like **DSKCOPY**, does not verify the copy. For important files, use **COPY**. If you need more information on how to create your backups, refer to your DOS manual or a book on the DOS operating system.