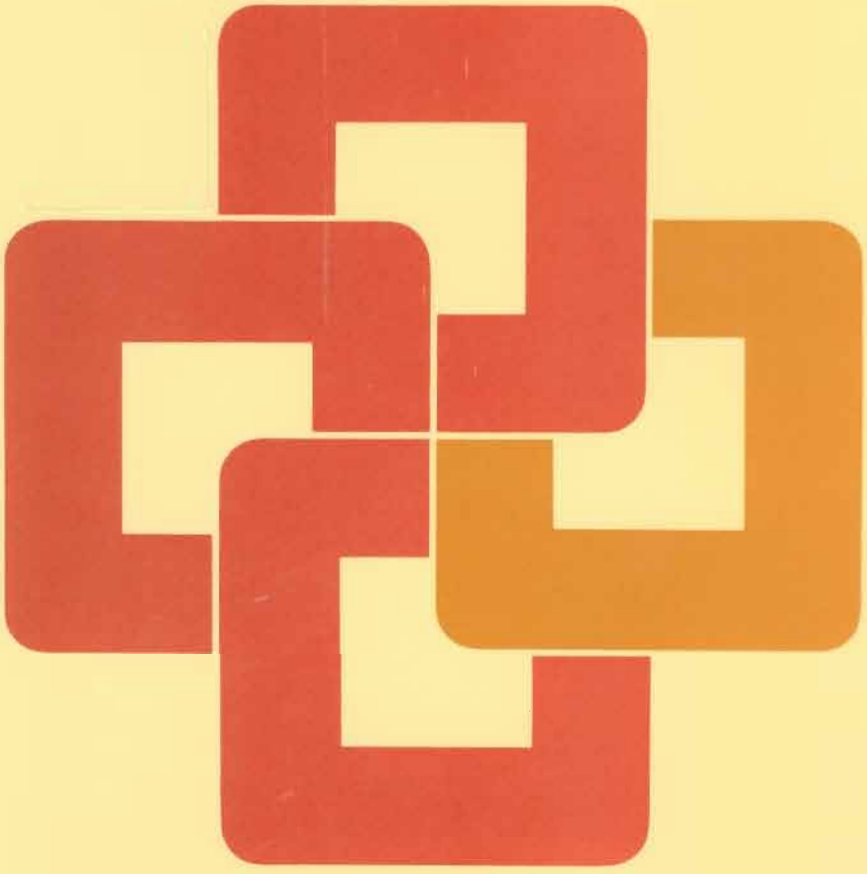
pfs:® file

A member of the integrated PFS Family of Software



HP 150 Personal Computer

pfs:® file

user's manual

for HP 150 Personal Computer

Program Authors: D.D. Roberts and Lori Cameron
Manual Author: Connie Burton

HP Computer Museum
www.hpmuseum.net

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First Printing, March 1984

Software Publishing Corporation
1901 Landings Drive
Mountain View, CA 94043

preface

This manual explains how to use the PFS:FILE program to help organize and manage the information you use every day. If you are not familiar with the general operation of your computer system, read through the *HP 150 Personal Computer Owner's Guide* before beginning to use the PFS:FILE program.

To use PFS:FILE, you need an HP 150 Personal Computer with a printer and the Hewlett-Packard supplied MS-DOS* operating system. You also need a dual diskette drive or one diskette drive and a fixed disk, the PFS:FILE program disk, and a supply of blank, formatted disks.

This manual provides step-by-step instructions on how to get started and how to use each FILE function. Each chapter goes through one function in detail. The manual works with the same major example throughout to allow you to use your computer and experience FILE as you are reading about it. The best way to learn FILE is to read the manual and follow along with the examples.

The appendices contain information on error messages and recovery, estimating how many forms will fit in a file, and a summary of special keys and commands. A glossary explains words that may not be familiar to you. Finally, there is an index.

If you have not already done so, please take a moment to complete and mail the User Group Enrollment Card. Enrollment in the PFS User Group entitles you to receive product update information, new product announcements, and tips on using the PFS Family of Software.

*The MS™-DOS Disk Operating System is a registered trademark of Microsoft Corporation.

Protecting Your PFS Data Files

By the time you have created a PFS file and entered information in it, you have invested a good deal of your time. To avoid losing the data stored in that file (and the time you've spent entering it), follow these guidelines:

1. Never remove a data disk or turn the computer system off unless the PFS:FILE Main Menu is displayed on the screen. IF YOU DO, YOUR FILE MAY BE PERMANENTLY DAMAGED.

2. Always keep at least one extra, or "backup" copy of each PFS file. See our backup recommendations below.

3. Handle your disks carefully. Store away from heat, sunlight, and devices with strong magnetic fields (TVs, disk drives, etc.)

4. Print a copy of your files from time to time. See Chapter 5 for instructions.

Recommended Backup Procedure

1. Back up your data files on a regular basis. If you update them daily, then back up daily. If you update less often, then back up whenever you update.

2. After creating a new data file, make two backup copies. Thereafter, alternate their use. The first time you back up, use the first disk; the next day, use the other disk; and so on. This way, if a problem develops while making a backup, you will still have the data on the other backup disk.

3. Use the Personal Application Manager (P.A.M.) COPY command to back up your files (see the *HP 150 Personal Computer Owner's Guide* for instructions).

4. If you encounter problems with a file or get an I/O ERROR message, discard the disk at once and use the backup disk (make a copy of the backup disk first). If the problem recurs with the backup disk, ask your computer dealer for help.

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I: introduction

This introduction is divided into two parts. The first part is an overview of the PFS:FILE program and how it works. The second part tells you how to get started using PFS:FILE.

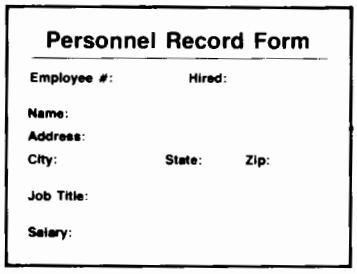
What is PFS:FILE?

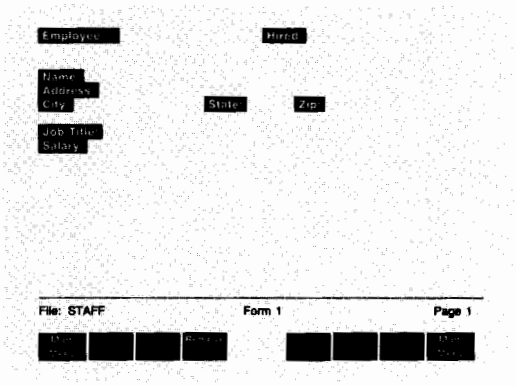
PFS:FILE is a computer program that you can use to store and retrieve the information you deal with every day. It works with all kinds of information—about people, places, objects, ideas, events. PFS:FILE (or simply FILE) is useful in a wide range of applications, such as business, professional environments, home, and education. FILE organizes and stores information efficiently, providing easy access to any information you want. Retrieval is fast and reliable, and is not limited by the order in which the information is stored.

When you use FILE, your information is kept in forms of your own design. A form can have as much or little structure as you wish. Using the computer keyboard and screen, you design the form you want, save it in a file on a disk, and then use it to store your information.

Here are some examples of the kinds of forms you can design:

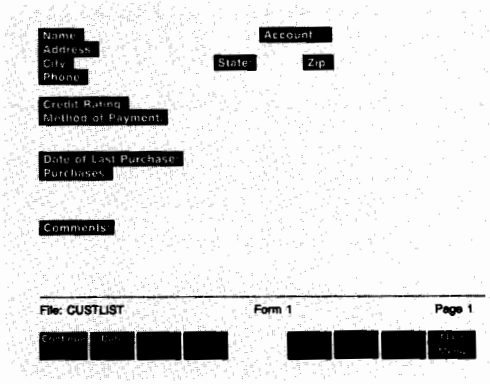
Personnel Records





Customer List

CUSTOMERS		
ACCOUNT #:		
NAME:		
ADDRESS:		
CITY:	STATE:	ZIP:
PHONE:		
CREDIT RATING:		
METHOD OF PAYMENT:		
DATE OF LAST PURCHASE:		
PURCHASES:		
COMMENTS:		



Patient Records

AZUKI MEDICAL GROUP
1357 W. SHAW AVE.
PETALUMA, CA 93711

Patient Record

Soc. Sec. # 565-66-2730 Age 67

Name Mr San Miguel

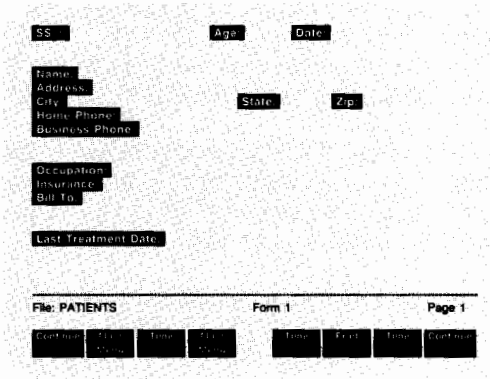
Address 3199 Frisco Drive

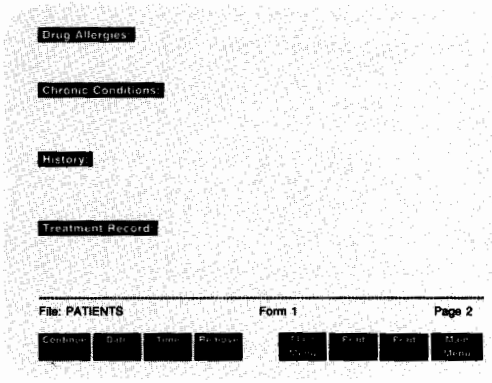
City Palo Alto State CA Zip 94025

Chronic Conditions Arthritis

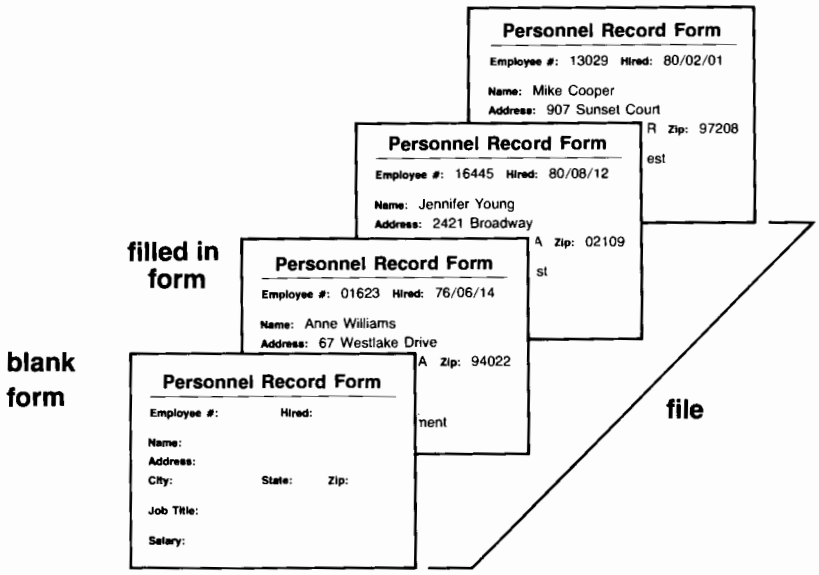
Last Office Visit

9/30/78
7/16/79



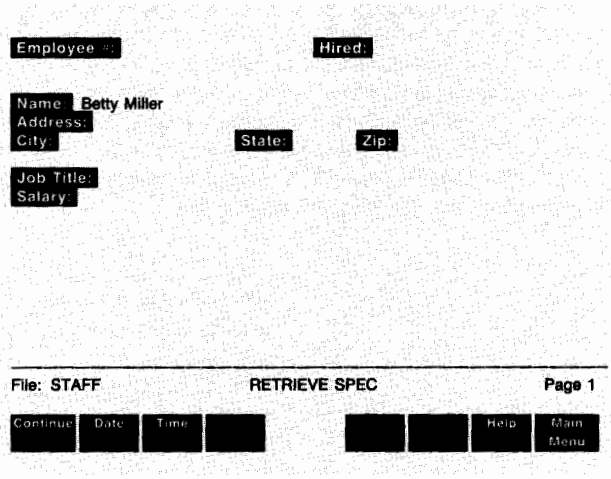


After you have designed the blank form, you can recall it to the screen, fill it out with the information you want to keep, and then store the filled-in form back in the file. You can enter data in any order you like and FILE will find the information when you need it. Disk storage is very compact. The number of forms you can store depends on the number of pages there are in the form, how many items there are per page, and how much data is entered in each item. See Appendix B, "Disk Storage Capacity," to learn how to estimate accurately the number of forms that will fit in a file.



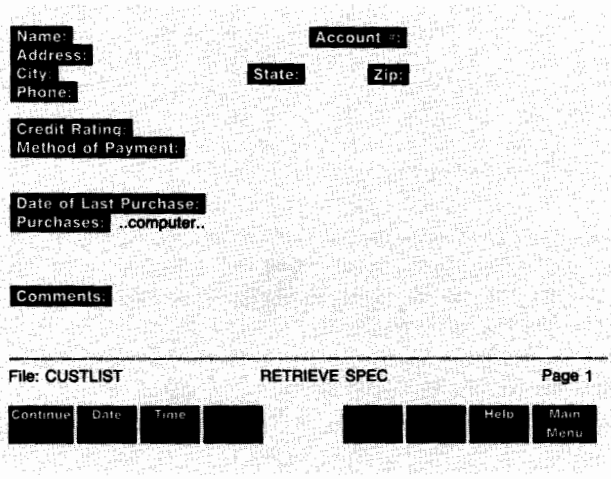
Once you store the information in the file, you can retrieve it in a variety of different ways. Using a retrieve spec form, you indicate what information you want to find by filling in retrieve specifications. You can ask for all items that exactly match a given set of characters:

"find the employee record for Betty Miller"



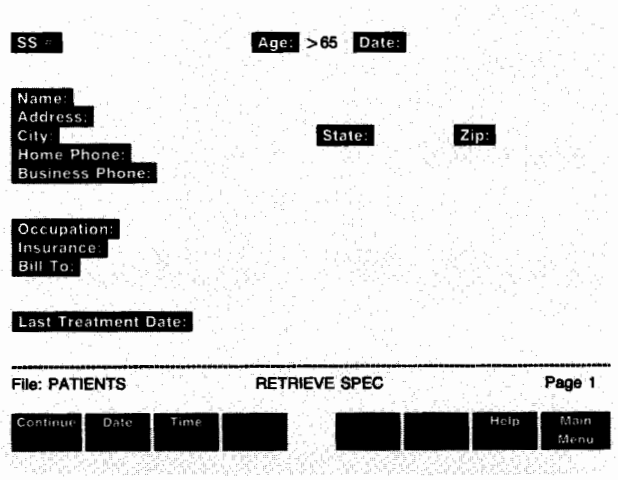
or all items that contain a certain set of characters:

"find all customers that have purchased a computer from us"



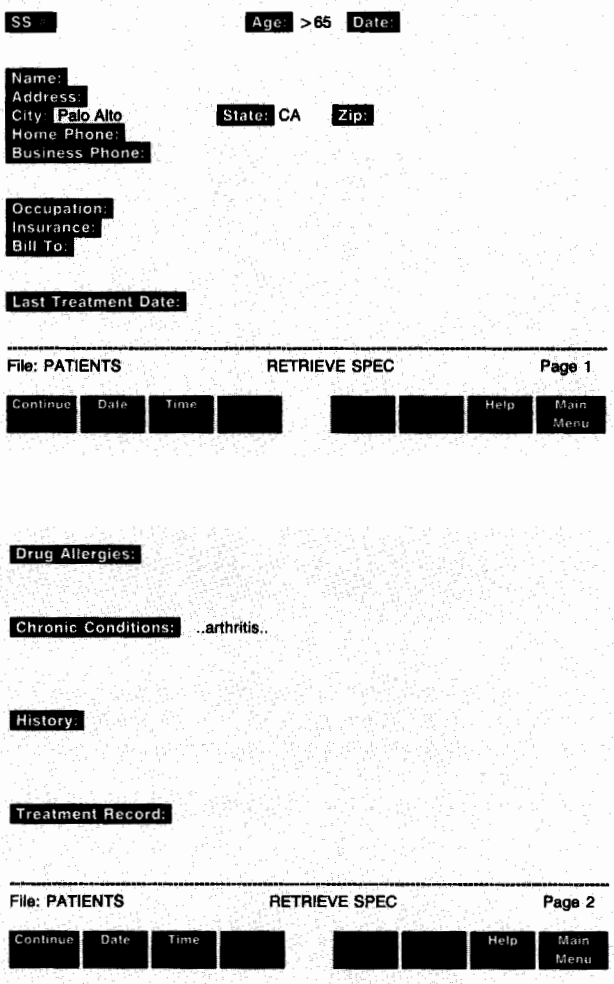
If the item is a number, the request can be for all items less than, greater than, or equal to a given number:

"find all patients over 65"



FILE allows you to enter a retrieve specification for every item in the form. Only those forms meeting all the specifications are found. This feature gives you access to complex relationships between different items of information:

"find all patients over 65 living in Palo Alto who suffer from arthritis"



You can display the requested forms on the screen for quick viewing (and updating, if you wish) or print them for a more permanent record. You can print the entire form or selected portions of it, formatted to your specifications (for example, you can generate mailing labels).

Getting Started with PFS:FILE

This section provides basic information about starting to use the PFS:FILE program. It talks about your computer system, loading the program into your computer, FILE's Main Menu, and the special keys used in FILE.

What You Need to Use FILE

To take advantage of all the features of the FILE program, you need the following equipment:

- an HP 150 Personal Computer with
  - —the Hewlett-Packard supplied MS-DOS operating system
  - —a dual diskette drive or one diskette drive and one fixed disk
  - —a printer (either the built-in HP printer or an external printer)
- the PFS:FILE package including
  - —the disk that includes the PFS:FILE program
  - —the spare copy of the disk with the PFS:FILE program

    Note: This copy is provided in case something happens to damage your original program disk. Store it in a safe place.
- extra disks on which to store information

How to Start the Program

The procedure for starting the program is slightly different depending on whether or not the computer is turned on:

—If the computer is turned off, first turn on the disk drive and insert your HP 150 System Disk in drive A and the disk with the FILE program in drive B. Turn on the computer. Next you see displayed the P.A.M. list of application programs you have stored on your system. Touch the screen at the name **PFS:FILE**, and then touch **Start Applic**. You will hear the disk drive as the program loads into memory.

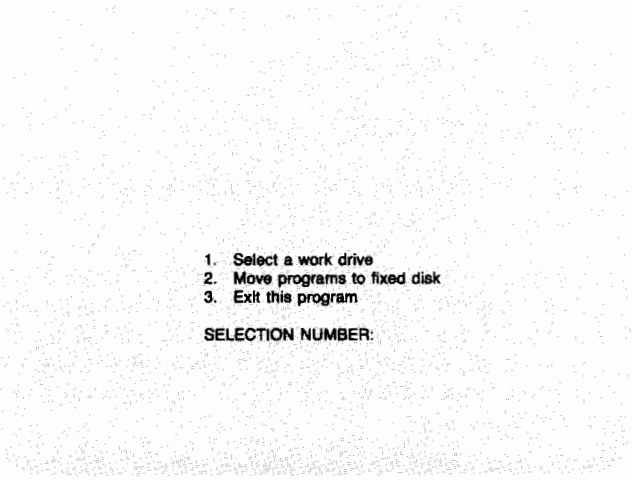
—If the computer is turned on, simply exit from whatever program you are using, making sure the FILE disk is in a drive. When the list of programs appears on the screen, touch **PFS:FILE**, and then touch **Start Applic**. FILE will be loaded immediately into memory.

—You can start FILE from the MS-DOS prompt instead of from P.A.M. If you choose to start from DOS, first change the default drive (the one the HP 150 assumes you want to use unless you specify another drive) to the drive that contains the program diskette. Enter the drive name followed by a colon, and press Return. When the new drive prompt appears, type FILE and press Return.

Adapting FILE to Run with Your Computer

FILE comes set up to automatically use the diskette in drive A as a "work disk." A work disk is used to store information temporarily when sorting forms for printing or when changing the design. If you want to use a diskette in a different drive or a fixed disk as the work disk, you will need to run the SETUP utility program provided on the FILE program disk before using the FILE program. You also use the SETUP program to move the programs to a fixed disk.

To use the SETUP program, first be sure your disk is not write-protected. Starting at the P.A.M. screen, press **SETUP**. Then press **Start Applic**. The SETUP screen looks like this:



You have three options: to select a work drive, to move the programs to a fixed disk, and to exit the SETUP program. Each procedure has on-screen instructions for you to follow. These instructions are summarized below.

Note: You can also start the SETUP program from MS-DOS, but you must first change the default drive to the drive that contains the program diskette. Enter the drive name followed by a colon, like B:, for example, and press Return. When the new drive prompt appears, type SETUP, and press Return. See the *HP 150 Personal Computer Owner's Guide* if you need further instructions.

To select a work drive, choose the first option. (If you press the wrong key, use the Escape key to return to the SETUP menu.) Enter the drive you want to designate as your work drive followed by a colon. Next, specify which programs, PFS:FILE, PFS:REPORT, or both, that you want to change. Press Return and the work drive is changed for you.

To move the programs to a fixed disk, choose the second option of the SETUP program. (If you make a mistake, use the Escape key to return to the SETUP menu.) Enter the drive designation of your fixed disk followed by a colon. Press Return and PFS:FILE, PFS:REPORT, and SETUP are moved to the fixed disk. You can only move the programs to a fixed disk five times.

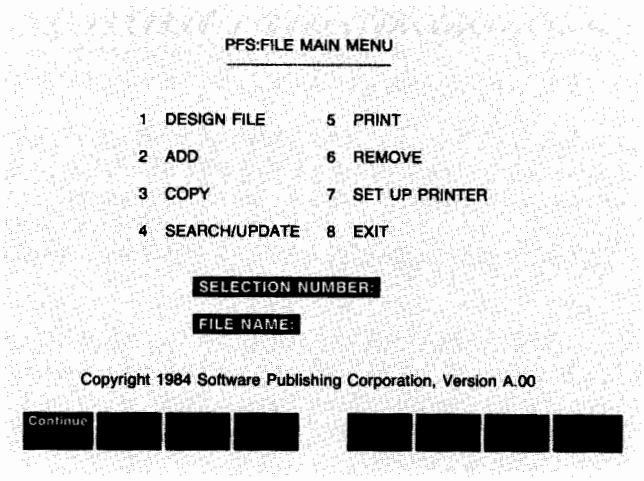
To run the programs on the fixed disk from P.A.M., you need to install them. Follow instructions in the *HP 150 Personal Computer Owner's Guide* carefully. You can also run the programs from the MS-DOS prompt.

Note: If you move the programs to a fixed disk, you do not have to change the default drive before starting from the MS-DOS prompt.

In addition, you need to configure your system printer using the MS-DOS Device Configuration Menu described in Appendix A of the *HP 150 Personal Computer Owner's Guide.*

The PFS:FILE Main Menu

When you load the FILE program, the first thing you see is the FILE Main Menu:



You see this menu when you first load FILE and whenever you touch **Main Menu** on the screen or press the F8 key on your keyboard. You use this menu to select the function you want FILE to perform. It consists of a numbered list of the FILE functions, along with two items that you need to fill in:

SELECTION NUMBER: Enter the number corresponding to the function you want to perform (1 selects DESIGN FILE, 5 selects PRINT, etc.) Each time the Main Menu appears, this item is cleared, indicating FILE is ready for you to enter a new selection.

FILE NAME: Enter the name of the file you are going to use. You initially give the file a name when you design it (see Chapter 1). This can be a simple file name, such as STAFF, a drive name and file name, such as B:STAFF, or it can be a complete pathname. If no drive is specified, FILE assumes the file is in the default drive (the drive from which you started the program).

WARNING

Do not remove the disk containing your data file from the disk drive unless the FILE Main Menu is displayed on the screen. Removing it at other times may damage the data in the file.

Keyboard and Touch Screen Control Keys

PFS:FILE utilizes the entire touch-sensitive screen of the HP 150 Personal Computer. When you touch a highlighted item on the screen, like SELECTION NUMBER on the Main Menu, for example, the cursor moves to that item, and you are ready to type the required information.

There are also some special control keys you often use when working with FILE. They are listed below. Throughout the manual, keys that appear at the bottom of the touch-sensitive screen are in boldface print. To use one of these keys, simply touch your finger to the labeled section of the screen. If two keys are listed for a function, use whichever you wish. Appendix C summarizes all the keys used by PFS:FILE.

Key	Function
Main Menu or F8	**Escape.** Use either of these keys to cancel the current operation at any point in FILE and return to the Main Menu.
Continue or F1	**Continue.** Use either key to begin or continue the specified function.
Help or F7	**Help.** Use either key to display quick reference information appropriate to the function you are performing.
Tab	**Tab.** The Tab key moves the cursor from one item to the next on a menu or FILE form. With Shift, it moves the cursor back to the previous item. In addition to the Tab key, you can also touch the item on the screen where you want to position the cursor.
Backspace	**Backspace.** This key moves the cursor one space to the left and removes any character in that space. Use this key to correct mistakes made when filling in items on the screen.
Return	**Return.** This key moves the cursor to the beginning of the next line.

Next	**Next Page.** This key brings up the next page of the form, or an attachment page if the page on the screen is the last page of the form.
Prev	**Previous Page.** This key recalls the previous page of the form to the screen.
Clear display	**Clear.** Use this key to clear all entered information from the menu or form, and to move the cursor to the first item or the top left-hand corner of the screen.
Insert char	**Insert Characters.** This key switches back and forth between normal and insert mode. In insert mode (shown by a rectangular cursor), FILE inserts typed characters at the cursor position, moving other characters on that line to the right to make room. If the line is full, nothing happens.
Delete char	**Delete Characters.** This key deletes the character at the current cursor location, moving other characters on the line one location to the left to fill up the space.

PFS File Names

You can build PFS files on any MS-DOS-compatible disk device that is connected to your computer system. You will usually store each PFS file on a separate disk. You can put more than one file on a disk, but we recommend that you don't, since files tend to get large over time and cannot be continued on another disk. (Before using a disk for a PFS file, you must format it. To format a disk, use the FORMAT application program that came with your HP 150 Personal Computer.)

To the computer, PFS files look just like other files. The conventions for naming PFS files are the same as for other MS-DOS files. These conventions are briefly summarized below. For a complete description of file naming, see the *HP 150 Personal Computer Owner's Guide.*

A file name usually has two parts: the name of the drive on which the file is stored, and then the name of the file. The two parts are separated by a colon (:). For example, the file name A:STAFF refers to the file named STAFF on the disk in drive A. If you use the name of the file only, e.g., STAFF, FILE assumes the file is on the disk in the default drive.

File names can be from one to eight characters long. You can use the letters A through Z, the numbers 0 through 9, and some special characters. Here are some sample file names:

TARGET82 SALES PATIENTS

A file name can also have an optional extension of a period and one, two, or three more characters. If a file name has an extension, you must always use the extension with the name in referring to that file. Some file names with extensions are:

TARGET.JAN SALES.PFS CLIENTS.$$$

You can also use complete pathnames to name your files. For example, you might specify a pathname like this for one of your files: C:\STAFF\ACCOUNTING\AP. The *HP 150 Personal Computer Owner's Guide* has details on assigning complete pathnames to files.

When You Need Help

Help screens are available when designing a form; when searching through the file; when copying, removing, or printing forms; and when changing the design of an existing file. Simply press **Help** or F7 and FILE displays quick reference information to help you remember what to do.

Summary

- PFS:FILE is a computer program that helps you store and retrieve information in a way that is familiar, fast, reliable, and powerful.
- Make backup copies of your data files to prevent the loss of valuable data.
- The following keys are used by FILE:

Main Menu or F8	cancels the current operation and returns to the Main Menu.
Continue or F1	begins or continues the specified function.
Help or F7	displays a help screen when filling in forms to perform FILE's functions.

Tab	moves the cursor from one item to the next on a menu or form. With Shift, moves to the previous item. Instead of the Tab key, you can also touch the item on the screen where you want to position the cursor.
Backspace	moves the cursor one space to the left and removes any character in that space.
Return	moves the cursor to the beginning of the next line.
▶ ◀ ▼ ▲	moves the cursor one space in the direction shown by the arrow. No characters are erased.
▽	moves the cursor to the top left-hand corner of the screen during the design function; when filling in a form, moves to the first item.
Next	brings up the next page of the form, or an attachment page.
Prev	recalls the previous page of the form to the screen.
Clear display	clears all entered information from the menu or form, and moves the cursor to the first item on the screen.
Insert char	switches between normal and insert mode.
Delete char	deletes the character at the current cursor location.

WARNING

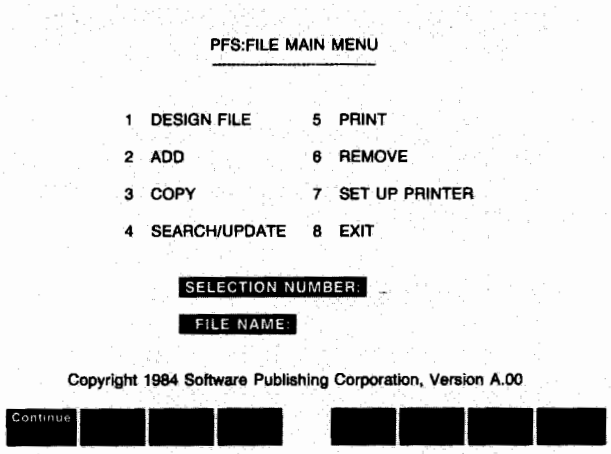
Do not remove the disk containing your data file from the disk drive unless the FILE Main Menu is displayed on the screen. Removing it at other times may damage the data in the file.

1: design file

With the DESIGN FILE function, you create a file for storing your information. You select a disk to hold your file, give the file a name, design the form, and store this form in the file. Later, you fill in the form with information, and FILE stores that information in the same file.

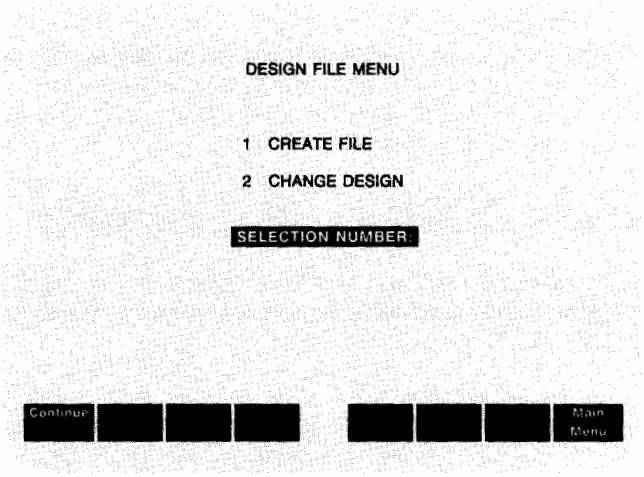
Starting the DESIGN FILE Function

Start the FILE program according to the directions in the Introduction. When the FILE Main Menu appears on the screen, the cursor is always positioned in SELECTION NUMBER:



To select the DESIGN FILE function, first enter a 1 in SELECTION NUMBER. Press the Tab key or touch the screen to move the cursor to the FILE NAME item, and enter a name for your file. If you want to store the file on a disk other than the disk in the default drive (drive B, unless you have changed it), precede the file name with a drive name and a colon (:). For example, to store a file named ORDERS on the disk in drive A, enter A:ORDERS in FILE NAME. (The section titled "PFS File Names" in the Introduction describes the use of drive and file names.)

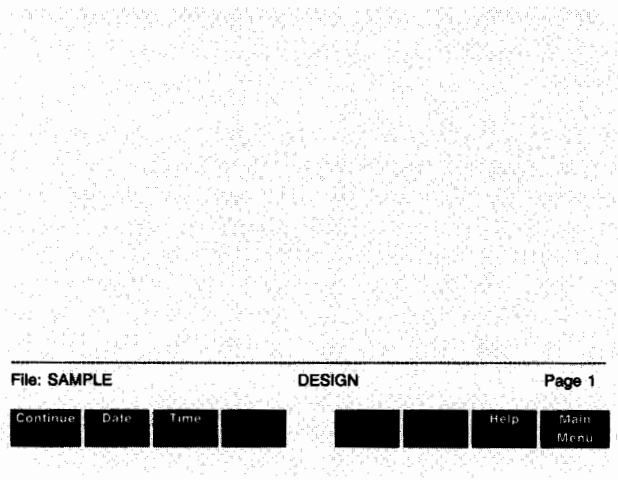
When you have filled in both items, press the **Continue** or F1 key. The Design File Menu appears next:



The DESIGN FILE function has two options. With Create File, you can design the form for a new file. With Change Design, you can change the design of a form from an existing file, whether or not the file contains data. This second option is discussed in Chapter 9.

The Create File Option

To create a new file, enter a 1 in the SELECTION NUMBER item of the Design File Menu, and press **Continue**. A blank screen appears for you to design the form:



FILE uses the message area at the bottom of the screen to tell you:

- the name of the file you are creating (SAMPLE)
- what stage of file development you are in (DESIGN)
- the page number (1)

If the file name you entered already exists on the disk, FILE will display the message THE FILE ALREADY EXISTS before displaying the blank screen. If you want to replace the existing file with the new file, press **Continue**; otherwise, press the **Main Menu** or F8 key to cancel the operation, then start again with a different name.

Designing a Form

When you design a form, you create a place to store your information. Using the keyboard and screen, you create an image of the form you want. You can use a ready-made form as a guide in designing your FILE form, or you can use the following guidelines to create your own form:

- Decide how to arrange the information you wish to store in your file.
- Choose names that best describe each section of information.
- Determine approximately how much space you should leave for each section of information.

Each section set aside for information (and later the filled-in section) is called an "item." As you are designing your form, keep in mind these important points about items:

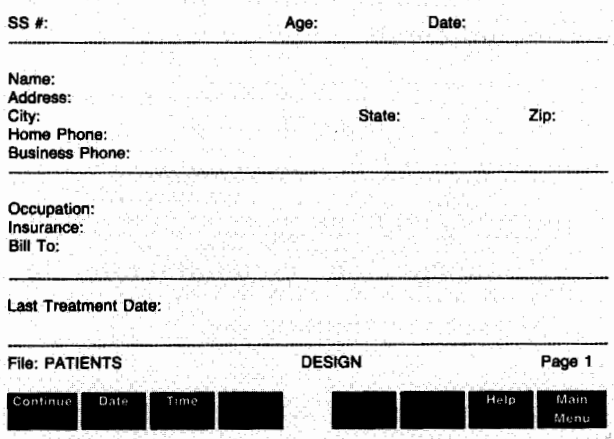
- Leave plenty of space for each item. This does not take more space on your disk and is important because your form is used for both storing and retrieving information. When you use it to retrieve something, the format necessary to retrieve the information may actually require more character positions than the data itself. For example, an item named PAGE may be expected to store a maximum of three digits. If you design your form with only three spaces following PAGE, you cannot ask for all pages less than 100, because the necessary format would look like this: PAGE: >100.

- Make the first item in your form the one you will look for most frequently. This provides the fastest possible retrieval. When FILE is searching for the first item on a form, it can go directly to the desired form in the file. When FILE is searching for other items in the form, it searches through each form in the file from the end of the file forward, which takes longer.

- When FILE prints out information from your files, it prints items in the order in which they appear on the form. Design your form with this in mind. For example, suppose you want to print mailing labels from a file. Your forms must be set up in the order of a standard mailing address (name, address, city, state, zip), or you will not be able to print a mailing label with the items in that order. Note that the items you choose for printing do not have to be adjoining, just in the proper order on the form.

- If you would like to have the same information stored in two different ways for different purposes, set up two items with different names. For example, have a LAST NAME item for searching and sorting customers by last name, and have a NAME item for keeping names in the format you would use in a mailing address.

- Terminate each item name with a colon. Any character entered on the screen during the design process is part of some item name, and the colon identifies characters as item names for the FILE program. For example, suppose the form from the PATIENTS file mentioned in the Introduction looked like this:



SS# is an item name, and so are AGE and DATE. The line of dashes inserted between the first and second lines of the form are a part of the NAME item. (Every character entered after the colon ending the DATE item and before the colon ending the NAME item is a part of the NAME item.) Knowing exactly what characters an item name includes is very important if you want to change the design of your form after you enter data in it. Information is not copied unless the item names in both the old design and the new design match exactly (see Chapter 9).

Entering Your Design on the Screen

When you are ready to enter the design for your form on the screen, the following keys allow you to move the cursor to different positions on the screen so that you can enter item names wherever you choose:

◀	moves the cursor back one space.
▶	moves the cursor forward one space.
▲	moves the cursor up one line.
▼	moves the cursor down one line.
▽	moves the cursor to the top left-hand corner of the screen.
Return	moves the cursor to the beginning of the next line.

You can make changes to the item names you enter by typing over them, or by using one of the following keys:

Backspace	moves the cursor one space to the left and removes any character in that space.
Insert char	switches between normal and insert mode. In insert mode (shown by a rectangular cursor), FILE inserts typed characters at the current cursor location, moving other characters in the line to the right to make room. (This allows you to insert an item to the left of an existing item.) If the line is full, nothing happens.
Delete char	deletes the character at the current cursor location, moving other characters on the line to the left to fill up the space.

Note that each page of the form can contain a maximum of 100 items.

Multiple-Page Forms

Your form can consist of more than one page, though the screen can show, at most, only one page at a time. If you need more than one page for a form, you can create up to 31 additional pages. Then you can move back and forth between pages, like turning pages in a book, by using these keys:

Next	brings up the next page of the form on the screen. When designing a form, it brings up a blank page. You can continue to enter more item names.
Prev	recalls the previous page of the form to the screen. You can review it and make changes if you wish.

As you move through your multi-page form, the current page number is displayed in the message area at the bottom of the screen. An asterisk (*) to the right of the page number indicates there are additional pages in the form.

Erasing a Page

You can press the Clear display key to erase the currently displayed page of the form that you are designing. Other pages remain unchanged. Pressing this key does not remove the page from the form, however, it merely turns it into a blank page. For example, if you design a four-page form and decide to erase page two, you still have a four-page form with a blank page two. To remove the blank page, use the Change Design option (see Chapter 9).

Storing the Form Design

When you are satisfied that your form has all the right items in the right places, you are ready to store it in the file on the disk. To do this, press **Continue**. FILE stores the form and returns to the Main Menu.

FILE is now ready to accept another function selection. The cursor is positioned in SELECTION NUMBER. The FILE NAME remains unchanged, however, because FILE assumes you are working on the same file until you enter a new name.

WARNING

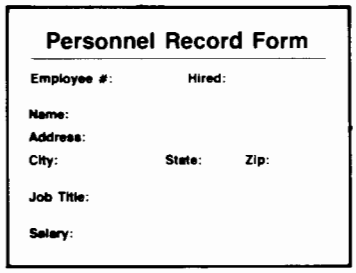
If you press the Main Menu or the F8 key while designing a form, that form is not saved in the file. You must press Continue to save the form in the file.

Leaving the DESIGN FILE Function

If at any time you want to terminate the DESIGN FILE function, you may do so by pressing **Main Menu**. If you press **Main Menu** while designing a form, however, the form design is not saved and the file is erased from the disk. You must press **Continue** to save the form design in the file.

Example of Designing a File:

By following along with this example, you will create a file to store typical personnel information for six sample employees. The personnel form that you want to duplicate as the form for the file looks like this:



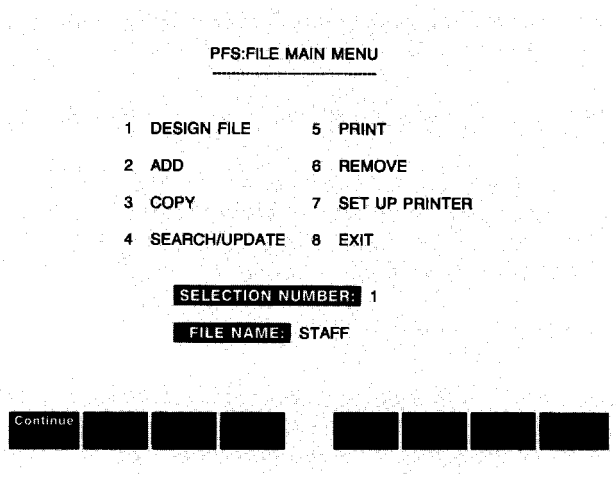
To begin designing the file, make sure the Main Menu is on the screen (press **Main Menu**, if necessary) and place a blank, formatted disk (or other disk with available space) in the default drive. The cursor should be in the SELECTION NUMBER item. Type

1

to select DESIGN FILE, press the Tab key to move the cursor to FILE NAME, and type

STAFF

to give the file its name. Your screen should look like this:

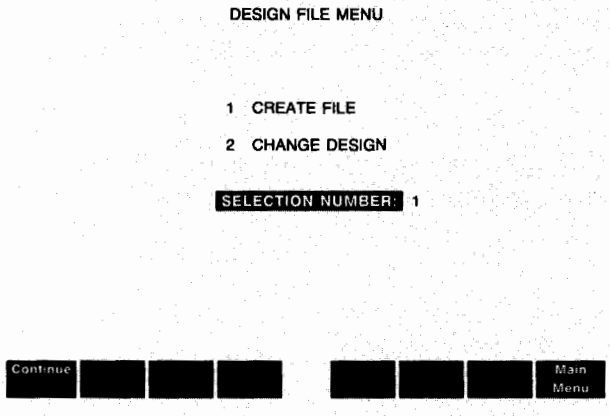


This file will be created on the disk where you started the FILE program (the default drive), since a drive name is not included as part of the file name. Also, note that you can enter the file name as any combination of uppercase and lowercase letters: STAFF, staff, Staff, etc. MS-DOS™ doesn't distinguish between cases.

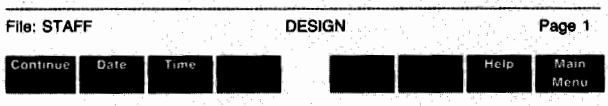
Now press **Continue** and the Design File Menu appears. Since you are going to create a new file, type

1

in the SELECTION NUMBER item:



Press **Continue** again and the following screen appears, ready for you to design the form:



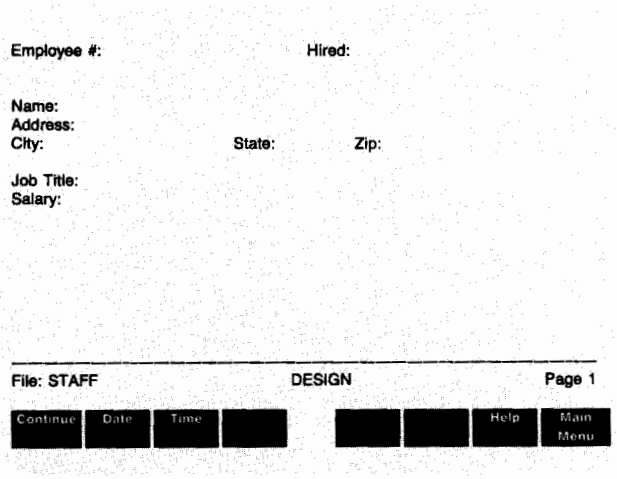
Information about employees is most frequently retrieved by employee number, so the item Employee # should be the first item on the form. This speeds up the search process. The cursor should currently be in the top left-hand corner of the screen (press the diagonal arrow key if it isn't), so type

Employee #:

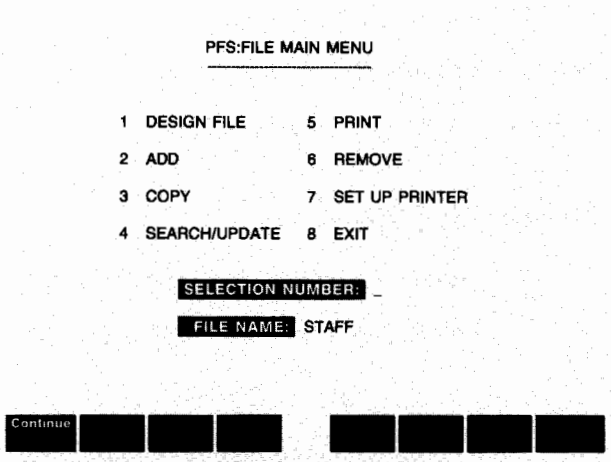
as the first item name. Remember to end it with a colon. Then press the right arrow key to move the cursor to the middle of the same line and type

Hired:

Continue moving the cursor with the cursor movement keys and typing item names until the screen looks like this:



When you have entered all of the items on the form, press **Continue**. FILE stores the form on the disk in a new file named STAFF, and then returns to the Main Menu:



Notice that the SELECTION NUMBER item has been cleared—at this point, you can enter another function selection. The FILE NAME item remains the same, since FILE assumes you are working with the same file until you enter a new name.

Summary

- The DESIGN FILE function has two options:

  1. Use Create File to create a new file.
  2. Use Change Design to change the form design from a file that already exists (see Chapter 9).

- A file name (not including drive names or extensions) must be from one to eight characters in length.
- You may also assign complete pathnames to files.
- Give each file that you create a different name.
- The first item in your form should be the one you will look for most frequently.
- Place a colon at the end of each item name.
- Leave plenty of space for each item.

- A page can hold a maximum of 100 items.
- A form can have a maximum of 32 pages.
- An asterisk to the right of the page number means there are additional pages in the form.
- Keys used with the DESIGN FILE function are:

◀	moves the cursor one space to the left.
▶	moves the cursor one space to the right.
▲	moves the cursor up one line.
▼	moves the cursor down one line.
▷	moves the cursor to the top left-hand corner of the screen or first item.
Return	moves the cursor to the beginning of the next line.
Next	brings up the next page of the form.
Prev	recalls the previous page of the form.
Clear display	erases the page displayed on the screen.
Continue or F1	stores the form design and returns to the Main Menu.
Main Menu or F8	stops the DESIGN FILE function and returns to the Main Menu. The form is not saved.

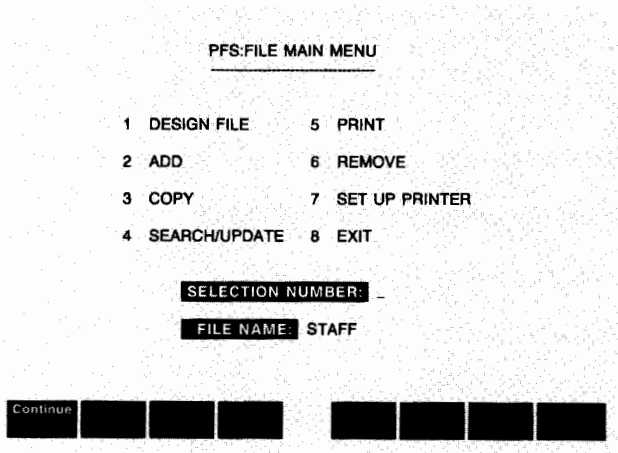
2: add

Once you have created a file, you use the ADD function to store information in it. Using ADD, you fill in a form with the information you want to keep, then store that form in the file. The actual number of forms that will fit in a file depends on the available space on the disk, the number of pages in the form, the number of items per page, and the amount of data entered for each item. Appendix B explains how to calculate the exact number of forms that will fit in a given situation.

Selecting the ADD Function

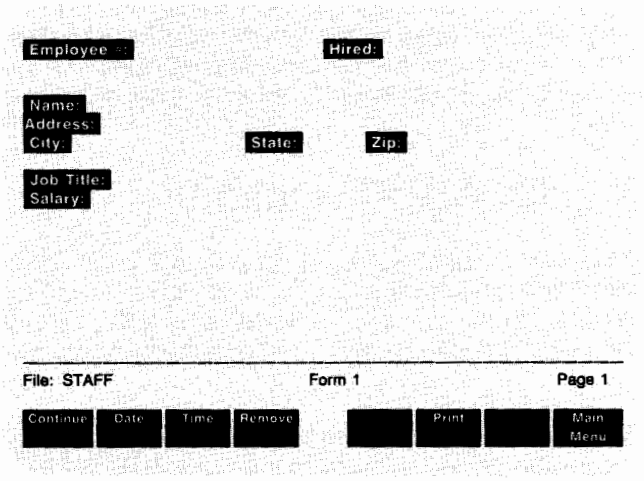
To select ADD, return to the Main Menu and enter a 2 in the SELECTION NUMBER item. If you are adding to a file that you have already been using, the name of that file remains in the FILE NAME item. FILE assumes you are working on the same file until you enter a new name by typing over the old name.

For example, if you have just designed and stored the form for the STAFF file in Chapter 1, your screen should look like this:



To add to a different file, enter its name in the FILE NAME item, including a drive name if the disk that contains the file is not in the default drive.

When you have filled in the menu, press **Continue**. FILE begins the ADD function by displaying the form from the file. For example, if you were using the STAFF file, your screen would look like this:



You fill in this form with the information you want to store. Notice that the item names are highlighted (dark characters on a light background) to easily distinguish them from the information you enter. They are also protected, so you cannot inadvertently write over and destroy them.

FILE uses the message area at the bottom of the screen to tell you:

- the file to which you are adding forms (STAFF)
- the form you are adding to the file (Form 1)
- the page number (1)

Filling in a Form

Touch the screen or use the Tab or Shift Tab keys to move the cursor from item to item when filling out each form. As you are filling in the forms, follow these guidelines:

- If you know that your data will require more than one disk, presort it into groups according to your needs. For example, if you will want to sort your forms by zip codes, make sure that all forms from one zip code area are in the same file; e.g., make sure that all forms with zip codes beginning with 0 are in one file, and all those beginning with 1 are in another, etc.

- Enter last names first to have FILE search your files or sort and print them in alphabetical order by last names. See Chapter 5 for details.

- Enter first names first if you want to keep your files in a standard address format—for printing mailing labels, for example.

- Enter dates in the format yy/mm/dd (year/month/day, with two digits for each part of the date) so FILE can search for them properly. For example, suppose you want FILE to search for items dated between December 15, 1981 and January 1, 1982. This is the correct format:

  =81/12/15..82/01/01

  When searching, FILE ignores the slashes and looks at the dates as numeric values. It sees 811,215,..820,101 and can find the forms you want.

  FILE can automatically enter the current date in the recommended format. Just move the cursor to the date item, and press **Date** or F2.

- Enter times in a 24-hour format, hh:mm, as in 13:45 for 1:45 p.m. It is necessary that minutes be two digits, but not necessary for hours.

  FILE can also enter the time in the recommended format. Just move the cursor to the time item and press **Time** or F3.

- Enter numbers so that they are all the same length if you want FILE to sort by them. For example, if your highest numbers will be in the thousands, enter 9 as 0009. When sorting, FILE looks at numbers as simple character strings; thus, 1000 would be sorted before 9 and after 0009.

Multiple-Page Forms

You can move through a multiple-page form using the Next key to bring up the next page of a form, and the Prev key to recall the previous page. You can review the information on previous pages, and make changes if you wish. When adding forms, however, you can also use these special keys to add and move through attachment pages.

Attachment pages appear after the last page of your form. You can add attachment pages to a form until you run out of room on the disk. This feature allows you to append information to any form. If you need to add some special information to a particular form, the information can be entered on an attachment page. If you forgot to include some item when you originally designed a form, use the Change Design option of DESIGN FILE to add it (see Chapter 9).

Correcting Mistakes

If you make a mistake while entering data into a form, you can easily correct it. If the mistake is in the same item as the cursor, simply use the Backspace key to erase the last few characters and retype the correct information.

If the mistake is in another item, touch the screen or use Tab or the cursor control keys to move the cursor to that item and overtype with the correct information. If the item is on another page, use the Next or Prev key to move there. You can also use the Insert char key to insert characters, or the Delete char key to delete them.

If you want to re-enter all the items on a particular page, press the Clear display key. This erases all the information entered on the current page and returns the cursor to the first item. Information on other pages is unaffected and item names are not erased. For example, you might be entering information in a form and suddenly realize that you have already entered it.

Storing the Filled-In Forms

When you have entered all your information and are ready to add the filled-in form to your file, press **Continue**. The current form (all pages) is stored in the file. A new form (blank) appears on the screen, with the next form number listed in the message area, and you are ready to fill it in. You can add forms in any order you like—FILE finds the desired information when you need it.

Back up your file frequently when adding forms to it to prevent the loss of information. (See our backup recommendations in "Protecting Your Data Files" at the end of the Preface.)

Leaving the ADD Function

You may press **Main Menu** at any time to terminate the ADD function, but if you do it before storing your form, the information you entered into that form is not saved. When you finish saving the last form, press **Main Menu** to return to the Main Menu. FILE is now ready to accept another function selection.

WARNING

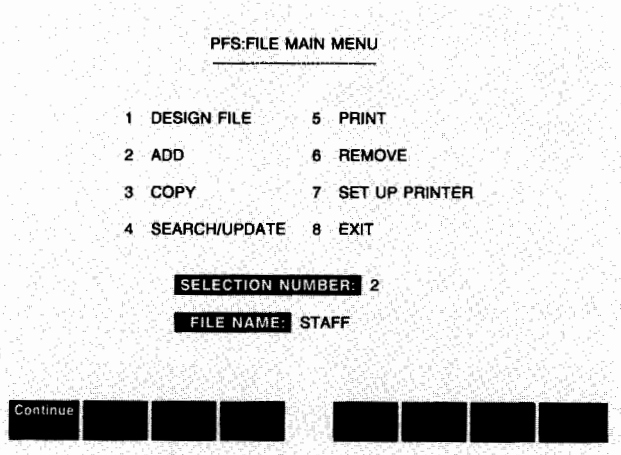
You must complete the ADD function and return to the Main Menu before putting in another data disk. If you change diskettes while still in the ADD function, you may damage the data on your disk.

Example of Adding to a File:

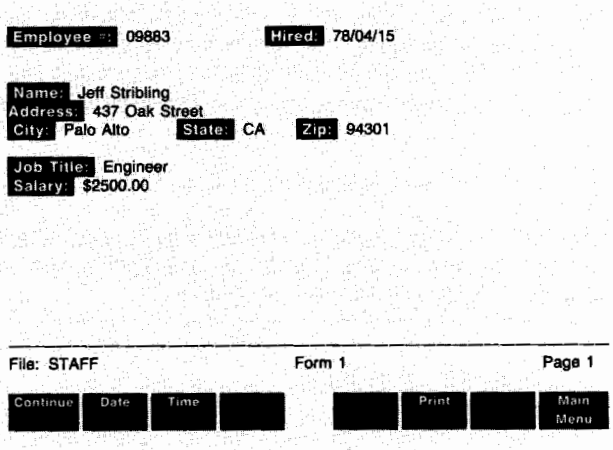
Let's add information to a STAFF file. Return to the Main Menu and enter a

2

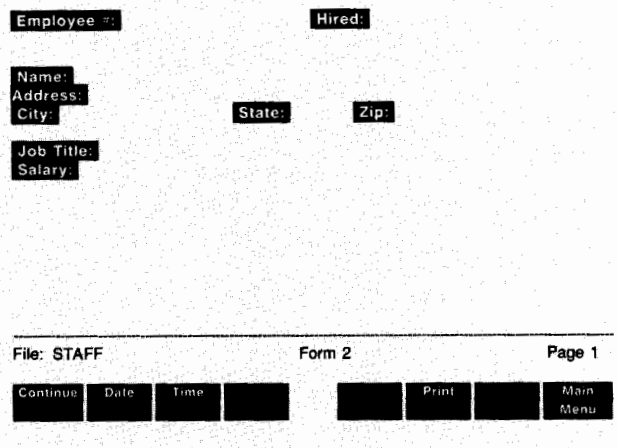
in the SELECTION NUMBER item. If you have been working with the example file, STAFF should remain in FILE NAME. If it does not, enter it. Your screen should look like this:



Make sure that the STAFF disk is in the correct drive and press **Continue**. The form from the STAFF file should appear on the screen, with Form 1 in the message area. Starting where the cursor positions itself in each item, type in the information contained on the following screen:



Press **Continue** to store the form in the STAFF file. A new form (Form 2) should appear on the screen:



Fill in the second form with the information shown here:

Employee #: 16445 Hired: 80/06/12

Name: Jennifer Young
Address: 2421 Broadway
City: Boston State: MA Zip: 02109

Job Title: Salesperson-East
Salary: $1950

File: STAFF Form 2 Page 1

Continue | Date | Time | Remove | | Print | | Main Menu

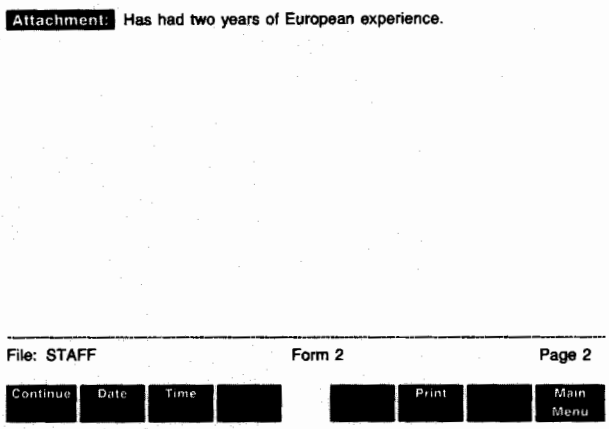
For this form, there is some additional information to store. Since the STAFF form only contains one page, add an attachment page for this information. Press Next and the following screen appears:

Attachment:

File: STAFF Form 2 Page 2

Continue | Date | Time | | | Print | | Main Menu

Type in the additional information. The screen should look like this:



If you want to review the information entered on the previous page, you can press the Prev key to return to page 1, although you can store the filled-in form regardless of which page is displayed on the screen. Go ahead and press Prev, and notice that there is an asterisk to the right of the page number to indicate that this form has an additional page that contains data.

Now press **Continue**, and both pages of Form 2 are stored in the STAFF file. The STAFF form reappears with Form 3 in the message area, and you are ready to fill in the next form. Using the information provided here, fill in four more STAFF forms and store them on the disk.

Form 3:

Employee #: 01623 Hired: 77/06/14
Name: Anne Williams
Address: 67 Westlake Drive
City: Los Altos State: CA Zip: 94022

Job Title: Manager
Salary: $3500.00

Form 4: Employee #: 13029 Hired: 80/02/01

Name: Mike Cooper
Address: 907 Sunset Court
City: Portland State: OR Zip: 97208

Job Title: Salesperson-West
Salary: $1900.00

Form 5: Employee #: 07531 Hired: 77/06/29

Name: Sara Brown
Address: 1552 Bay Road
City: Menlo Park State: CA Zip: 94025

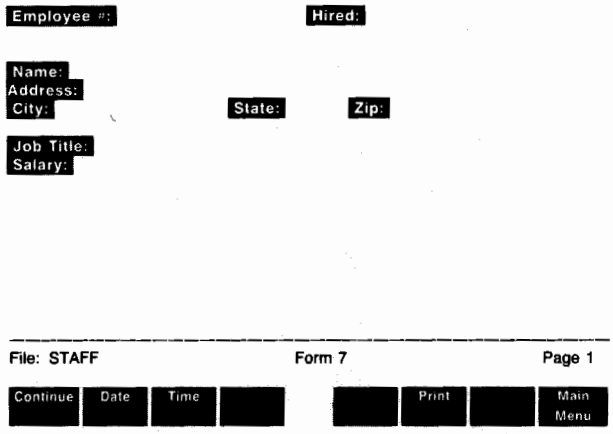
Job Title: Secretary
Salary: $1200.00

Form 6: Employee #: 10764 Hired: 79/10/23

Name: John Andrews
Address: 6811 Cypress Lane
City: Dayton State: OH Zip: 45401

Job Title: Salesperson-Midwest
Salary: $1850.00

After you fill in and save the last form, the following screen should appear:



Now press **Main Menu**. FILE returns to the Main Menu, ready to accept another function selection.

Printing a Copy of a Single Form

You can print a copy of a single form when using the ADD function by pressing the **Print** or F6 key while the form is on the screen. You might want to use this option to print a copy of your blank form that you fill in and add to an already established file. When FILE displays the print options, press **Continue** and FILE begins printing the form, using the default values for those options. (See Chapter 5 for a description of the print options.)

Summary

- Use the ADD function to store information in a file.
- You enter data in a file by filling in the form that you designed when you created the file.
- Item names are protected from overwriting.
- Attachment pages allow you to add one or more pages to a particular form.
- Back up your files frequently to prevent the loss of information.
- Special keys used for adding information to forms are:

Tab	moves the cursor to the next item on the form. With Shift, moves to the previous item. You may also touch the screen to move from item to item, instead of using the Tab key.
Clear display	erases all the information entered displayed page, but not the item names.
Next	displays the next page of the form, or an attachment page if the last page is on the screen.
Prev	displays the previous page of the form.
Date or F2	enters the current date at the cursor position.
Time or F3	enters the time at the cursor position.

Print or F6	prints a copy of the displayed form.
Continue or F1	begins or continues the specified function.
Main Menu or F8	returns to the Main Menu. If you press Main Menu before you store a filled-in form, the information entered into that form will be lost.

WARNING

You must complete the ADD function and return to the Main Menu before putting in another data disk. If you change diskettes while still in the ADD function, you may damage the data on your disk.

3: copy

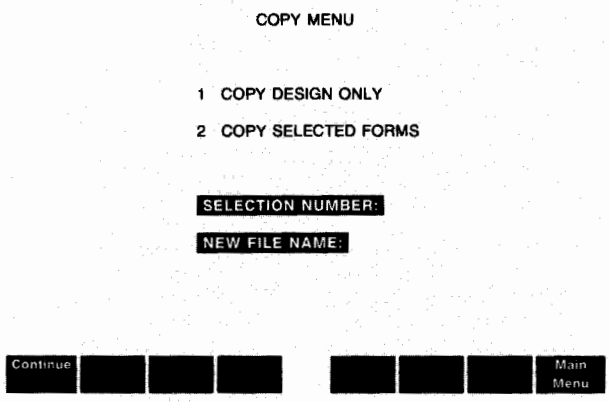
Once you create a file and have information in it, you can copy part of the file or just the form design. Using COPY, you can start a new file with the same form design, split one large file into two smaller files, or merge two files into one.

The COPY function has two options:

- COPY DESIGN ONLY allows you to copy just the form design from the file.
- COPY SELECTED FORMS allows you to choose among the filled-in forms in your file and copy these selected forms to another file. This option does not copy the form design.

Selecting COPY

To select the COPY function, return to the Main Menu. Enter a 3 in SELECTION NUMBER and the name of the PFS file you want to copy in FILE NAME. Press **Continue**, and the Copy Function Menu appears:



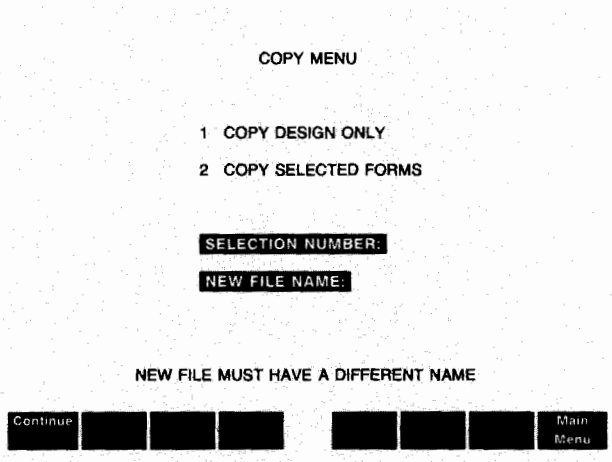
At this point, you can select between the two COPY functions.

The Copy Design Only Option

With Copy Design Only, you can copy just the form design of an existing file to a new file. You use this function when your file becomes full, and you want to start a new file that uses the same form design. You also use it to provide a file with a form design before copying selected filled-in forms to it. Note that the Copy Design Only option destroys any information that exists in the destination file.

To select Copy Design Only, enter a 1 in SELECTION NUMBER on the Copy Function Menu. The disk containing the file from which you want to copy the design should be in the default drive, unless you precede the file name with a different drive name. The disk to which you want to copy the design should be in another drive (unless, of course, you want to copy the design to a new file on the same drive). Enter a name that is different from the original file name in NEW FILE NAME, and don't forget to use the drive name. Press **Continue**, and FILE copies the design from the original file to a new file that it creates on the specified disk, then returns to the Main Menu.

If you enter the name of an existing file in the NEW FILE NAME item, FILE displays the following message:



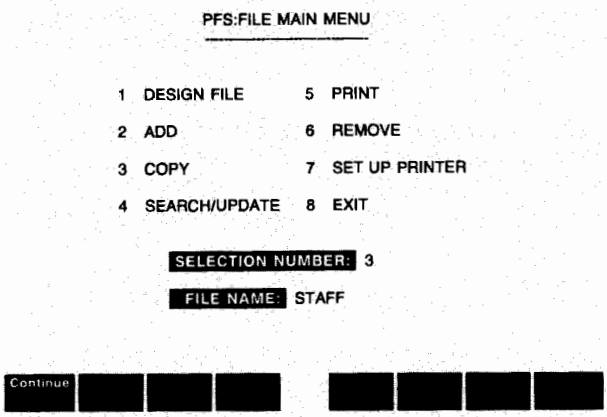
If you press **Main Menu**, you return to the Main Menu and can start over with another name. If you press **Continue**, FILE replaces the existing file with a new file containing the form design you are copying.

Example of Copying the Form Design:

Let's make a copy of only the form design from the STAFF file. Return to the Main Menu and enter a

3

in the SELECTION NUMBER item. If you have been working with the example file, STAFF should still be in FILE NAME. If it is not, enter it. Your screen should look like this:



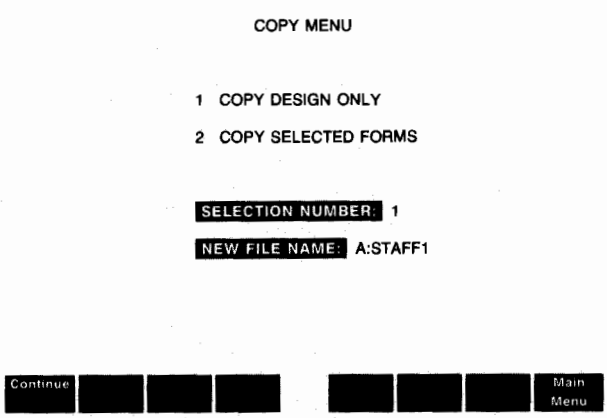
Make sure the STAFF file is in the default drive (drive B in this case), and place another disk in drive A, then press **Continue**. The Copy Function Menu appears. Enter

1

in SELECTION NUMBER and

A:STAFF1

in NEW FILE NAME (or another drive name if you want to create the new file on another drive). The screen should look like this:



Press **Continue** again, and FILE copies the STAFF form design to a new file that it creates on the disk in drive A, named STAFF1, and returns to the Main Menu. The cursor is positioned in SELECTION NUMBER, and STAFF remains in FILE NAME. FILE is ready to accept another function selection.

The Copy Selected Forms Option

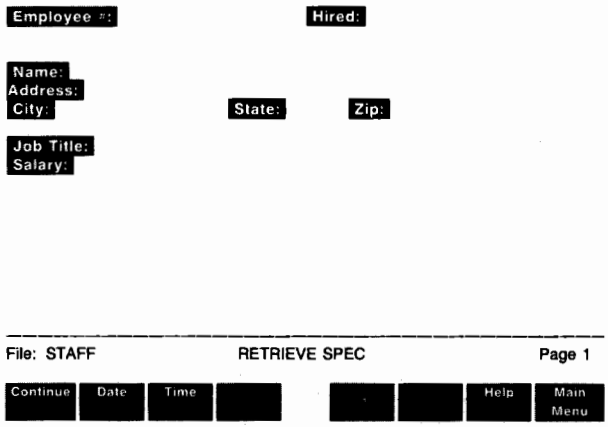
The Copy Selected Forms option allows you to choose among the filled-in forms in your file and copy selected ones to another file. You might want to use this option when a file becomes too large and you want to split it into two files, or you might want to split off a special interest group of forms to a new file. Also, you can use Copy Selected Forms to merge parts of several different files into one new file.

To select Copy Selected Forms, enter a 2 in the SELECTION NUMBER item on the Copy Function Menu. Put the disk containing the file from which you are copying forms (the source file) in the default drive, and the disk containing the file to which you are copying forms (the destination file) in another drive.

Selected forms must be copied to an existing file containing a form design. (You can create a new file by copying the form design using Copy Design Only first, or you can copy the selected forms to a partially-full file.) Enter the name of the destination file in NEW FILE NAME (don't forget the drive name).

The layout of the forms from the source file and the destination file need not be identical (the items can be arranged differently), but the item names must be identical in order for information to be copied. For example, if your source file has an item called EMPLOYEE NAME, and the equivalent item in the destination file is called NAME OF EMPLOYEE, the names of the employees will not be copied.

When you fill in the items on the Copy Function Menu and put the diskettes in their proper drives, press **Continue**, and a form from the source file (in the default drive) appears on the screen. Using the STAFF file as an example, the screen looks like this:



Notice that the message area at the bottom of the screen contains the words RETRIEVE SPEC. When you fill in items on a retrieve spec form, you describe information that you want FILE to find. FILE uses this description to search your file and find the forms you want. In COPY, FILE then copies these forms. If you leave the retrieve spec form blank, FILE copies all the forms. For a complete description of using retrieve spec forms, see Chapter 4.

After entering the information in your retrieve spec form, press **Continue**, and FILE copies the selected forms, renumbering the forms as it copies them. A screen appears telling you how many forms were copied. After you press **Continue** again, FILE returns to the Main Menu, ready to accept another function selection.

Example of Copying Selected Forms:

Let's copy some forms from STAFF to the file named STAFF1 that you created earlier in this chapter using the Copy Design Only option.

Return to the Main Menu and enter

3

in the SELECTION NUMBER item and

STAFF

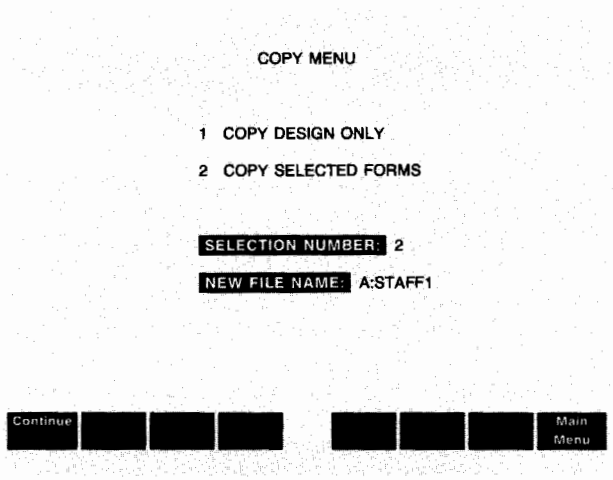
in the FILE NAME item, if necessary. Then press **Continue**. When the Copy Function Menu appears, enter

2

in SELECTION NUMBER and

A:STAFF1

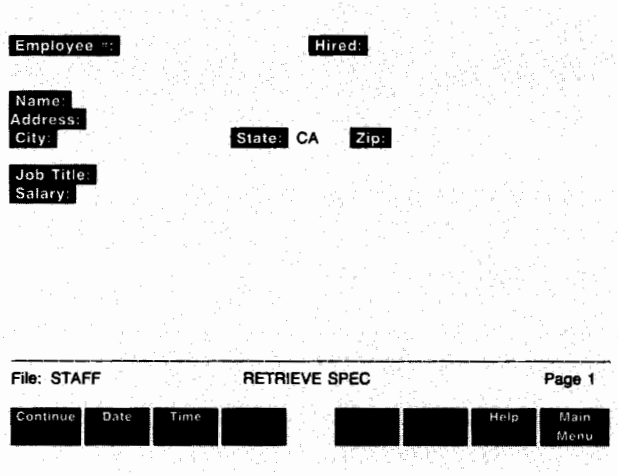
in NEW FILE NAME. Your screen should look like this:



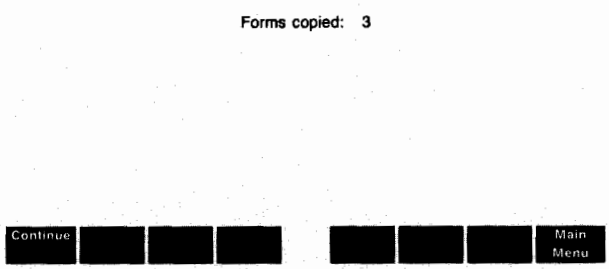
Make sure the disk containing STAFF is in the default drive (drive B in this case), and put the disk containing STAFF1 in drive A. Press **Continue**, and the retrieve spec form from STAFF (the source file) appears on the screen. You are now ready to indicate which forms you want copied. Suppose you want to create a separate file for your California office, so you want to copy the forms for these employees to STAFF1. Enter

CA

in the STATE item. Your screen should look like this:



Press **Continue**, and FILE copies the appropriate forms from STAFF to STAFF1. Then, the following screen appears:



Press **Continue** again, and FILE returns to the Main Menu.

Splitting a File

When a file has grown in size, you may want to split off part of it to form a new file. Or, you may want to separate a special interest group of forms to a new file.

To split a file, follow these guidelines:

1. Copy the form design (using Copy Design Only) to a new file.
2. If you change the design of the form in the new file, remember to keep the item names identical (FILE only copies information for items that have identical names).
3. Use Copy Selected Forms to select and copy the filled-in forms you want into your new file.
4. Select the REMOVE function from the Main Menu and use the same retrieve specification to delete the copied forms from the original file (see Chapter 6).

Merging Files

At some time, you may want to combine two PFS files into one file, or parts of two or more files into one new file. For example, suppose you have two customer files (A to L and M to Z). You want to form a new file containing information for customers that have not made any purchases for the last 3 months. You can copy the form design from your present customer file, or design a new form that uses only some items from the present file. (Items that you do not use are not copied.) Then, you can copy the filled-in forms (and the items) you want into the new file from the other two files.

To merge files, follow these guidelines:

1. Use a file that already has a form design, or create a new file by copying a form design, or designing a new form. If you do not want some items to be copied to your new file, do not include the names of those items in the new form design. Make sure that item names are identical for items that you do want copied.

2. Use Copy Selected Forms to select and copy the filled-in forms you want into your new file.

3. Before merging files, make sure you estimate their combined size so that you do not exceed the storage capacity of the disk used (see Appendix B).

Leaving the COPY Function

If at any time you want to terminate the COPY function, press **Main Menu**. If you do so while FILE is copying, however, the destination file receives only the information transferred from the source file before you pressed **Main Menu**.

Summary

- COPY has two options:

  1. Use Copy Design Only to copy the form design of a file to a new file.

  2. Use Copy Selected Forms to copy selected filled-in forms from a file; this option is particularly useful for splitting or merging files.

- Items must have identical names to be copied from one file to another, but they do not have to be in the same location on the two forms.

- Before merging files, estimate their combined size so you will not exceed the storage capacity of the disk (see Appendix B).
- Selected forms must be copied to an existing file containing a form design. The file can contain existing forms as well as the design.
- With Copy Selected Forms, you select forms to be copied based on the filled-in information.
- **Main Menu** returns to the Main Menu. The file is copied only to the point where **Main Menu** was pressed.

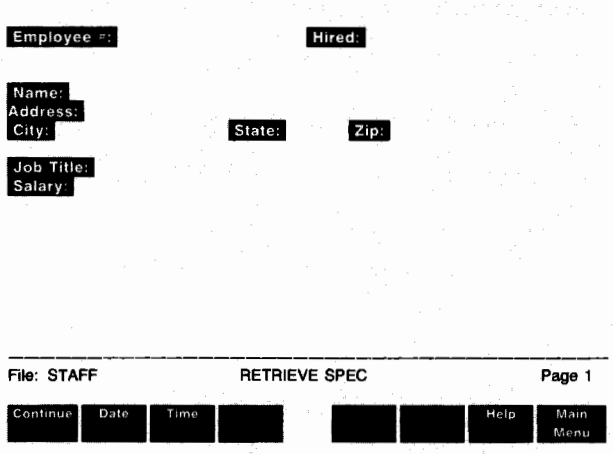
4: search/update

After you store information in a file, you can use the SEARCH/UPDATE function to search through your file and find forms that are of interest to you. FILE can search for forms based on the contents of any page, including attachment pages. Once you find a particular form, you can review it, update it, print it, or remove it from the file.

Selecting SEARCH/UPDATE

To select SEARCH/UPDATE, return to the FILE Main Menu. Enter a 4 in SELECTION NUMBER and the name of the file you wish to search through in FILE NAME (include the drive name if the file is not in the default drive).

Press **Continue**, and a form from this file appears with the words RETRIEVE SPEC in the message area at the bottom. This form is referred to as the retrieve spec form. The STAFF file retrieve spec form looks like this:



Using Retrieve Specifications

With SEARCH/UPDATE, you describe the forms you want FILE to find by filling in items on the retrieve spec form. The items that you enter on this form are called "retrieve specifications." You can enter a retrieve specification in as many items of the form as you wish. Only those forms in the file meeting all the specifications are found. If no retrieve specifications are entered, FILE retrieves every form in the file.

There are five categories of retrieve specifications: the full item match, partial item matches, numeric item matches, the numeric range match, and the "not" match. The following sections describe these five categories.

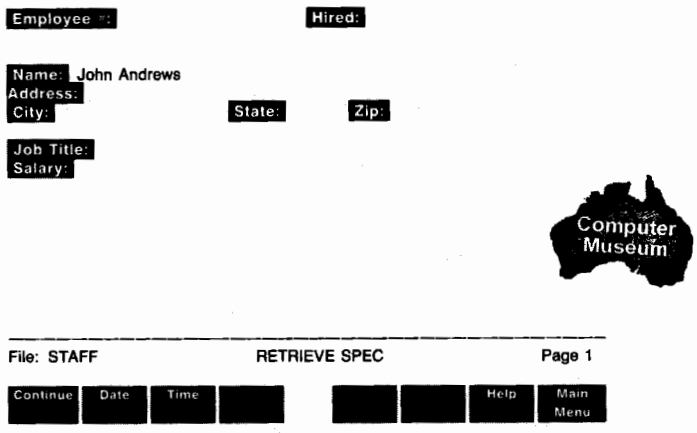
1. Full item match

For the fastest possible retrieval, use this type of retrieve specification. If you use a full item match in the first item of your form, any form can be found in 3–5 seconds.

In a full item match, FILE looks for forms on which the characters in an item exactly match the characters that you entered in the same item on the retrieve spec. (A character can be a letter, a number, or a punctuation mark.) To determine whether there is a match, FILE uses the following rules:

- FILE ignores spaces before the first character and after the last character.
- FILE treats multiple spaces within the items as a single space.
- FILE ignores the difference between upper and lower case.

For example, suppose you want to recall the John Andews form of the STAFF file to the screen. If you enter this retrieve specification,



NAME : John Andrews	will be a match.
NAME: John Andrews	will be a match.
NAME: JOHN ANDREWS	will be a match.
NAME: Mr. John Andrews	will not be a match.
NAME: John Andrews Jr.	will not be a match.
NAME: JOHN	will not be a match.
NAME: Andrews, John	will not be a match.
NAME: JohnAndrews	will not be a match.

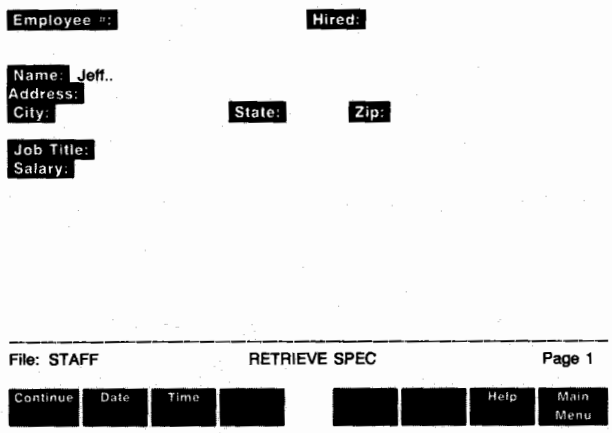
2. Partial item matches

Use a partial item match if you do not remember exactly how an item of information is entered in a file, or if you want to find occurrences of specific pieces of information in your files. There are two kinds of partial item matches: the ..match.. and the ? match.

The ..match.. uses either two or four dots with a word or group of words (number or group of numbers) to search for an occurrence of certain information within an item. It works like this:

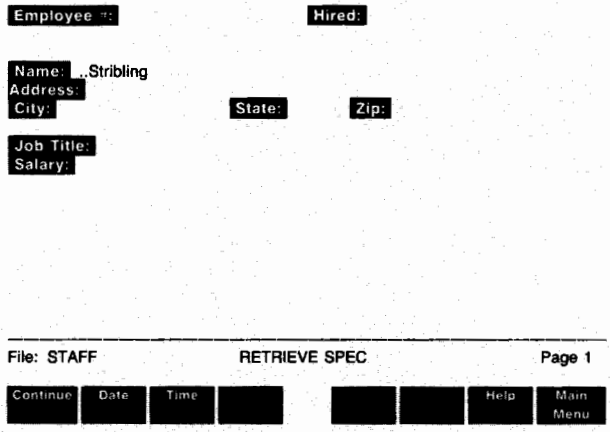
..Word	tells FILE to ignore whatever characters occur before Word.
Word..	tells FILE to ignore whatever characters occur after Word.
..Word..	tells FILE to ignore whatever characters occur before or after Word; i.e., to look for Word anywhere in the item.
..	tells FILE to find all forms with any characters in this item.

For example, suppose you want to recall Jeff Stribling's personnel form to the screen. Jeff's full name is Jeffrey Stribling, Jr. and you don't know exactly how the name was entered in the file. Using the ..match.., there are three ways you can find Jeff's form. If you enter this retrieve specification,



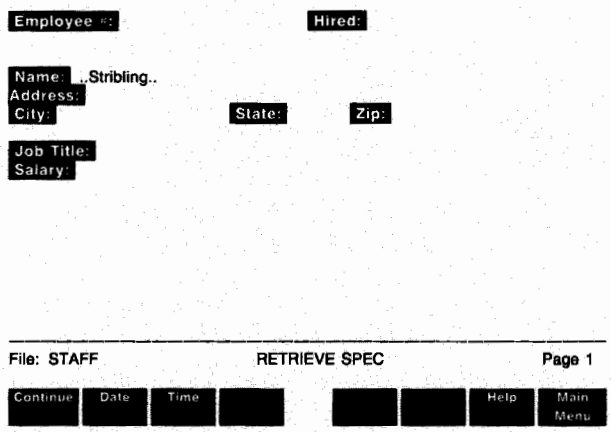
NAME: Jeff	will be a match.
NAME: JEFF STRIBLING	will be a match.
NAME: Jeffrey Stribling Jr.	will be a match.
NAME: Jeff Warner	will be a match.
NAME: Mr. Jeff Stribling	will not be a match.

If you enter this retrieve specification,



NAME: Mr. Stribling	will be a match.
NAME: J. STRIBLING	will be a match.
NAME: Mr. Jeff Stribling	will be a match.
NAME: Sara Stribling	will be a match.
NAME: Jeff Stribling Jr.	will not be a match.

If you enter this retrieve specification,

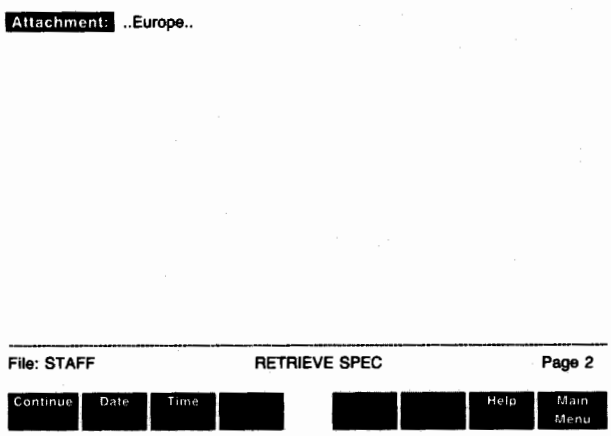


NAME: Mr. Jeff Stribling Jr.

NAME: JEFFREY STRIBLING } will be matches.

NAME: Tom Stribling Jr.

Now suppose you want to look at the forms of all the employees who have work experience in Europe. You know that this information was entered as an attachment page. If you enter this retrieve specification,



both of the following will match:

ATTACHMENT: Has had two years of European experience.

ATTACHMENT: Worked in Europe for two years.

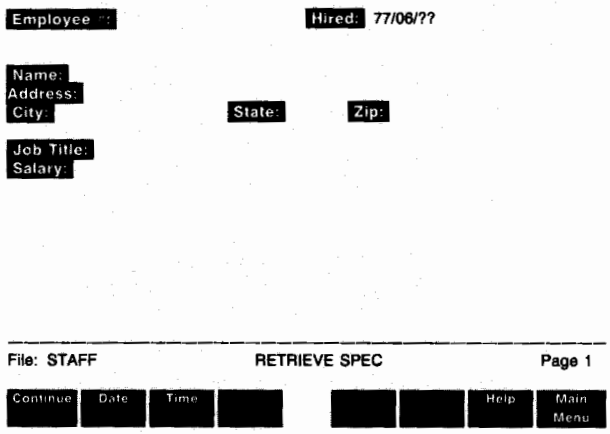
The ? match uses the question mark as a "wild-card" character to search for items that are almost an exact match. This symbol can be entered in the retrieve spec form to represent any single character. When FILE searches, it accepts any character in that same position.

For example, suppose the second digit of a part number indicates its color and you want to retrieve all forms for a certain part regardless of its color:

PART NUMBER: 3?711

will retrieve all forms listing the part.

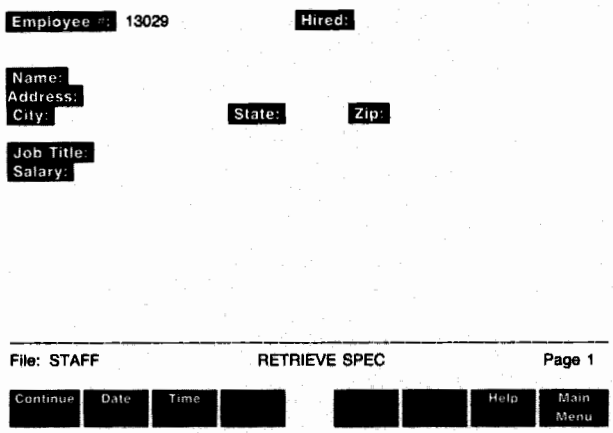
As another example, suppose you know that there are two people in the STAFF file who were hired in June of 1977, and you want to find their forms. You would use the following retrieve specifications:



3. Numeric item matches

There are two ways to use numbers as information. One way is to use the number as a set of characters that identifies an item. In this case, the number has no numeric value. One number is not typically thought of as larger or smaller than any other. Phone numbers, part numbers, and social security numbers are examples of numbers used as identifiers. FILE treats the numbers as it would treat a word or any string of identifying letters. You use either a full item match or one of the partial item matches to look for such a number.

For example, if you want to search through the STAFF file for employee number 13029, the retrieve specification would look like this:



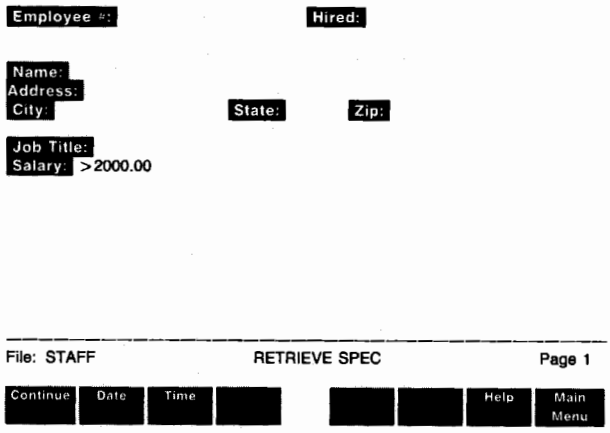
The other way is to use the number to represent a numeric value—something that has a meaning of larger or smaller associated with it. Numbers associated with quantity or cost are examples of numbers used to represent arithmetic values. When searching through forms for such a number, it is possible to look for all items less than, greater than, or equal to that given number. The retrieve specification consists of one of three special symbols (<, >, and =) followed by the desired number. In determining the value of a number, FILE uses the following rules:

- FILE ignores all characters other than −, . ,0,1,2,3,4,5,6,7,8,9. (Be sure to use the number 1 rather than lower case l, and the number 0 not the letter o.)
- A minus sign (−) appearing before the first digit or after the last makes the value negative. FILE ignores multiple minus signs.
- If FILE encounters multiple decimal points (.), it ignores all but the first.

Below are some examples of how FILE assigns an arithmetic value to a number which follows one of these symbols (<, >, or =):

Item	Value	
$1,706.22	1706.22	FILE ignores the $ and ,
13 MAY 1980	131980	FILE ignores MAY
70-06-29	700629	to be negative, a minus sign must appear before the first digit or after the last. (This is a convenient way to represent dates numerically.)
20:45	2045	FILE ignores the colon. (This is a convenient way to numerically represent times.)
FIVE	0	FILE ignores letters. If no digits are found, the value is zero.

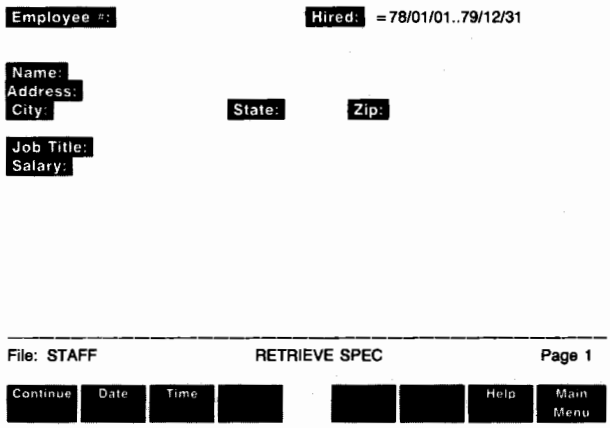
For example, suppose you want to search through the STAFF file for all the employees with salaries greater than $2000.00. The retrieve specification should look like this:



4. Numeric range match

The numeric range match allows you to search for numeric values within a certain range. To do this, use an equals sign followed by the lowest of the numeric values, two dots, and then the highest numeric value. The dot-dot with the equals sign means "through."

For example, to find all the employees in the STAFF file hired between January 1, 1978, and December 31, 1979, the retrieve specification should look like this:



Note: You can put spaces anywhere except between the dots.

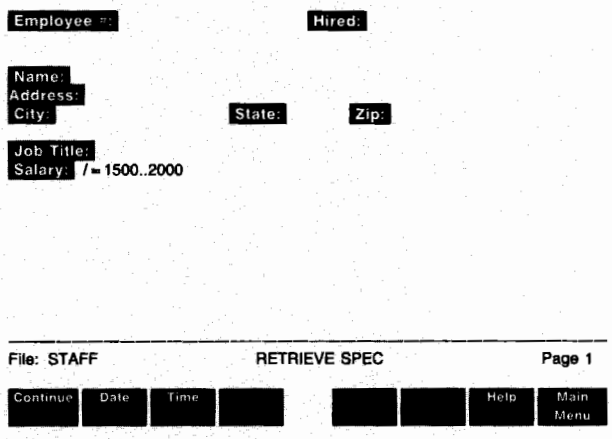
5. The "not" match

Any of the different types of retrieve specifications can have its intent reversed by preceding it with a slash (/). For example,

/=3.1	finds all those values which are NOT equal to 3.1.
/JOHN	finds all those items that are NOT JOHN.
/B..	finds all those items that do not begin with B.

/..er	finds all those items that do NOT end with er.
/=31..100	finds all those items less than 31 or greater than 100.
/..	finds all those items that are blank.

For example, suppose you want to search through the STAFF file for all employees with salaries less than $1500.00 or more than $2000.00. The retrieve specification would look like this:



Starting the Search

When you have entered all retrieve specifications, press **Continue**, and FILE searches for the desired forms, starting with the most recent form added. While FILE is searching, the screen is blank except for the message area at the bottom where the form numbers change as FILE checks each form in the file.

When FILE finds a form meeting the retrieve specifications, it displays it on the screen and pauses. You can do any of the following:

1. Update the Form.

You can make any changes to information stored in the form by positioning the cursor in the item you want to change and entering new information. Then, press **Continue**, and FILE stores the updated form in the file and continues its search.

2. Review the Form.

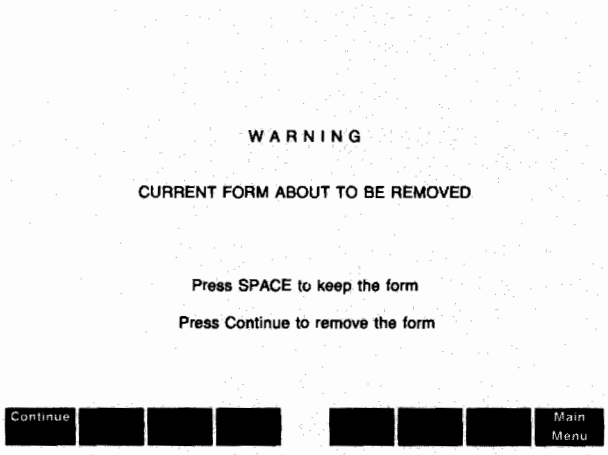
You can browse through the form, using the Next and Prev keys if you have multiple pages. When you finish, press **Continue**, and FILE continues its search.

3. Print the Form.

You can print the form (all pages) by pressing **Print**. After reviewing a form, press **Print**, and the print options form appears. Press **Continue**, and FILE prints a copy of the form, using the default values in the print options. (See Chapter 5 for a description of the print options.)

4. Remove the Form.

You can remove the form (all pages) from the file by pressing **Remove**. Before the form is removed, the following screen appears:

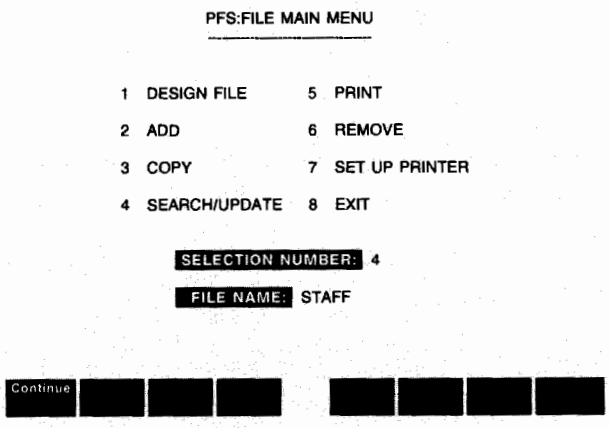


If you do not want to remove this form (you may have pressed **Remove** by mistake), press the space bar, and FILE returns the form to the screen. If you want to remove the form, press **Continue**, and FILE removes the form and continues its search. (See Chapter 6 for other removal capabilities.)

Example of Searching through a File:

Suppose you want to search through the STAFF file for all employees in sales with salaries more than $1850.00. There are two items you are interested in: JOB TITLE and SALARY.

First, return to the Main Menu and enter 4 in SELECTION NUMBER. If you have been working with the example file, STAFF should remain in FILE NAME. If it does not, enter it. Your screen should look like this:



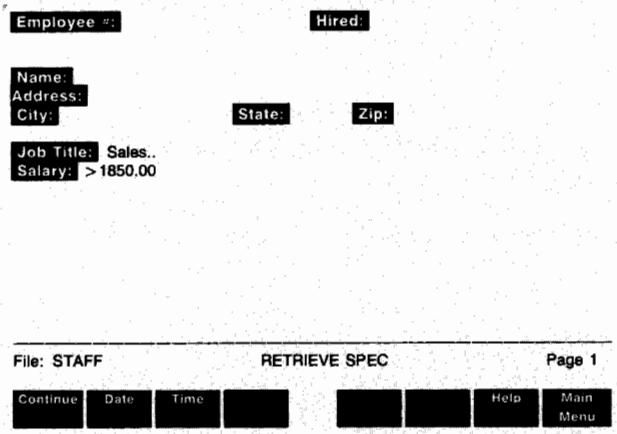
Press **Continue**, and the retrieve spec from STAFF appears on your screen. Use the Tab key or touch the screen to move the cursor to the JOB TITLE item. Since you want any person in sales, enter

Sales..

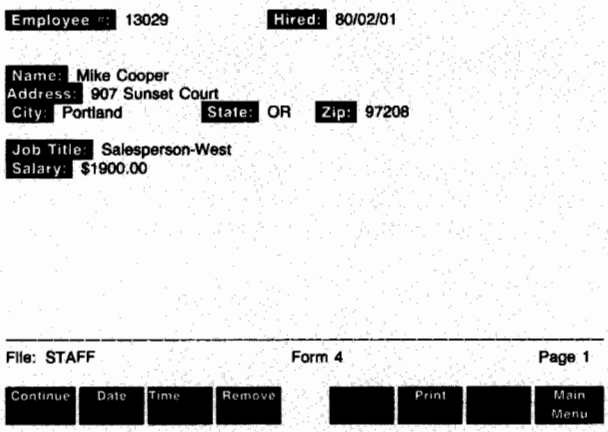
and FILE will ignore any characters after the word sales when searching. Move the cursor to the SALARY item, and enter

>1850.00

Your screen should look like this:



Press **Continue** again, and FILE begins searching. There are two employees in sales who earn more than $1,850.00. As the first of the forms is found, FILE displays it:

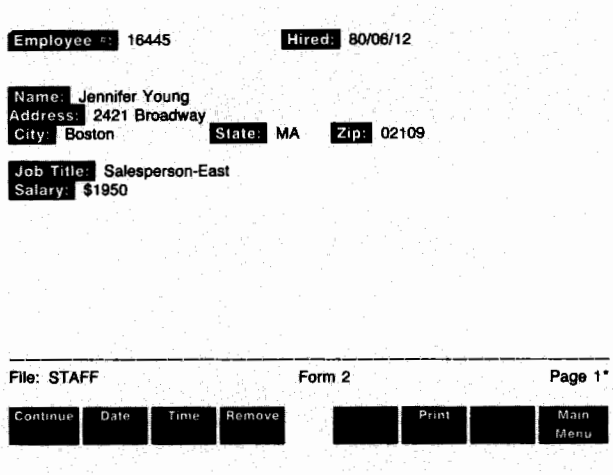


Assume there is an error in the date that Mike Cooper was hired. It should be FEB 7, not FEB 1. You can update it here. Press Tab or touch the screen to move the cursor to the HIRED item, then press the right arrow key four times to move the cursor over to the 1 without destroying any of the correct characters. Type

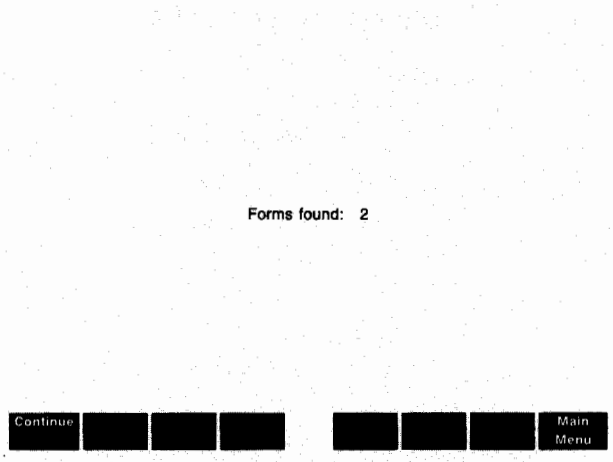
7

to change the date, then press **Continue**. The updated form is stored, and FILE continues its search.

The next form that meets the retrieve specification appears:



The asterisk (*) after the page number indicates there are more pages in this form containing data. To see the second page, press the Next key. After you review this form, press **Continue**, and the following screen appears:



Press **Continue** once more, and FILE returns to the Main Menu. The cursor is positioned in SELECTION NUMBER, and STAFF remains in FILE NAME. FILE is ready to accept another function selection.

Leaving the SEARCH/UPDATE Function

You can terminate SEARCH/UPDATE at any time by pressing **Main Menu**. (FILE returns to the Main Menu.) If you are updating a form when you press **Main Menu**, however, the changes to the form may not be recorded in the file.

In SEARCH/UPDATE, any changes you make to a form are actually written in the file when the updated page disappears from the screen; that is, when you press either Next, Prev, or **Continue**. If you make changes to a form, but press **Main Menu** before the page disappears, those updates are not written in the file.

Summary

- Use the SEARCH/UPDATE function to search through files, find desired forms, and display them on the screen.
- You tell FILE what forms you want to find by filling in a form called a retrieve spec.
- FILE can search for forms based on retrieve specifications you enter in any combination of items on any page of the retrieve spec form.

- Retrieve specifications must be constructed as follows:

characters (letters or numbers)	FULL ITEM MATCH
..characters	PARTIAL ITEM MATCH-ignore beginning
characters..	ignore end
..characters..	ignore both
..	matches any filled-in item
?	matches any single non-blank character
<number	NUMERIC ITEM MATCH-less than
>number	greater than
=number	equal to
=number1..number2	NUMERIC RANGE MATCH-inclusive
/retrieve spec	NOT MATCH-not equal to retrieve spec
/..	matches blank items

- For fastest possible retrieval, use a full item match in the first item of your form.
- If no retrieve specifications are entered, FILE finds and displays every form in the file.
- To update a form, enter any changes when the form is found. Then press **Continue** to store the changes and search for the next form.
- Keys used in SEARCH/UPDATE are:

Print or F6	prints a copy of the displayed form.
Remove or F4	removes the displayed form from the file.
Main Menu or F8	returns to the Main Menu. Any updates not yet saved are lost.

5: print

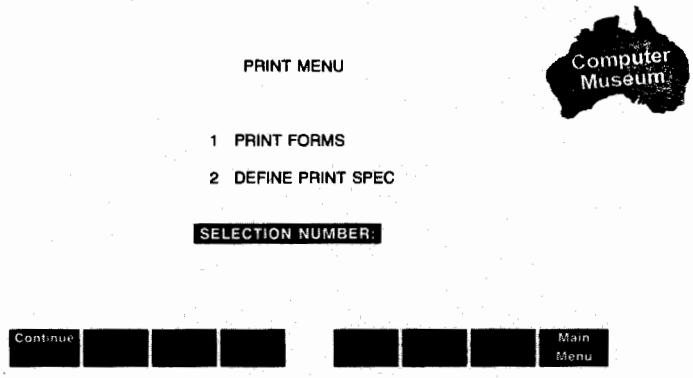
FILE gives you the ability to print selected forms or portions of forms from a PFS file according to a format that you specify. (This format might include printing the forms in sorted order; for example, in alphabetical order for an item called CITY.) You can also store a format for printing to use at a later time.

With the PRINT function, you indicate which forms you are interested in, which items of the form you are interested in, and how you want these items printed. FILE searches through the file, automatically printing all selected information.

Selecting PRINT

To select PRINT, return to the Main Menu. Enter a 5 in SELECTION NUMBER and the name of your file in FILE NAME.

Check to make sure the disk containing your file is in the correct drive. Then press **Continue**, and the Print Menu appears:

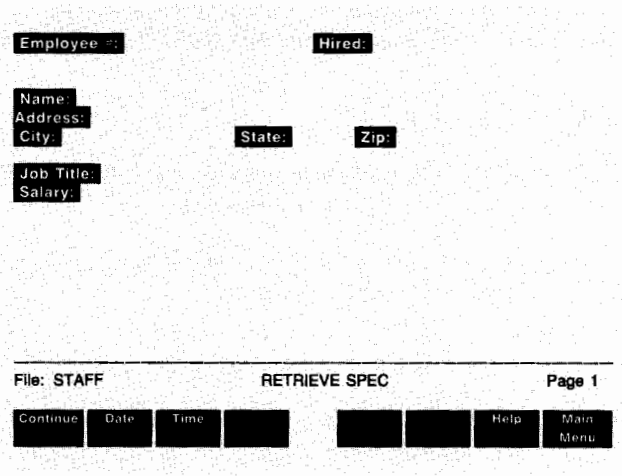


At this point, you can select from the two PRINT options: Print Forms and Define Print Spec.

The Print Forms Option

Print Forms lets you choose which forms you want to print, which items from each form you want to print, and how you want to print these items. You supply this information by filling in three forms.

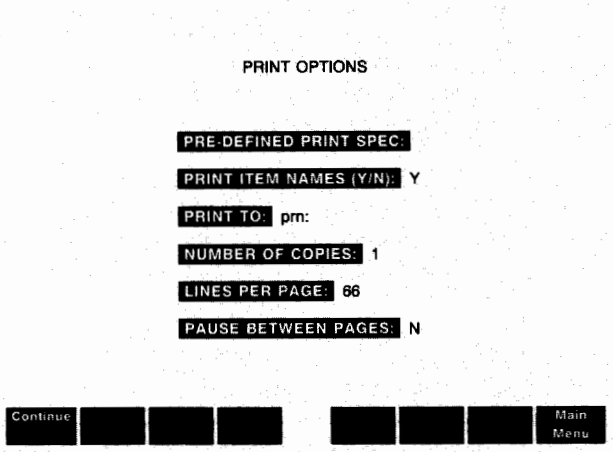
To select the Print Forms option, enter a 1 in the SELECTION NUMBER item on the Print Menu. Press **Continue**, and the first form, the retrieve spec, appears. The STAFF file retrieve spec form looks like this:



Filling in the Retrieve Spec

You indicate which forms to print by filling in the retrieve spec form with specifications just as you did in the SEARCH/UPDATE function. (See Chapter 4 for a detailed description of retrieve specifications.) If no retrieve specifications are entered, FILE retrieves and prints every form in the file.

When you finish filling in the retrieve spec, press **Continue**, and the second form, the print options form, appears:



Filling in the Print Options

This screen appears whenever FILE is about to start printing something. It allows you to control the format. Type the desired value for each option over the default value shown on the screen, or press **Continue** to print your form using the default values.

PRE-DEFINED PRINT SPEC: (Optional) If you previously defined a print specification and stored it, you can enter its name here, and FILE prints with this specification. If you do not have a pre-defined specification, leave this item blank.

PRINT ITEM NAMES (Y/N): This item specifies whether or not the item names are to be printed along with the information in the items. If you do not want the item names printed, type N over the Y.

PRINT TO: This item allows you to choose the device to which the output is sent. Enter PRN: for the internal printer, COM1: or COM2: for an external printer, or the name of a disk file. See the *HP 150 Personal Computer Owner's Guide* for instructions on configuring PRN:, COM1: or COM2: to your printer.

NUMBER OF COPIES: This specifies how many copies FILE prints of each form. If you specify more than one copy, FILE prints all copies of the first form, then all copies of the second form, etc.

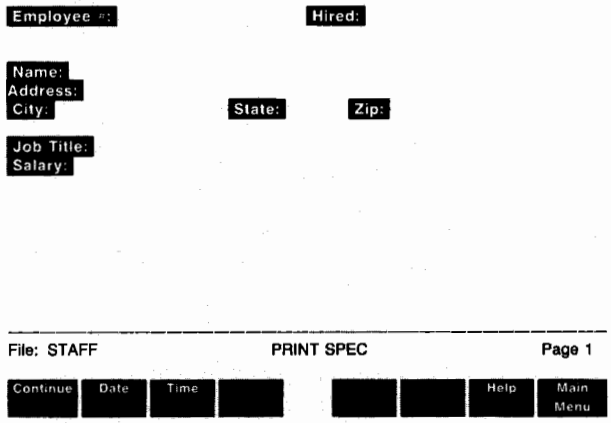
LINES PER PAGE: This item specifies how many lines you want to have between the first line of one form and first line of the next form. The default value of 66 is the full size of a normal printer page. You can adjust this value to accommodate the size of your printer paper, the size of your form, and the number of lines you want to have between forms.

For example, if you want to print one form per printer page, and have printer paper with 66 lines, leave the lines per page at 66. If you want two forms per printer page, change the lines per page to 33. The number you enter should divide evenly into the total number of lines on your printer page, or you will print over the perforation.

PAUSE BETWEEN PAGES (Y/N): If you enter Y for this item, FILE pauses after printing each pageful of information (as defined by LINES PER PAGE) so you can insert a new sheet of paper. This allows you to print forms on single sheet stationery, or print mailing addresses on individual envelopes.

FILE temporarily stores any changes that you make in the print options. The next time you start the program, the default values will again be in effect. The print options can be updated at any time.

When you finish with your print options, press **Continue**, and the third form to fill in appears with the words PRINT SPEC in the message area at the bottom. This form is referred to as the print spec form. The STAFF file print spec form looks like this:



Filling in the Print Spec

On the print spec form, you choose which items you want to print and how you want to arrange them (on the same line, or different lines, etc.). If you leave this form blank, each form is printed exactly as it appears on the screen, using the print options you just selected. To select items for printing, use these two characters:

X — print this item, then advance the printer to the next line.

\+ — print this item, but do not advance the printer to the next line after printing it—skip 2 spaces instead. (This allows you to print more than one item per line.)

In addition, you can print the forms in a particular order by combining the following character with the X or the +:

S — sort the printout based on this item. Using the first ten characters in this item, FILE sorts the printout into ascending order. You can sort on one item only.

Letter sorts: FILE sorts an item that consists of letters, and the forms are printed out in alphabetical order according to that item. For example, if you place an S next to an X or a + in the CITY item of your STAFF file, the forms are printed out alphabetically by city. The CITY item does not appear first on the forms, however; the items in each form are always printed in the order in which they appear on the screen.

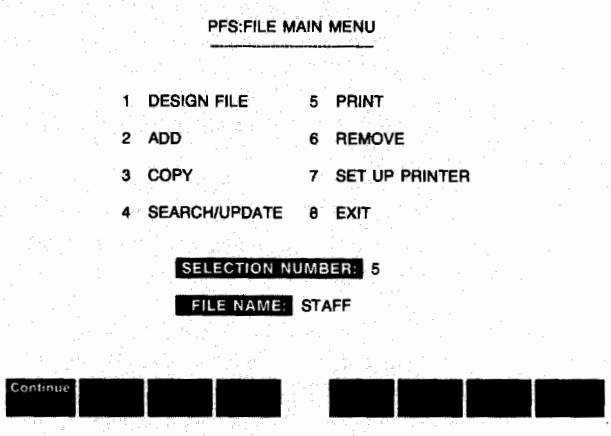
Number sorts: FILE treats numbers as character strings for the purposes of sorting. Just as AZ is sorted before Z, 19 will be sorted before 9. For this reason, sorting the printout into numerical sequence is not feasible unless all the numbers are the same length, as with zip codes. To sort numbers of different lengths, enter zeros to the left of the numbers to make them the same length. For example, 09 will be sorted before 19 not after.

Note: Remember, an S does not automatically cause an item to be printed. It must be used with an X or a +.

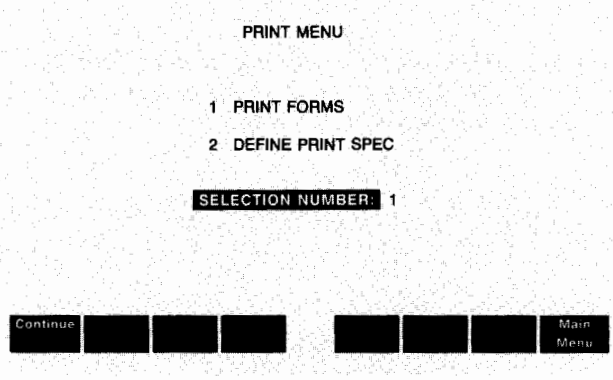
Example of Printing Mailing Labels from Forms:

Let's use the PRINT function to generate mailing labels for everyone in the STAFF file.

To begin, return to the Main Menu and enter a 5 in the SELECTION NUMBER item. If you have been working with the example file, STAFF should still be in FILE NAME. If it is not, enter it. Your screen should look like this:

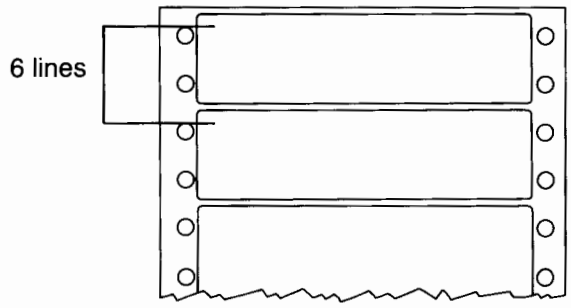


Press **Continue**, and the Print Menu appears. Enter a 1 in SELECTION NUMBER. Your screen should look like this:



Press **Continue** again, and the retrieve spec appears. Since you want a label for each employee in the file, leave the retrieve spec blank. Press **Continue**, and FILE displays the print options for you to fill in. (The options show the current default values.)

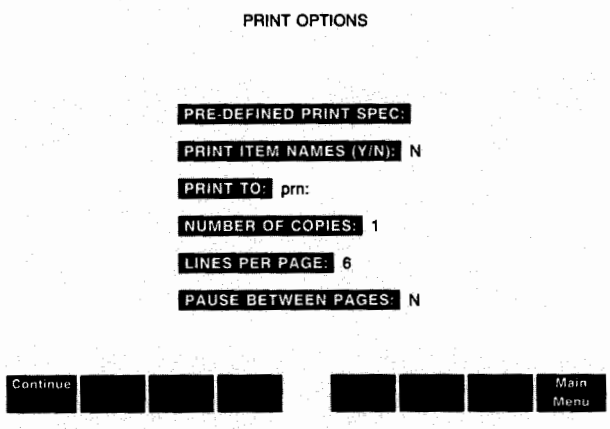
To select the desired print options, press Tab or touch the screen to move the cursor to the PRINT ITEM NAMES item. Since you would not want item names on mailing labels, change the Y to N. Move the cursor again, and enter the device name for your printer. Then move to the next item. At this point, you need to determine the spacing between the mailing labels and make sure the labels are properly inserted in the printer. (If you have questions about loading paper or mailing labels, refer to the printer manual or see your dealer.) To determine the proper spacing, count the number of lines between the top of one mailing label and the top of the next. This is the number you want to enter in the LINES PER PAGE item.



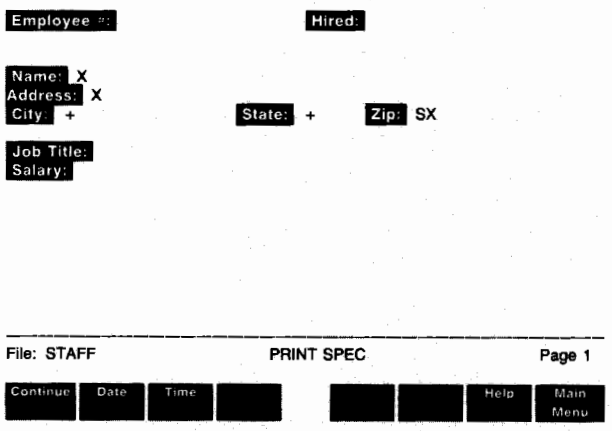
For the mailing labels in this example, there are 6 lines from the start of one label to the start of the next. Type

6

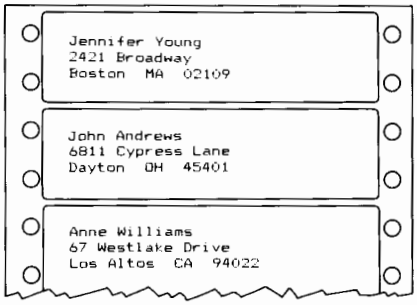
and a space to write over the default value of 66. Leave NUMBER OF COPIES and PAUSE BETWEEN PAGES as they are, unless you want to print more than one copy. Your screen should look like this:



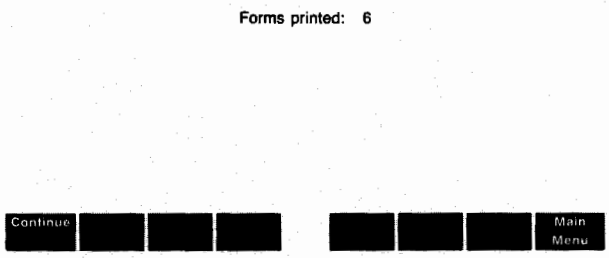
When you finish entering your print options, press **Continue**, and the print spec form appears. The items that you want to select for printing your mailing labels are NAME, ADDRESS, CITY, STATE, and ZIP. Use the Tab key or touch the screen to move the cursor to NAME and enter X. Also enter X in ADDRESS. The CITY and STATE items each receive a + sign to put them on the same line. Move the cursor to ZIP and enter SX. (The mailing labels will be sorted by zip codes.) When you are finished, the print spec form looks like this:



Press **Continue** again, and FILE prints the mailing labels. They look like this:



After the last form is printed, the following message appears:

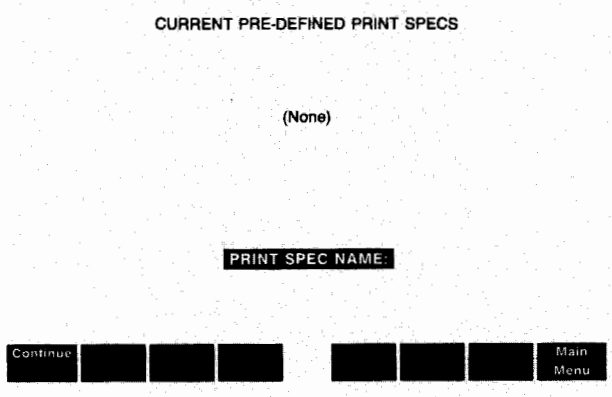


Press **Continue** one more time. FILE returns to the **Main Menu**, ready to accept another function selection.

The Define Print Spec Option

The Define Print Spec option allows you to specify the way you want to print forms from a particular file, give a name to that set of specifications, and repeatedly use the specifications to print forms by simply referencing the name. You can store eight print specs in a file at one time.

To select Define Print Spec, enter a 2 in the SELECTION NUMBER item on the Print Menu and press **Continue**. The following screen appears:



Enter a name (one to ten characters) for the print specification that you want to define. Press **Continue**, and a print spec form from your file appears. Indicate the items you want printed by filling them in with an X or a +. Also, enter an S if you want to sort your printout.

When you finish, press **Continue**. The print specification and its name are stored in the file to use for future printings. FILE then returns to the Main Menu, ready for a new function selection.

Example of Defining and Using a Print Spec:

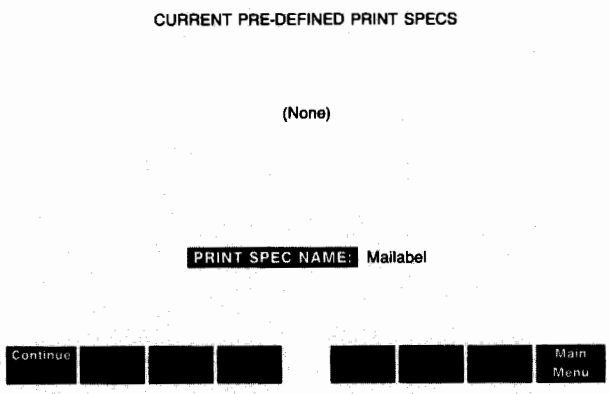
Let's define a print specification for doing mailing labels and call it "Mailabel."

First, return to the Main Menu and enter a 5 in SELECTION NUMBER. Enter STAFF in the FILE NAME item, if necessary. Press **Continue**, and the Print Menu appears. Enter a 2 in SELECTION NUMBER and press **Continue** again.

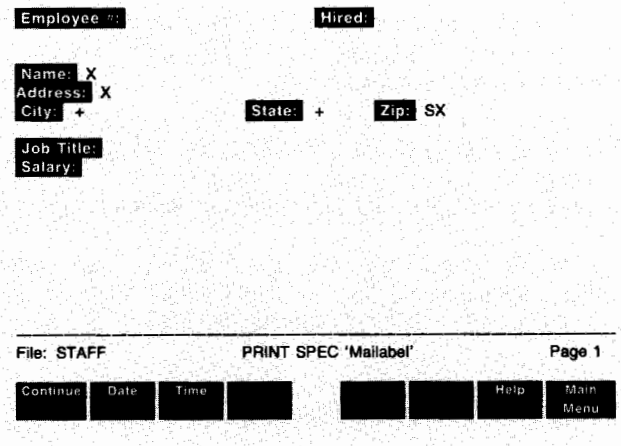
The screen indicating the current pre-defined print specs appears. Enter

Mailabel

in the PRINT SPEC NAME item, as shown below:

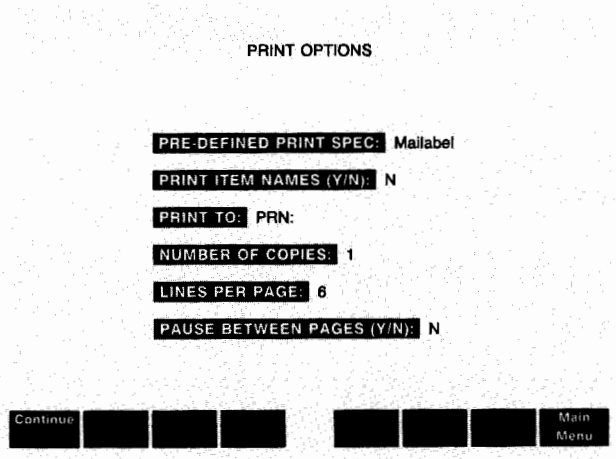


Press **Continue**, and the print spec form from your STAFF file appears. Indicate the items you want printed by filling in the form to look like this:

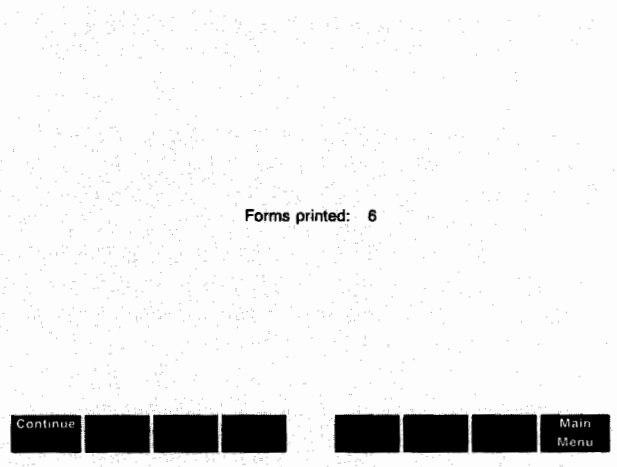


Press **Continue** one more time, and the print specification and its name are stored in the STAFF file to use for future printings. FILE returns to the Main Menu.

Now let's try using Mailabel. You are in the Main Menu, so enter a 5 in SELECTION NUMBER to return to the Print Menu. Enter a 1 to select the Print Forms options, and press **Continue**. When the retrieve spec form appears, again press **Continue** since you want all the forms in the file. The print options form appears next. Enter Mailabel in the PRE-DEFINED PRINT SPEC item. The other items on the form should already be correct, providing you have not restarted the program, since the changes you entered in the print options are still stored in FILE:



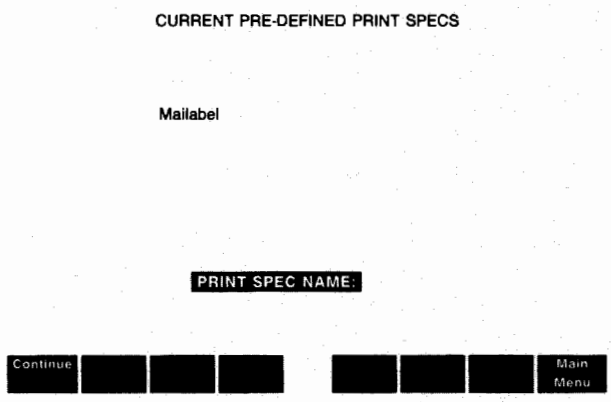
Press **Continue**, and FILE immediately begins printing the mailing labels, without displaying the print spec form, since the print specifications are defined by Mailabel. After it finishes, the following message appears:



Press **Continue** again, and FILE returns to the Main Menu. The cursor is positioned in SELECTION NUMBER and STAFF remains in FILE NAME. FILE is ready for another function selection.

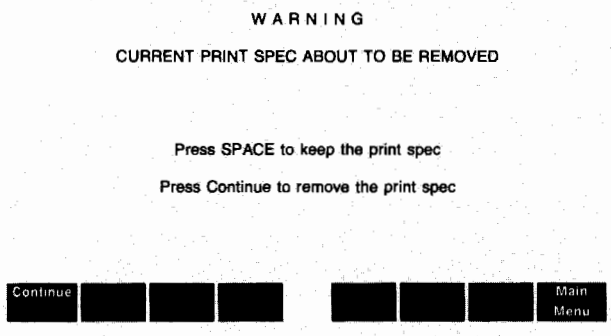
Changing or Removing a Pre-Defined Print Spec

To change or remove a pre-defined print spec, you select Define Print Spec from the Print Menu. The screen that displays the names of any print specs that you have already designed appears:



To change a pre-defined print spec, enter its name in the PRINT SPEC NAME item. Press **Continue**, and FILE displays the stored print specifications on the screen. You can make changes by typing over any entries on the form, or you can press Clear display to erase all the entries on that page of the print spec and start over.

To remove the print spec from the file, enter its name in the PRINT SPEC NAME item. Press **Continue**, and when FILE displays the stored print specifications on the screen, press **Remove**. A warning screen appears, giving you an opportunity to change your mind:



If you change your mind and want to keep the print spec, press the space bar. The print spec appears on the screen again. Now press **Continue**, and FILE returns to the Main Menu. The print spec remains in your file.

If you want to remove the print spec, press **Continue**. FILE removes the print spec from your file and returns to the Main Menu.

Reviewing Forms before Printing

If you wish to review each form before printing it, use the SEARCH/UPDATE function (see Chapter 4). When printing with SEARCH/UPDATE, all items on the form are printed, unless you have pre-defined a print spec that selects certain items, and have entered that print spec name in the print options form. In that case, only the selected items will be printed.

Leaving the PRINT Function

If at any time you want to terminate the PRINT function, press **Main Menu** to return to the Main Menu. If you press **Main Menu** while FILE is in the middle of printing a form, it finishes printing that form before it leaves the function.

Summary

- Use the PRINT function to copy some or all of your information to a printer or disk file.
- PRINT has two options:
  1. Use Print Forms to print a copy of all or part of a form.
  2. Use Define Print Spec to create a set of print specifications and store them for repeated use (maximum eight print specs per file).
- To print a form, follow these three steps:
  1. Fill in the retrieve spec form to tell FILE which forms in the file you want printed. (See Chapter 4 for a detailed description of retrieve specifications.)
  2. Fill in the print options form to tell FILE how you want the information printed. If you enter the name of a pre-defined print spec in the print options form, the print spec form (step 3) does not appear.

3. Fill in the print spec form to tell FILE which items in the form to print, whether to put items on the same or a different line, and whether to sort the forms according to a certain item.

- Use these characters to fill in the print spec form:

  X print this item and advance the printer to the next line.

  \+ print this item but do not advance the printer to the next line—skip 2 spaces instead.

  S sort printout based on this item.

- If you do not enter any print specifications, FILE prints forms just as they appear on the screen.

- FILE always prints items in the same relative order in which they appear on the form.

- To review a form before printing it, use the SEARCH/UPDATE function and then press **Print**.

- **Remove** removes the currently displayed pre-defined print spec

- **Main Menu** returns to the Main Menu after FILE finishes printing the form it is currently printing.

6: remove

With the REMOVE function, you can delete forms you no longer need from your file. You indicate which forms you no longer want, and then FILE searches through the file, automatically removing all appropriate forms. (If you want to see each form before it is removed, use the SEARCH/UPDATE function and press **Remove** as explained in Chapter 4.)

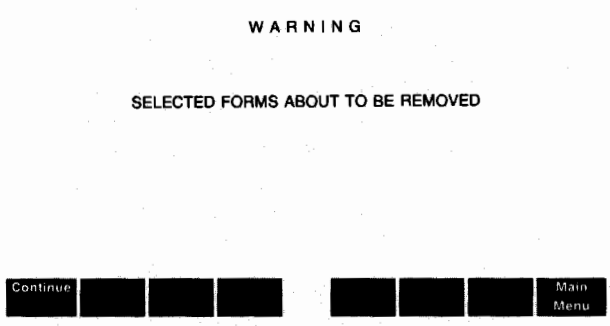
Selecting the REMOVE Function

To select the REMOVE function, return to the Main Menu (press **Main Menu**, if necessary). Enter a 6 in SELECTION NUMBER and the name of the file from which you want to remove forms in FILE NAME.

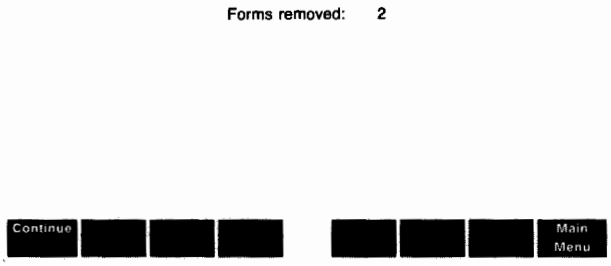
Make sure the disk containing the file is inserted in the drive indicated by the file name. Press **Continue**, and a retrieve spec form from this file appears on the screen.

Removing Selected Forms from a File

You are now ready to indicate which forms you want to remove from the file by filling in the retrieve spec form with retrieve specifications. (See Chapter 4 for a detailed description of retrieve specifications.) When all retrieve specifications are entered, press **Continue**. Removing a form involves erasing information from your file. Before FILE removes any forms, it displays the following screen, giving you the opportunity to change your mind:



You have two choices here. If you press **Main Menu**, FILE returns to the Main Menu. No forms are removed. If you press **Continue**, FILE removes all forms meeting your retrieve specifications, displaying each form as it removes it. After the last form is removed, FILE displays the following message, indicating the number of forms that have been removed:



Press **Continue** again. FILE returns to the Main Menu, ready to accept another function selection.

Once a form is removed, the disk space previously occupied by the form is automatically re-used as soon as FILE stores another form. However, the form number is never used again. If you want to renumber the remaining forms in your file so they are numbered consecutively, use the Change Design option of DESIGN FILE (see Chapter 9).

Example of Removing Selected Forms:

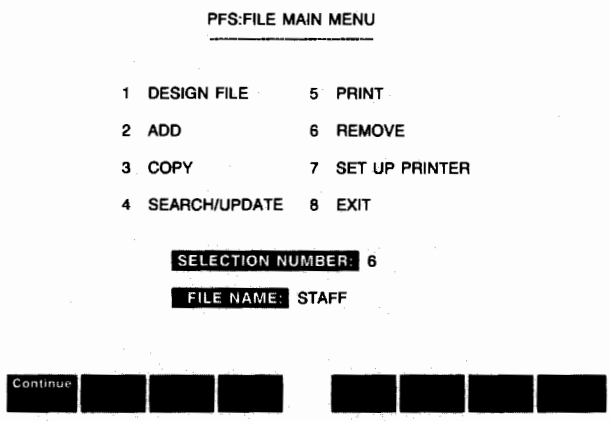
Let's suppose you have created a separate file for the Ohio sales office, and now you want to remove any Ohio employees from the STAFF file. First, return to the Main Menu and enter

6

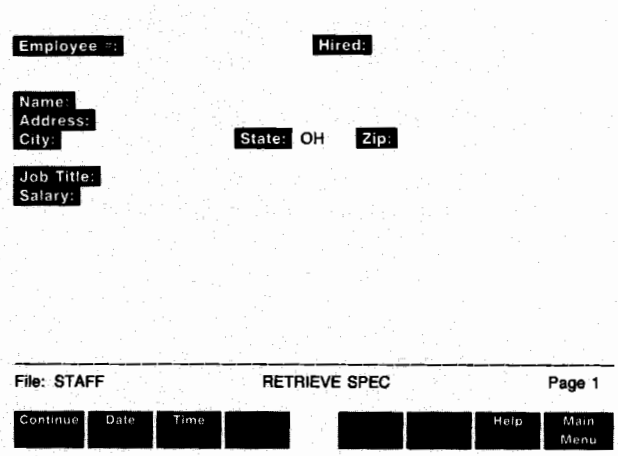
in SELECTION NUMBER. Enter

STAFF

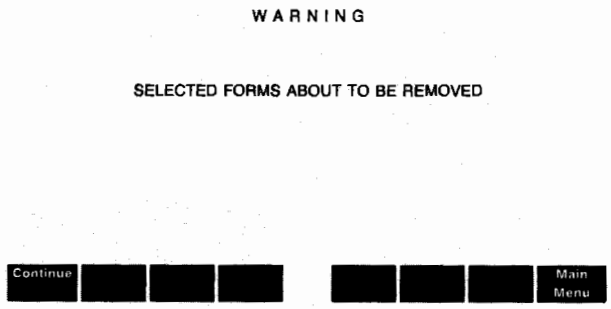
in the FILE NAME item, if necessary, and make sure the disk containing STAFF is in the default drive. Your screen should look like this:



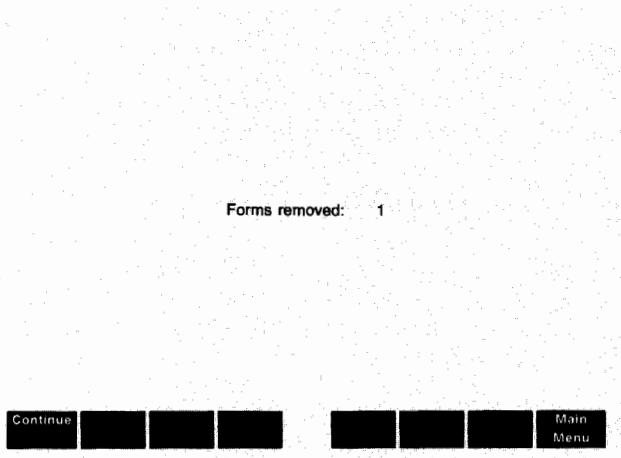
Press **Continue**, and the retrieve spec form from STAFF appears on your screen. Using the Tab key or touching the screen, move the cursor to the STATE item. Enter OH to identify which employee forms you want to remove. The screen should look like this:



Press **Continue**, and FILE displays the following screen, giving you the opportunity to change your mind before it removes any forms:



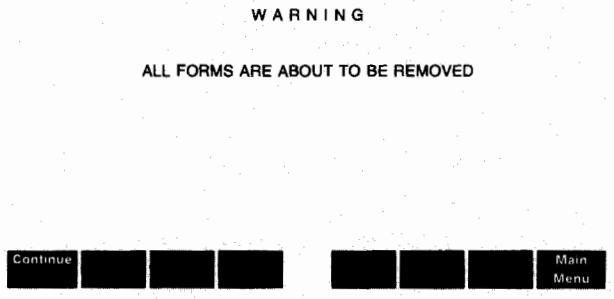
Press **Continue** again to proceed with the function, and FILE removes all forms with OH in the STATE item. When it finishes, FILE displays the following message:



Now press **Continue** one more time, and FILE returns to the Main Menu.

Removing All Forms from a File

If you want to remove all the forms from a file, leave the retrieve spec blank. Press **Continue**, and the following message appears:



If you change your mind at this point, press **Main Menu** to return to the Main Menu. Otherwise, press **Continue**, and FILE removes all the forms in the file, leaving only the form design.

Note that even if you remove all the forms from a file, the file remains on the disk, occupying as much space empty as it did when full. To remove the file, exit from PFS:FILE and use the MS-DOS ERASE command or use the File Manager option on the Personal Applications Manager main menu to remove the file. See the *HP 150 Personal Computer Owner's Guide* for details.

Leaving the REMOVE Function

If at any time you want to terminate the REMOVE function, press **Main Menu**, and FILE returns to the Main Menu. If you press **Main Menu** while FILE is in the middle of removing a form, it finishes removing that form before returning to the Main Menu.

Summary

- Use the REMOVE function to remove any unwanted forms from a file.
- Indicate which forms you want to remove by filling in a retrieve spec form with retrieve specifications.
- To remove all forms from a file, leave the retrieve spec form blank.
- If you want to see each form before it is removed, use SEARCH/UPDATE and press **Remove** (see Chapter 4).
- **Main Menu** returns to the Main Menu after FILE finishes with the form it is currently removing.

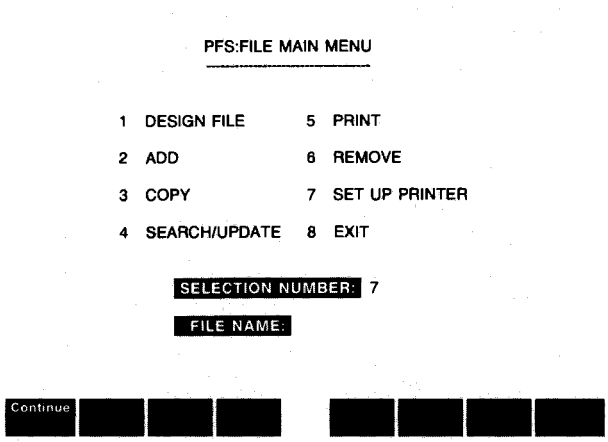
7: set up printer

You use the SET UP PRINTER function to send special characters or codes to your printer to initiate or terminate special printing modes. For example, you might want to print your forms in condensed or bold type.

If your printer supports special printing modes, they will be listed in the operations manual for the printer. Typically, the manual either instructs you to send special characters (such as ESC&k2S) or the ASCII number that corresponds to those characters (such as the number 27 38 107 50 83). The SET UP PRINTER function accommodates both characters and ASCII numbers.

Selecting SET UP PRINTER

First, return to the Main Menu and enter a 7 in SELECTION NUMBER. You do not need to enter a file name in the FILE NAME item. The screen looks like this:



Press **Continue**, and FILE displays an instruction screen with an area for you to enter the characters or ASCII numbers that you want to send to your printer.

Entering Characters

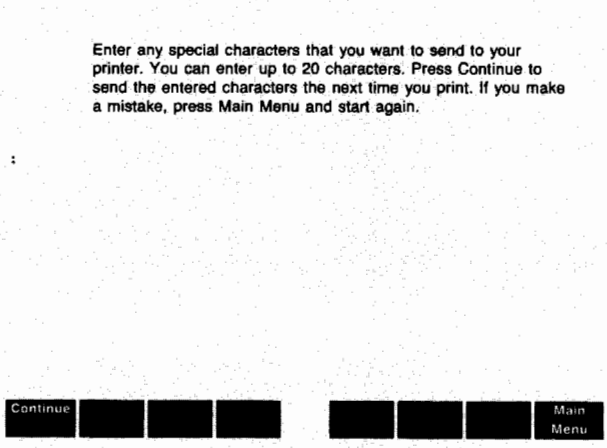
To enter a character, simply press the key on the keyboard that corresponds to the desired character. FILE echoes the character on the screen, so you can verify that you pressed the correct key. If you need to enter a control character, such as CTRL B, press CTRL and, while holding it down, press B. The cursor automatically moves to the next line on the screen as soon as you press a key. To send several characters in a row, just press the keys in the correct sequence. When you have entered all the characters, press **Continue** to store the characters and return to the Main Menu. FILE sends the stored characters to the printer just prior to printing forms the next time.

Note: FILE sends up to 20 characters to the default printer PRN: or to the printer whose name you entered last in the PRINT TO item of the print options screen.

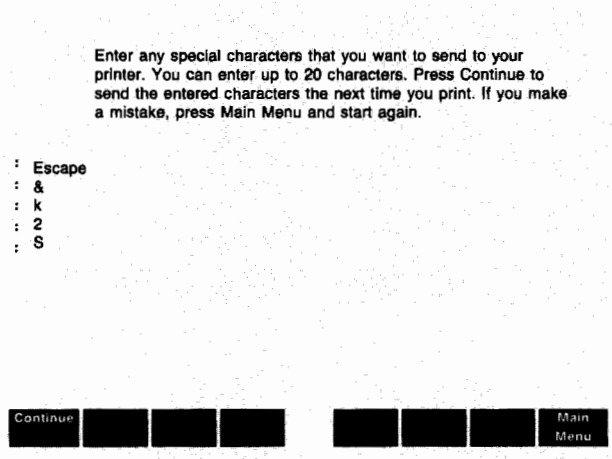
If you should enter a wrong character by mistake, press **Main Menu** and FILE will return without storing any characters, then start again.

Example of Sending Control Characters:

For example, let's send the characters necessary to set the HP2674A internal printer into condensed mode. The required character sequence is ESC, then &k2S. First, return to the Main Menu (press **Main Menu**, if necessary) and enter 7 for SELECTION NUMBER. Press **Continue**, and FILE displays the instruction screen, with a colon next to which you will begin entering characters. That screen looks like this:



Now, to enter the ESC character, just press the ESC key. Then, to enter &k2S, press each key in sequence and press Return after each one. Notice that FILE echoes the characters on the screen:



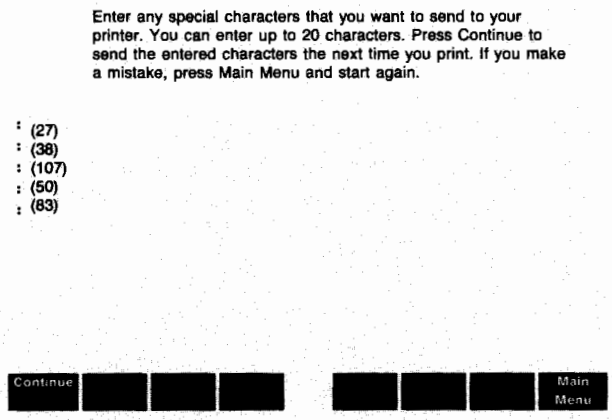
Since those are the only characters needed for this example, press **Continue**, and FILE stores the characters and returns to the Main Menu.

Sending ASCII Numbers

If your printer manual lists ASCII (decimal) numbers rather than control characters, you can enter those instead. Just precede the number with a left parenthesis, (, and press Return to indicate the end of the number. If you wish, you can enter a combination of control characters and ASCII numbers.

Example of Sending ASCII Numbers:

Let's send the ASCII numbers that correspond to ESC&k2S, again setting the HP2674A internal printer into condensed type. Return to the Main Menu and select SET UP PRINTER as before. When the instruction screen appears, type (then type 27 (the ASCII number corresponding to ESC), and press Return. Repeat that sequence but first type 38 (the ASCII number corresponding to &) instead of 27. Then type (, and 107 (the ASCII equivalent of k) and press Return. Use the same procedure for the ASCII equivalents of 2 and S which are 50 and 83. Notice that, for each number, FILE closes the parentheses around the number to remind you that it is an ASCII number:



Terminating Special Printing Modes

To terminate a special printing mode, you can either send the character or ASCII number that turns off the printing mode or, if you are using a printer other than the internal printer, simply turn it off and back on.

Leaving SET UP PRINTER

You can leave the SET UP PRINTER function at any time to return to the Main Menu by pressing **Main Menu**. However, any characters or ASCII numbers that you have entered will not be stored and later sent. To store the characters, you must press **Continue** to complete the function.

Summary

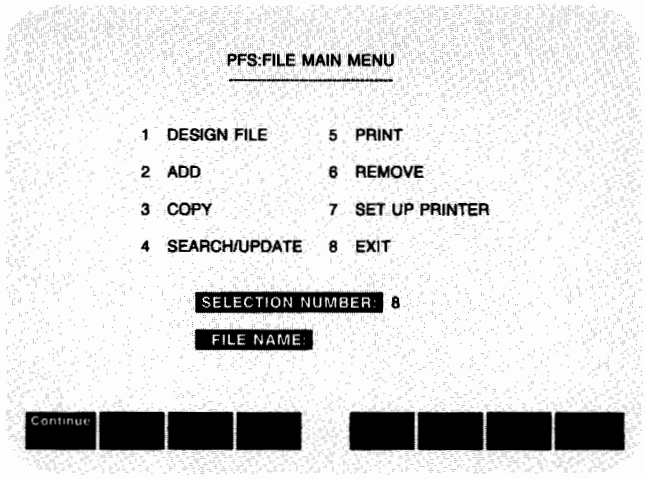
- SET UP PRINTER allows you to send special characters or the corresponding ASCII number to your printer to initiate or terminate special printing modes.
- To enter a character, press the corresponding key.
- To enter an ASCII number, type a left parenthesis, then type the number. Press Return after typing the number.
- **Main Menu** cancels the SET UP PRINTER function, returning to the Main Menu without sending characters or ASCII numbers entered.

8: exit

When you are finished using the FILE program, or when you want to leave FILE to perform file management tasks with the Personal Applications Manager (P.A.M.), you use the EXIT function.

Selecting EXIT

To select EXIT, return to the Main Menu and enter 8 in the SELECTION NUMBER item. You need not enter a file name in the FILE NAME item. The screen should look like this:



Press **Continue** and you are now out of the FILE program and back under control of P.A.M. If you have removed the FILE program diskette from the default drive, reinsert it and press **Reread Discs** to see the applications stored on the diskette.

To return to the FILE program from the Personal Applications Manager, simply press **PFS:FILE** on the screen, and then press **Start Applic**. You could also press **PFS:REPORT** or another program name on the screen, press **Start Applic** and begin work.

Summary

- EXIT allows you to leave the FILE program and return to the Personal Applications Manager.
- You do not need any entry in the FILE NAME item of the Main Menu when you select EXIT.
- To return to the FILE program from P.A.M., simply press **PFS:FILE** when it is on the screen and press **Start Applic**.

9: change design

After you have created and used your file, you may want to redesign the form to suit your needs better. With the Change Design option of the DESIGN FILE function, you can add more items, delete some items, or rearrange the items on your form, whether your file is empty or contains data. Always be sure to make a backup copy of your file before beginning.

Selecting Change Design

To select Change Design, return to the FILE Main Menu. First, enter a 1 in SELECTION NUMBER to select DESIGN FILE. Then, enter the name of your file in FILE NAME, and make sure the disk containing your file is in the correct drive indicated by the file name. Press **Continue**, and the Design File Menu appears. Enter a 2 in the SELECTION NUMBER item on this menu to select Change Design.

Using Change Design with a File Containing No Data

If your file does not contain data, simply insert the disk that contains it in the specified drive. When you select Change Design from the Design File Menu and press **Continue**, the form appears immediately for you to edit.

The item names are no longer in inverse video and protected from overwriting. You can type in new items, delete items by typing spaces over them, or move items by removing them from their original locations and typing them into new locations. Using the cursor control keys (see Appendix C) to move the cursor around the screen, make all the desired changes in the form. Press **Continue**, and FILE stores the redesigned form in the file and returns to the Main Menu.

Using Change Design with a File Containing Data

When you change the design of a form from a file that contains data, FILE assumes that it will find temporary work space on the disk in drive A. If you want to use a disk other than the one in drive A for this temporary work space, run the SETUP utility program found on the FILE program disk (see the Introduction for instructions).

When changing the design of a form from a file that contains data, there are several things you need to know:

1. First make a backup copy of your file (see the instructions in the Preface on backing up your file) in case you change your mind later, or inadvertently damage the file during the redesign process.

2. Insert a blank, formatted disk in drive A (or the drive you set as your work drive using the SETUP program) for FILE to use as temporary storage space during the Change Design process.

3. The item names in the old and new designs of the form must match exactly in order for the data to be copied. If they do not, FILE does not transfer the data belonging to the item to the redesigned form, and that data is permanently lost. For example, if the NAME item on the patient's form mentioned in Chapter 1 is moved to a new location during the redesign process, the line of dashes which is a part of the item name must also be moved, or the data belonging to that item will not be transferred. (FILE ignores leading and trailing blanks when matching names, and treats more than one blank between words as a single blank. See Chapter 1 for a complete explanation of item names.)

4. You can move items to different places on the form, without affecting the data for those items (as long as the names match exactly).

5. The redesigned form can have more or fewer items than the original form. When you delete items from the form, however, the data for those items is not copied. It is permanently lost from the file.

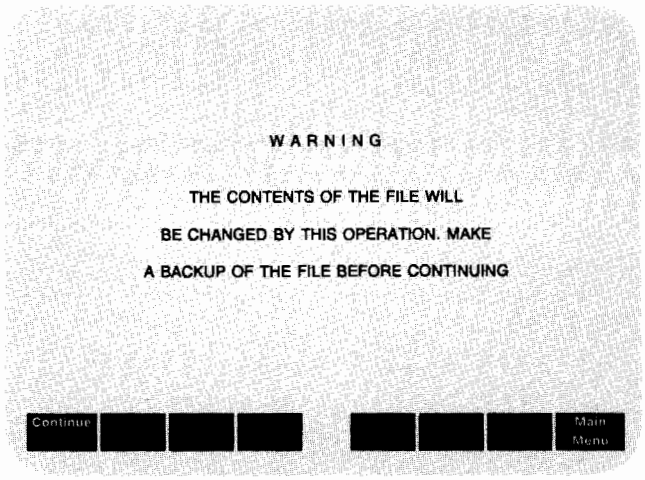
6. Leave enough space for the information in the item on the original form to fit into the item on the redesigned form. (See "When the Data Doesn't Fit into the New Design" in this chapter.)

7. Only four pages (maximum) can be redesigned at one time. (See "Changing Forms with Multiple Pages" in this chapter.)

8. It may take a long time for FILE to reorganize your files. Depending on the complexity of the file and the amount of data in it, the reorganization can take from 5 minutes to a few hours.

9. The forms in your file are renumbered in reverse order during the redesign process.

After you select Change Design from the Design File Menu and press **Continue**, the following screen appears:



If you press **Main Menu**, FILE returns to the Main Menu. To continue, insert a disk in the work drive and press **Continue**. FILE continues with the Change Design process and displays the form from your file as you originally designed it. The item names are no longer in inverse video and protected from overwriting. You can type in new items, delete items by typing spaces over them, or move items by removing them from their original locations and typing them into new locations (you must type the item names exactly as they originally appeared). Use the cursor control keys (see Appendix C) to move the cursor around the screen.

When you have made all the desired changes, press **Continue**, and FILE changes the design on all the filled-in forms, briefly showing each form in its original format. FILE then stores all the changes in the file and returns to the Main Menu, ready for another function selection.

Example of Changing the Form Design:

Let's change the STAFF form design to include an EXPERIENCE item and to delete the SALARY item. Before you begin, make a backup copy of STAFF, if you have not already done so. You might also want to enter another form for John Andrews, since you deleted his form while using the REMOVE function.

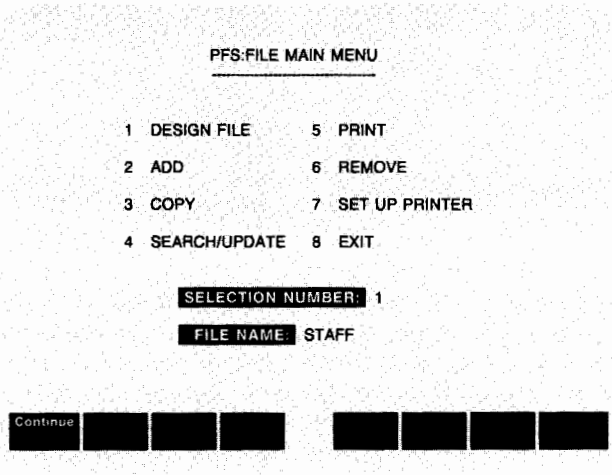
First return to the Main Menu and enter

1

in the SELECTION NUMBER item. Enter

STAFF

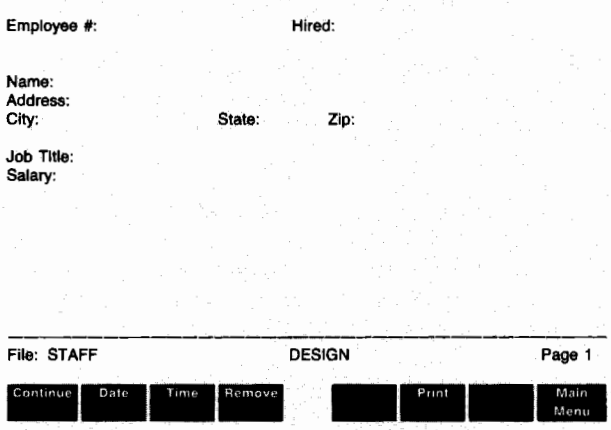
in the FILE NAME item, if necessary, and make sure the disk containing STAFF is in the default drive. Your screen should look like this:



Press **Continue**, and the Design File Menu appears. Enter

2

in the SELECTION NUMBER item. Press **Continue** and, when the warning screen appears, insert a disk with available space in drive A (or your work drive) and press **Continue** again. FILE displays the form from the STAFF file as you originally designed it:



To change the STAFF form, use the down arrow key to move the cursor down the screen to the SALARY item. Replace it with EXPERIENCE. Since you are not making any further changes, press **Continue**, and FILE changes all the forms and stores the changes in the file.

Using Change Design to Renumber Forms

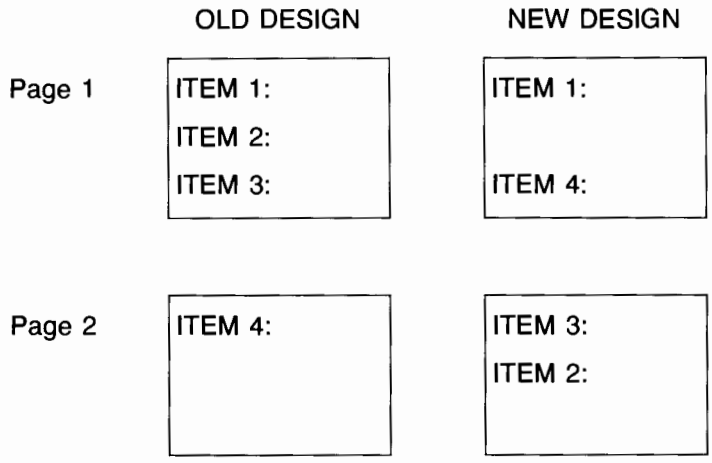
When you remove a form from your file, its form number is never used again, although the disk space occupied by the form is automatically re-used as soon as FILE stores another form. If you have removed a number of forms from a file and want to renumber the remaining forms consecutively, use the Change Design option. When FILE displays the form from your file for you to redesign, press **Continue** without making any changes. FILE recopies the forms in your file and renumbers them in consecutive order.

Since FILE recopies the forms starting with the last form entered in the file, using Change Design to renumber forms reverses their order in the file. If this is not acceptable for some reason (perhaps you search the most recently entered forms most often, and having them at the beginning of the file slows down the search process), use Change Design to renumber them again. This will get them back in their original order.

Changing Forms with Multiple Pages

You can change only four pages of a multiple-page form at any one time. Thus, if you want to change six pages, you have to change four of them first, complete the Change Design function, then repeat the operation for the other two pages.

When transferring data, FILE looks for the item name first on the equivalent page of the new form, then on the other pages consecutively, so the data is transferred regardless of the page the item appears on. For example, in the redesign shown in the diagram below, the data in ITEM 3 now appears on the second page of the new form, while the data in ITEM 1 and ITEM 2 remains on the first page.

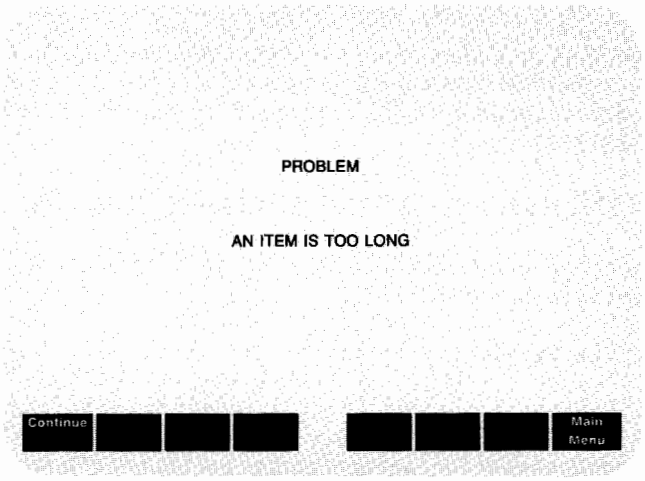


Using Change Design to Remove a Blank Page

When designing or redesigning a form, if you remove all the item names from a page, the page (now blank) continues to exist. To remove the blank page, use Change Design and retype the items from pages following the blank page so they fill up the empty space. (If the blank page is the last page in the form, FILE removes it automatically during the Change Design process.)

When the Data Doesn't Fit into the New Design

When transferring data from the original form to the redesigned form, if the information in an item does not fit into the space for that item on the redesigned form, FILE stops and displays the following message:



You have two choices. If only one form has an item that is too long, it is probably better to shorten the information in that item so that it fits in the new design (or, if the form is not vital to the new file, delete it).

If you press **Continue**, the form with the overlong data item appears with the cursor located at the first character that does not fit into the redesigned form. You can then edit the information in the overlong item. When you finish, press **Continue** again to continue copying.

If many of the forms in the file have an item that is too long for the redesigned form, you might want to cancel the operation and redesign the form again to accommodate the data. When you press **Main Menu**, you return to the Main Menu. FILE does not save the redesigned form. The file remains in its original state, and you must begin again.

Entering Data in Redesigned Forms

You can use the SEARCH/UPDATE function to enter information in an item that you added to a form in the redesign process.

After entering SEARCH/UPDATE, leave the retrieve spec form blank so that FILE retrieves every form in the file. As each form appears on the screen, enter the new information into the new item and press **Continue** to store the updated form in the file.

Repeat this procedure until every form in the file has been updated. After you store the last form, FILE displays a screen to tell you how many forms it found. Press **Continue** one more time. FILE returns to the Main Menu, ready for another function selection.

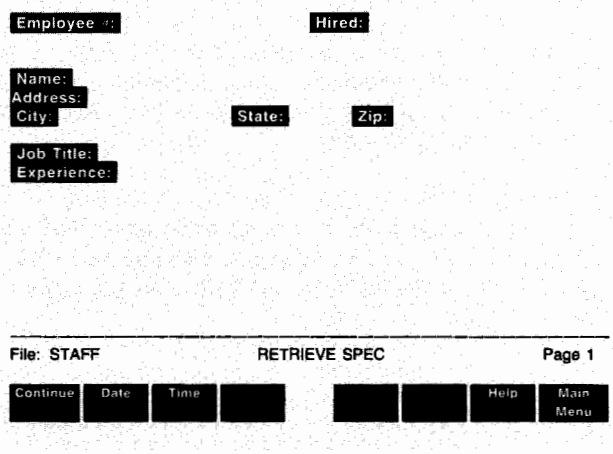
Example of Entering Data in a Redesigned Form:

Let's add information in the EXPERIENCE item you added when you redesigned the form for the STAFF file.

First, return to the Main Menu and enter a

4

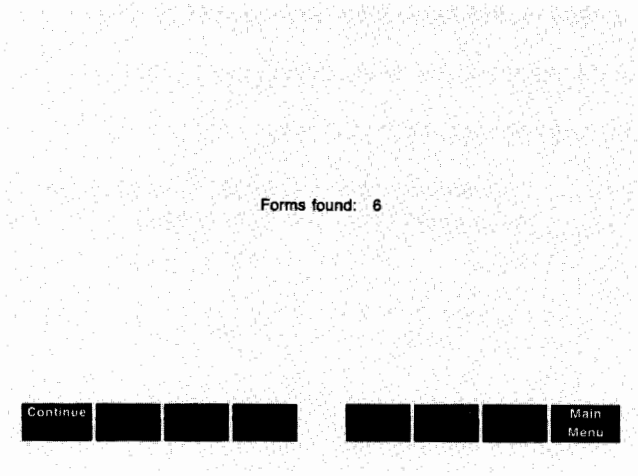
in SELECTION NUMBER. Since you just redesigned your STAFF form, STAFF should still be in FILE NAME, and the disk containing STAFF should still be in the default drive. Press **Continue**, and the retrieve spec from STAFF appears:



Since you have information to enter in the EXPERIENCE item of each STAFF form, you want to leave the retrieve spec blank. Press **Continue** again, and the first of your STAFF forms appears on the screen. Use Tab or touch the screen to move the cursor to the EXPERIENCE item, and enter the appropriate information from the list below. After you finish with each form, press **Continue**, and the next form appears. Continue entering information until you have updated all the forms.

NAME	EXPERIENCE
Jeff Stribling	Metal fusion
Jennifer Young	Electronic parts, International Sales
Anne Williams	Division Management
Mike Cooper	Machine tools
Sara Brown	Executive
John Andrews	Computer terminals, time sharing

When you finish the last form and press **Continue**, the following screen appears:



Press **Continue** one more time, and FILE returns to the Main Menu.

Leaving the Change Design Option

If at any time you want to terminate the Change Design option, press **Main Menu** to return to the Main Menu. If you press **Main Menu**, however, FILE does not save the redesigned form. The form remains in its original state.

Summary

- Use the Change Design option to change the design of the form from a file.
- You can change the form of an empty file or of a file that contains data.
- If changing the form of a file that contains data, remember these guidelines:

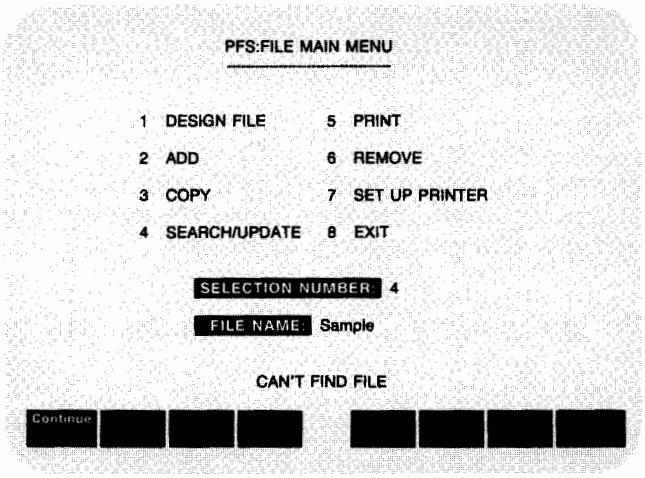
  1. Make a backup copy before you change the form.
  2. Insert a formatted disk in drive A for FILE to use for temporary work space. (To use another drive for this work space, run the SETUP program to change the work drive from drive A.)
  3. Item names in the redesigned form must match exactly the item names in the original form, but can be in different places on the forms.
  4. Leave enough space for the information in an item on the original form to fit into the item on the redesigned form, or edit the information to fit.
  5. Only four pages of a multiple-page form can be changed at one time.
  6. Forms are renumbered in reverse order.

- **Main Menu** FILE returns to the Main Menu without saving the redesigned form. The form remains in its original state.

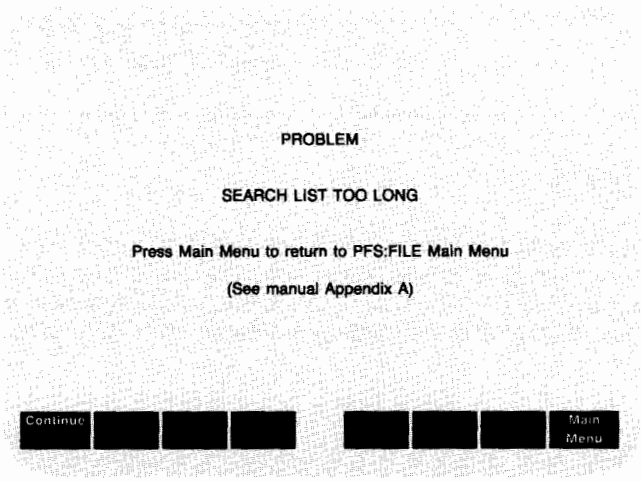
A: appendix

Messages

FILE displays a message whenever it encounters an error condition. Certain errors are the result of mistakes made when you enter information (filling in the Main Menu items, PRINT, COPY, or DESIGN FILE functions). These messages are displayed in the message area at the bottom of the screen:



Other errors are the result of physical limitations or problems with certain elements of your computer system. These messages are displayed on a separate screen that looks like this:



When you encounter one of these messages, simply locate the message in the following list and follow the instructions in the Corrective Action column. To restart normal FILE operation, press **Main Menu**. The following is the list of FILE error messages, arranged in alphabetical order:

MESSAGE	DESCRIPTION	CORRECTIVE ACTION
BAD FILE NAME	You entered an illegal file name.	Make sure the file name begins with a letter and does not contain spaces (see the Introduction or your *HP 150 Personal Computer Owner's Guide* for details.)
CAN'T FIND FILE	FILE searches for files in the default drive unless you include the drive name as part of the file name.	Check to make sure you entered the name of the file correctly in the FILE NAME item. If the file you want to use is in a drive other than the default drive, the file name must be preceded by a drive name. Also make sure the diskette that contains the file is in the correct drive.

MESSAGE	DESCRIPTION	CORRECTIVE ACTION
CAN'T FIND FILE (Cont.)	The file name you entered is not the name of a file created by PFS:FILE.	Enter the name of a PFS file and try again.
CAN'T FIND PRINT SPEC	There is no pre-defined print spec with that name.	Check to make sure you entered the name correctly.
DIRECTORY IS FULL	You have too many files in the directory on the diskette.	If you have some unnecessary files in the directory, use the DOS ERASE command or the File Manager in P.A.M. to remove them. Or, use another formatted disk.
DISK IS FULL	FILE attempted to write some information on a diskette and found that there was no room left.	If you have some unnecessary forms in the file, you can create some space by removing them (see Chapter 6). If the diskette has an unneeded file, you could use the DOS COPY command or the P.A.M. File Manager to copy it to another diskette, or remove it using the DOS ERASE command or the File Manager. You can also use the COPY function to copy the form design from the current file to a second file, then continue adding information to that new file. Make sure that your work disk is not full. Use SETUP to change the work drive.

MESSAGE	DESCRIPTION	CORRECTIVE ACTION
DISK IS WRITE-PROTECTED	FILE cannot use diskettes that are write-protected. FILE uses certain areas of the diskette to store information, even when you select a retrieve function.	Remove the write-protect adhesive or slide the tab. To protect the data that could now be over-written, make a backup copy of your file.
DISK HAS BEEN CHANGED	The diskette containing the PFS file has been removed from the drive.	Re-insert the diskette with the PFS file.
DRIVE ISN'T READY	The disk drive door is open.	Close the door.
FILE CAN'T PRINT TO THE CONSOLE	You have entered CON: on the print option form in the PRINT TO item.	Use the default PRN: or enter COM1: or COM2: to write to a printer, or enter the name of a diskette file. See the *HP 150 Personal Computer Owner's Guide* for information on device configuration.
INVALID SELECTION NUMBER	You entered a number for the SELECTION NUMBER item of a menu that is invalid.	Re-enter a number that is shown on the menu.
I/O ERROR	There is a physical problem with either the disk drive, the disk controller, or the diskette. Some possible causes are:	
	Disk drive door open.	Close the door.

MESSAGE	DESCRIPTION	CORRECTIVE ACTION
I/O ERROR (Cont.)	Malfunction.	DO NOT USE THIS DISKETTE AGAIN. Make a copy of your backup disk, then use that copy. If I/O ERROR persists, take the disk drive to your dealer for testing.
	Diskette inserted incorrectly.	Remove the disk, then re-insert it properly.
	Worn out diskettes.	After 40-50 hours of use, the diskette may need replacing. Try using a different diskette.
MUST GIVE A FILE NAME	You have left the FILE NAME item of the Main Menu blank. Every FILE function, except EXIT and SET UP PRINTER, requires a file name in this item.	Enter the name of the file you want to use.
MUST GIVE A PRINT SPEC NAME	You have tried to define or modify a pre-defined print specification but have not entered a name.	Enter a new name or one of the names listed on the screen.
NEW FILE MUST HAVE A DIFFERENT NAME	The NEW FILE NAME item of the COPY function Menu contains the same name as the FILE NAME item of the Main Menu.	Re-enter a different file name.

MESSAGE	DESCRIPTION	CORRECTIVE ACTION
ONLY 4 PAGES CAN BE CHANGED	You have tried to change the form design on more than four pages of the form at one time.	Complete the Change Design process for no more than four pages of a form design at one time. Repeat the process for each additional four pages.
ONLY 8 PRINT SPECS ARE ALLOWED	You have already defined eight print specs for the file.	Remove one of the print specs, then define the new one.
PRINT SPECS CAN HAVE ONLY 10 CHARACTERS	You entered a name that is longer than 10 characters.	Re-enter a name with 1 to 10 characters.
PRINTER ISN'T READY	FILE cannot access the printer you named in the PRINT TO item.	Check to make sure your printer is plugged in, turned on, on-line, and has paper.
SEARCH LIST TOO LONG	The retrieve specifications will not fit in FILE's internal storage area.	Specify fewer requests in the retrieve specifications.

B: appendix

Disk Storage Capacity

Assuming that you store only one file on a diskette, several things influence the number of forms you can store in that file. The actual number depends on how many pages the form contains, how many items there are per page, and how much data is entered in each item.

To estimate the number of forms your file can hold, begin by determining the number of bytes (characters) of disk capacity your HP 150 Personal Computer system has. You can find the number, represented in Kbytes (1024 bytes), by taking the following steps:

1. Insert the MS-DOS diskette in drive A and the disk whose capacity you want to measure in another drive, such as drive B for the purposes of this example. (If the disk is new, be sure to format it before you begin.)

2. From the MS-DOS A> prompt (see the *HP 150 Personal Computer Owner's Guide* for instructions on working with MS-DOS), type

   CHKDSK B: (or the drive you are using)

MS-DOS displays a summary of how many files are currently on the diskette, the space occupied by those files, and the amount of free space available measured in Kbytes (1024 bytes).

Next, you must know that a file is divided into blocks of 128 bytes per block. Some of these are used to store the form design, directory information and other internal FILE data structures.

Each page of every form stored in a PFS file uses at least one 128-byte block, even if the page is blank. The actual number of forms that you can fit into one of your files is a function of how much data is entered in each individual form.

Use the following rules to estimate how many bytes are used by a page of a form:

- FILE uses the first 14 bytes of every page.
- Each item name entered on a page takes 5 bytes (FILE internal parameters).
- Each character entered in an item takes one byte.
- Each blank space in a filled-in item takes one byte, but no blanks are counted at the beginning or end of an item.
- A string of 3 or more blanks inside a filled-in item takes 3 bytes.

Example:	NAME:	Jeff		Stribling		1970	
Length =	5	+4	+1	+9	+3	+4	= 26 characters

- A blank item takes 6 bytes (5 for the FILE internal parameters plus 1 blank character).

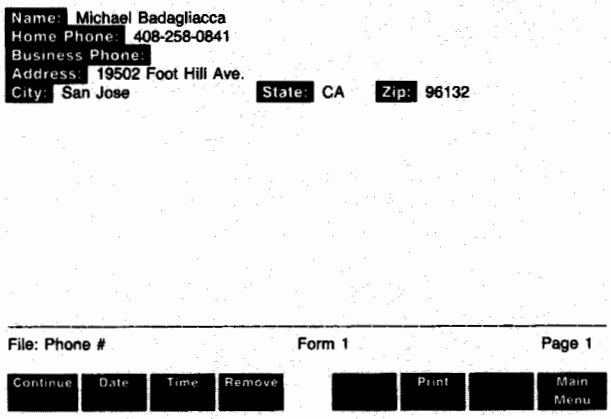
After figuring the total number of bytes used by each page of a form, use these steps to estimate how many forms will fit in a file:

1. Divide the total number of bytes for a page by 128.
2. Round up to the next largest whole number. (This gives you the number of 128-byte blocks used by the page.)
3. Add the number of blocks for all pages of the form to give you the total number of blocks required for an average form.
4. Divide the total disk capacity by 128 to figure capacity in blocks.
5. Divide the number of blocks (from step 4) by the total number of blocks per form to arrive at the approximate number of forms you can fit on your disk.

It is necessary to figure page by page because FILE uses space on a per-page basis. For example, if you use 30 bytes on a page, FILE assigns 128 bytes to that page in that file, and those 98 empty bytes are not used anywhere else. Estimating an entire form at once, instead of each page individually, will cause you to think that you have more empty space in your file than you actually do.

Example:

Let's figure the number of bytes used by the following example of a telephone directory form:



14 — FILE uses the first 14 bytes on a page

35 — 7 items using 5 bytes each (FILE internal parameters)

19 — Michael Badagliacca = 18 characters, 1 space

12 — 408-258-0841 = 12 characters, 0 spaces

1 — BUSINESS PHONE: empty item = 1 space

18 — 19502 Foot Hill Av = 15 characters, 3 spaces

8 — San Jose = 7 characters, 1 space

2 — CA = 2 characters, 0 spaces

5 — 95132 = 5 characters, 0 spaces

---

114 TOTAL number of bytes used by this completed form

114 / 128 = .89	Step 1. The total number of bytes for the page divided by 128.
.89 = 1	Step 2. Round .89 up to the next largest whole number, which is 1.
1	Step 3. Since this form has only one page, there is nothing to add to the 1. This form will require one storage block of 128 bytes.
	Total disk capacity (in bytes) / 128 bytes = Number of forms
	Step 4. Since one form requires only one storage block, you can probably fit the same number of these forms in the file as there are 128-byte blocks free on the disk.

If you put more than one PFS file on a diskette, they will compete with each other for space until the diskette is full. When a file is initially built, it takes 128 blocks of 128 bytes each, for a total of 16384 bytes. When that space is used, it takes space 64 blocks at a time, as it needs more room.

C: appendix

Special Control Keys

Cursor Control Keys

◀	Move the cursor to the left one space.
▶	Move the cursor to the right one space.
▲	Move the cursor up one line.
▼	Move the cursor down one line.
▷	Move the cursor to the first item or to the top left-hand corner of the screen.
Return	Move the cursor to the beginning of the next line.
Tab	Move the cursor to the next item on the form or menu. (You can also touch the screen where you want to place the cursor.)
Shift Tab	Move the cursor back to the previous item on the form or menu. (You can also touch the screen where you want to place the cursor.)
Backspace	Move the cursor one space to the left and remove any character in that space.

FILE Control Keys

Help or F7	Display a help screen appropriate to the function you are performing.
Continue or F1	Begin or continue with the specified function.

Next	Display the next page of the form.
Prev	Display the previous page of the form.
Clear display	Erase all entries from the currently displayed page.
Print or F6	Print the currently displayed form (all pages).
Remove or F4	Remove the currently displayed form.
Date or F2	Enter the current date at the current cursor location.
Time or F3	Enter the current time at the current cursor location.
Main Menu or F8	Return to the FILE Main Menu.
Insert char	Switches between normal and insert mode. When in insert mode, a typed character is inserted at the cursor location, moving other characters on the line one location to the right to make room. Characters inserted do not wrap to the next line.
Delete char	Delete the character at the cursor location.

G: glossary

byte	the space taken up by one character in a computer's memory or in a disk storage area.
character	a letter, number, or symbol.
cursor	a marker on the screen, in the form of a blinking rectangle or an underline character, that indicates where the next character typed will appear.
default drive	the drive the HP 150 assumes you want to use unless you specify another drive
default value	a value that is automatically assigned to something if no other value is chosen to replace it.
disk	a magnetic recording medium used to store information. Disks can contain programs (the PFS:FILE program disk) or data (your PFS files). Disks should be treated with care.
file	a collection of forms that are of the same type. (In FILE, it is the form you design, along with all the forms that you fill in with data.)
form	any combination of items arranged in a chosen order, and created to store information about one particular thing, person, or subject area. (In FILE, you design a form, then use it to store and retrieve information. Forms are kept in a file.)
format	the general layout or arrangement of something, such as the design of a form.
inverse	the reverse of the normal display of characters on the computer video monitor. Usually, characters are light on a dark background. In inverse video, the characters are dark on a light background.
item	the basic element of a form. An item consists of a name and a colon, highlighted on the screen (in inverse video), and followed by an area where information is entered.

load	the process of transferring a program from a disk into the computer's memory.
menu	the list of functions that you can choose at a given time. (The Main Menu appears when you first load the FILE program.)
work drive	the drive used to store information temporarily when sorting forms or when changing form design.
write-protect	to prevent a disk from being written on. See the *HP 150 Personal Computer Owner's Guide* for instructions on write protecting micro flexible disks. Other diskettes are write protected by placing an adhesive tab over the small notch on the side.

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Software Publishing Corporation
1901 Landings Drive, Mountain View, CA 94043