The Apple II
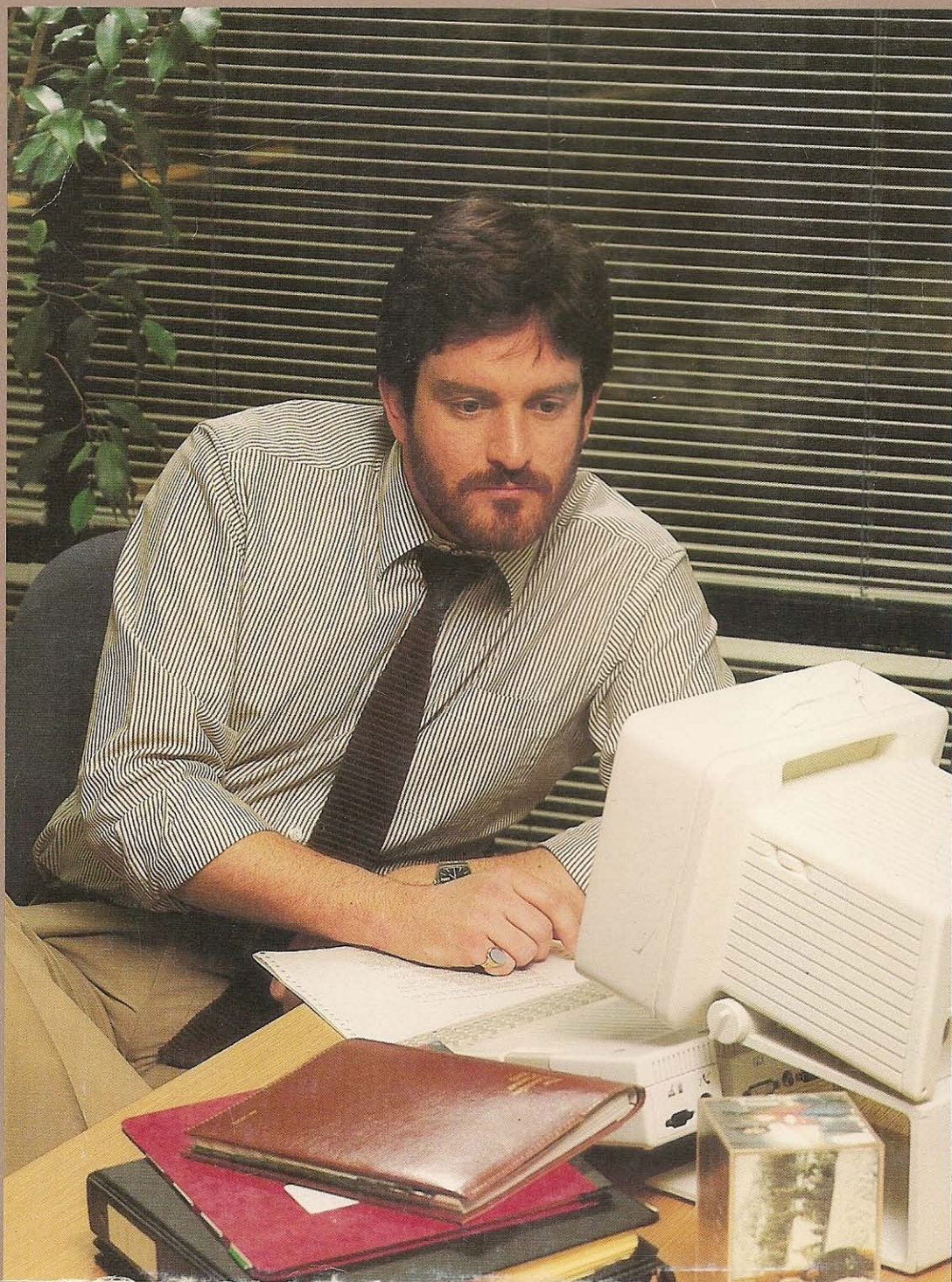
AppleWorks Reference
Manual

Compatible With
IIe, IIc

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The Apple II

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About This Manual

About This Manual

This manual contains reference information that describes all the features of AppleWorks integrated software. It contains the following chapters and appendixes:

- Chapter 1, "Understanding AppleWorks," presents a general overview of AppleWorks and discusses AppleWorks files.

- Chapter 2, "Working With AppleWorks," tells how to interact with AppleWorks and includes instructions for using menu options.

- Chapter 3, "Understanding the Data Base," discusses the AppleWorks Data Base's main functions, activity flow, and file guidelines.

- Chapter 4, "Working With Data Base Information," explains how to create Date Base files, keep information up to date, and display it in different ways.

- Chapter 5, "Reporting With the Data Base," details how to create Data Base reports.

- Chapter 6, "Understanding the Word Processor," summarizes the AppleWorks Word Processor's main functions, activity flow, and file guidelines.

- Chapter 7, "Working With Word Processor Documents," tells how to use the Word Processor to create and edit documents.

- Chapter 8, "Formatting a Word Processor Document," describes how to arrange a document the way you want it.

- Chapter 9, "Understanding the Spreadsheet," summarizes the AppleWorks Spreadsheet's two main functions, illustrates its flow of activities, and lists file guidelines.

- Chapter 10, "Working With Information in Spreadsheets," presents steps for creating sophisticated spreadsheets with a minimum of effort.

- Chapter 11, "Reporting With the Spreadsheet," explains how to create Spreadsheet reports.

- Chapter 12, "Using Cut and Paste," tells how to use AppleWorks' cut and paste feature to combine information of different types.

- Chapter 13, "Printers and Printing," presents how to communicate information to AppleWorks about your printer and tells how to print reports and documents.

- Appendix A tells how to use AppleWorks with a ProFile.

- Appendix B presents steps for preparing AppleWorks to print on a custom printer.

- Appendix C tells how to send AppleWorks files over phone lines.

Chapter tables of contents help you find what you want. The explanation of each feature contains numbered instructions and practical tips for using that feature.

Where to Start

If you have little or no experience with computers, you will probably be happier working with the *Apple Presents AppleWorks* training disk and the *AppleWorks Tutorial* before you start to use AppleWorks with this manual.

If you are an experienced computer user and you're anxious to get started using AppleWorks right away, work your way through the parts of the training disk that interest you and then use this manual. And have fun!

About This Manual

For More Information

These sources of information will help all AppleWorks users:

- The index and reference card

- The glossary at the back of the manual. Terms in **boldface** in the manual are defined in the glossary.

- The help information available whenever `(ⓐ)-? for Help` appears in the bottom-right corner of an AppleWorks display.

By the Way: The help available notice at the bottom of the display may appear in one of two forms:

- a black A in a white square, that is, an *inverse* A, followed by a question mark

- an outline of an open-Apple ((ⓐ)), also followed by a question mark.

You may also have seen ⌂A-? in some of your other software.

These forms all mean the same thing—help is available when you hold down (ⓐ) while you press (?).

Keycap Notation: In this manual, two keycaps separated by a hyphen means to hold down the first key while you lightly press the other key; then release both. If there isn't a hyphen between the keys, press the first key, release it, and then press the other.

An Important Reminder: Be sure to read the sections of your Apple computer's owner's manual that explain how to set up your computer. In addition, read "Copying Disks and Backing Up Files" in Chapter 1 for instructions on how to copy your AppleWorks *Startup*, *Program*, and *Sample Files* disks as well as your own AppleWorks files.

How This Manual Is Designed

Look for these visual aids throughout the manual:

Notes in the margin point to useful information contained elsewhere in this or other manuals.

AppleWorks Tip

Information labeled with **AppleWorks Tip** presents different ways of using a particular feature.

▲ **Warning**
Warning boxes like this alert you to potential problems.

Instructions contained in this manual apply whether you are using an Apple IIe or IIc computer. Information or instructions that differ for each machine are marked by

(IIe)

and

(IIc)

Your Ideas Are Welcome!

A *Tell Apple* card appears at the back of this manual. Please fill it out and return it after you've had some experience using AppleWorks.

About This Manual

Understanding AppleWorks

Understanding AppleWorks

This chapter presents a general overview of AppleWorks. It also tells you about AppleWorks files.

What Is AppleWorks?

AppleWorks is a computer program that allows you to do data base management, word processing, and spreadsheet analysis. AppleWorks' three functions are performed by three software applications that create and work with a specific kind of information:

- The AppleWorks Data Base allows you to work with information you normally keep in lists: names and addresses, schedules, inventories.

- The AppleWorks Word Processor lets you write documents: reports, memos, letters.

- The AppleWorks Spreadsheet lets you create information you normally put on a spreadsheet and manipulate with a calculator: budgets, financial forecasts, income and expense statements.

Because AppleWorks is an integrated program, you can move back and forth at will among these three software applications and the files they create. And you can combine the three kinds of information, cutting and pasting one kind of information into another. AppleWorks' integration greatly increases your ability to work with information in the easiest and most efficient way.

Equipment You Need

All AppleWorks users should have

- the AppleWorks *Startup* and *Program* disk
- the disk named *Sample Files* for use with *Apple Presents AppleWorks* and the tutorial manual
- at least two blank disks to use for copies of *Startup* and *Program*.

//e

If you have an **Apple IIe** computer, you need this equipment to use AppleWorks:

- An 80-Column Text Card, preferably one with extended memory, in the large auxiliary slot
- A video monitor
- One or more disk drives with the controller card in slot 6

To make maximum use of AppleWorks, you also need a printer with the printer interface card in slot 1.

Here's some other equipment you might find helpful in using AppleWorks: */Hard disk*

- A ProFile, with the interface card in slot 5
- A system clock, with the interface card in slot 2 or slot 4.

//c

If you have an **Apple IIc** computer, set to 80 columns, you need

- A video monitor

To make maximum use of AppleWorks, you also need a printer (serial only) plugged into port 1 or 2. In addition, it's nice to have an additional disk drive plugged into the built-in connector.

Chapter 1: Understanding AppleWorks

Copying Disks and Backing Up Files

Before you start using AppleWorks, you should copy your *Startup* and *Program* disk onto two blank disks. This section tells how. It also tells how to back up your own AppleWorks files, which you should do frequently.

Copying Startup and Program

Before you begin using AppleWorks, be sure to copy the side of the disk labeled *Startup* and the side of the disk labeled *Program* onto separate disks. Put the original disk in a safe place and use the copies. Because AppleWorks writes the date on the program disk every time you use it, you shouldn't put a write-protect tab on that disk.

//e

If a *ProDOS User's Manual* and *ProDOS User's Disk* came with your Disk II drive and controller card, use this utilities manual and disk to format blank disks and copy your *Startup* and *Program* disk.

If you received a *DOS 3.3 System Master* disk and manual with your Disk II drive and controller card, use AppleWorks' `Other Activities` menu option 5, `Format a blank disk`, to format your disks. Then use DOS 3.3 COPYA to copy the *Startup* and *Program* disk.

//c

A *System Utilities* disk and utilities booklet came with your Apple IIc computer. Use this utilities booklet and disk to format blank disks and copy your *Startup* and *Program* disk onto two blank disks.

Backing Up Your AppleWorks Files

It's important to **back up** AppleWorks files, or make duplicate copies of them, frequently. You should always have a recent copy of AppleWorks data disks, stored in a safe place away from dust, magnetic fields, and temperature extremes. Use the following to back up your files, depending on which system you have:

- The ProDOS Filer on the *ProDOS User's Disk*
- DOS 3.3 COPYA
- The Apple IIc *System Utilities* disk

There are two levels of activity within AppleWorks, as Figure 1-1 illustrates. The bottom level of activity is performed by the Data Base, the Word Processor, and the Spreadsheet. At this level, you do the actual work on information, creating and reviewing it, changing it, and printing it.

At the top level, AppleWorks contains information about where you store your files and about your printer. It also controls files by moving them onto the **Desktop**—the area of the Apple computer's **random-access memory (RAM)** that you use to work with your files—and by saving the files for you after you've worked with them.

As AppleWorks administers the space on the Desktop, it warns you when you are running out of Desktop space, and it lets you move back and forth from one AppleWorks file to another.

Figure 1-1. *AppleWorks' Two Levels of Activities*

```
┌─────────────────────────────────────┐
│   AppleWorks Information Control      │
│                                       │
│        —file movement                 │
│        —where files are               │
│        —printer information           │
│                                       │
└─────────────────────────────────────┘
                    │
          ┌─────────────────────────────────────┐
          │ Information Work in Review/Add/Change │
          │                                        │
          │        —Data Base                      │
          │        —Word Processor                 │
          │        —Spreadsheet                    │
          │                                        │
          └─────────────────────────────────────┘
```
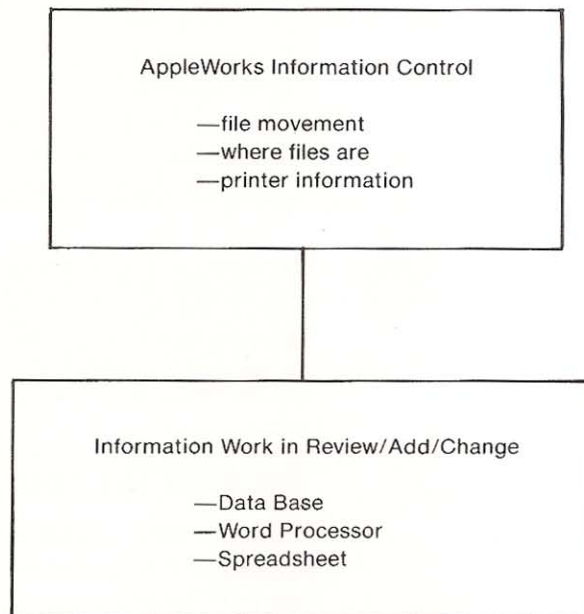
See Chapter 12 for complete cut and paste instructions.

AppleWorks also lets you transfer information from one file into another, an activity called **cut and paste**. You can cut and paste information into another file of the same type; for

example, you can cut and paste Data Base information into another Data Base file. You can also create Data Base and Spreadsheet reports and paste them into Word Processor documents.

When you cut and paste, you transfer information through the **clipboard**. The clipboard is an AppleWorks term that refers to an area of the computer's RAM used for cut and paste. Figure 1-2 shows a cut and paste operation.

Figure 1-2. *Cut and Paste*

Data Base File

Clipboard

Data Base File
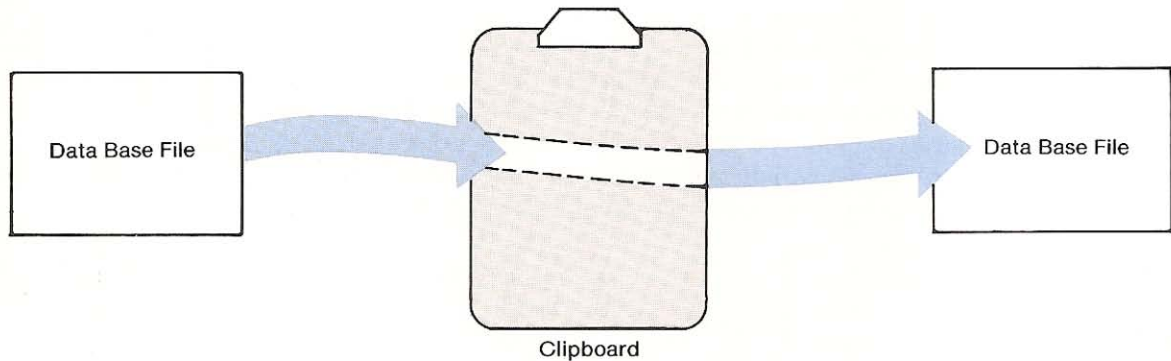
See "Quitting AppleWorks" in Chapter 2 for instructions on leaving AppleWorks safely.

Warning
Because the Desktop and the clipboard are actually a part of the memory of the computer, information in each place disappears when you turn off the power to the computer or when you leave AppleWorks by starting up another program. You should make sure you save new and changed files permanently before you leave AppleWorks.

Figure 1-3 is a flowchart of AppleWorks activities. It shows the options available from the Main Menu and from the Other Activities menu. Flowcharts specific to the Data Base, the Word Processor, and the Spreadsheet are in Chapters 3, 6, and 9, respectively.

Figure 1-3. *AppleWorks Flowchart*

Chapter 1: Understanding AppleWorks
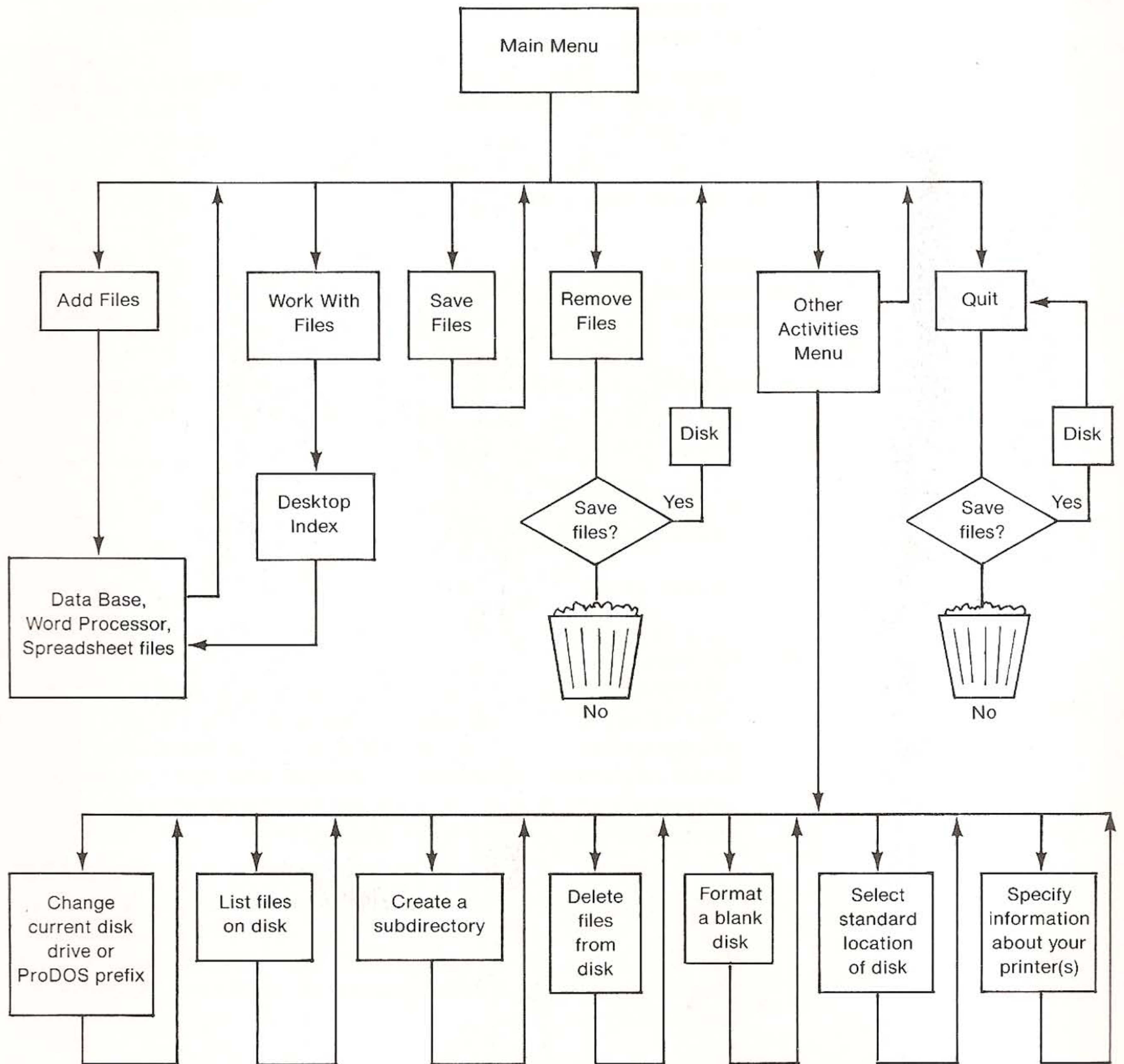
About AppleWorks Files

AppleWorks provides an enormous amount of flexibility both in the sources of files and in the guidelines for files. In addition, it keeps information on the storage location of your files so you don't have to always tell AppleWorks where to look when you want to use a file. This section tells all about file sources, guidelines, and storage locations.

File Sources

AppleWorks allows you to create files from scratch using the Data Base, the Word Processor, and the Spreadsheet. In addition, AppleWorks adds to your data management capability by letting you use files created by other programs. Then you can use AppleWorks' applications to work with these files. Figure 1-4 provides an overview of sources for AppleWorks files.

Figure 1-4. *Sources of AppleWorks Files*

The figure shows a clipboard containing three boxes: Data Base, Word Processor, and Spreadsheet, with circles around representing file sources (ASCII Files, Quick File Files, DIF Files, VisiCalc Files) connected by arrows labeled with Apple key commands (ᴳ-C, ᴳ-M, ᴳ-P).

Circles (top): ASCII Files, Quick File Files, DIF Files, ASCII Files. Boxes: Data Base, Word Processor, Spreadsheet. Labels: ⌘-C, ⌘-M, ⌘-P. Circles (bottom): DIF Files, VisiCalc Files, ASCII Files. Label: Clipboard.

Chapter 1: Understanding AppleWorks

- The keystrokes ⌨-P, ⌨-M, and ⌨-C are used to move files or parts of files from one area to another when you are using cut and paste.

Specific requirements for each type of file are listed in Chapters 4, 7, and 10.

- Text (ASCII) files can be sources for Data Base and Word Processor files. Text files are files created by Apple Writer and some data base management systems.

- Quick File™ files can be sources for Data Base files.

- DIF™, or Data Interchange Format, files can be sources for Spreadsheet and Data Base files. DIF files are created by VisiCalc® and many other programs; they allow for easy data interchange between programs.

- VisiCalc files can be sources for Spreadsheet files.

General Guidelines for AppleWorks Files

Table 1-1 contains general guidelines for AppleWorks files.

Table 1-1. General AppleWorks File Guidelines

File Feature	Guideline
Maximum number of AppleWorks files per flexible disk	Usually 51. Depends on size of files; up to 140K total characters
Maximum number of AppleWorks files per ProDOS subdirectory	130 if the subdirectory was made large enough. (The usual maximum is 51.)
Maximum number of AppleWorks files allowed on AppleWorks' Desktop	12
Guidelines for filenames	15 characters maximum. The name must start with a letter, and it can contain only uppercase and lowercase letters, numbers, spaces, and periods.

Space Available: Depending on the size of your computer's memory, the *space available* number you see in the lower-right corner of the display may be larger or smaller than that in the manual's illustrations.

By the Way: It's always best to give a unique name to each file, one that tells you as closely as possible what's in the file. Because of the freedom AppleWorks gives you in naming files, it's easy to describe the contents of a file in the filename.

File Locations

The AppleWorks program contains information about where it should look for your files. This storage location information is a combination of two different aspects:

- Whether the storage location is the standard location or the current location

- Whether you keep files by filename only, or whether you use a ProFile and/or group them logically by subdirectories.

This section explains both aspects.

Standard and Current Locations

See "Selecting the Standard Location of the Data Disk" and "Changing the Current Disk Drive or ProDOS Prefix" in Chapter 2 for information on changing file locations.

AppleWorks stores the information on disk that tells where it should always look for files at startup. This is the **standard location** of your files. When you first start up AppleWorks, the standard location is drive 1 (which is the built-in drive for the Apple IIc). If you use another disk drive for your AppleWorks files, you select that as the standard location.

You can override this standard location if you want by providing another, temporary, place where AppleWorks should look. This is the **current location** of files. AppleWorks saves the standard location from one session to the next, but it doesn't save the current location.

Chapter 1: Understanding AppleWorks

Files by Filename or Grouped by Pathname

If you store files by filename, you ordinarily keep them on a flexible disk in drive 1 or drive 2. So your standard or current location is drive 1 or drive 2. You can easily, efficiently, and happily operate AppleWorks and store files without giving another thought to dividing them into groups or storing them using another location. Just store files by filename on a disk in a drive. No problem!

Complete information about using ProDOS prefixes to identify files and about pathnames is in the *ProDOS User's Manual.*

However, because AppleWorks is based on ProDOS (Professional Disk Operating System), it uses a ProDOS system for naming and organizing files. This system allows you to logically and efficiently organize files. All AppleWorks users can use this system, whether they have ProDOS or DOS 3.3.

So, if you have a large number of files and/or you're using a ProFile to store files, you may want to group them by **subdirectories**. Subdirectories divide many files on one volume into logical groups. For example, you may want to keep personal letters and lists of names and addresses in separate directories.

In this case, you should set up a standard and/or current location, using the ProDOS prefix for the files. The ProDOS prefix consists of all the identifying information for the file except the filename, including the **volume name** and the subdirectory names. Examples of ProDOS prefixes are

/VOLUME3
/PROFILE/FINANCE
/LISTS/RECIPES

Occasionally, when you are writing certain reports on a disk, AppleWorks asks you for the **pathname** of the file. The pathname includes the ProDOS prefix and the filename. Examples of pathnames are

/VOLUME3/ADDRESSES
/PROFILE/FINANCE/BUDGET
/LISTS/RECIPES/OMELETTES

Working With AppleWorks

Chapter 2: Working With AppleWorks

Working With AppleWorks

This chapter presents general information about working with AppleWorks. It tells how to start up AppleWorks and how to interact with AppleWorks. It also includes instructions for using Main Menu and Other Activities menu options.

Starting to Use AppleWorks

Before you start using AppleWorks, be sure to copy the AppleWorks **Startup** disk and the **Program** disk. See "Copying Disks and Backing Up Files" in Chapter 1.

To start up AppleWorks, follow these steps:

If you want to start up AppleWorks from a ProFile, see Appendix A.

1. Put the AppleWorks *Startup* disk into drive 1 for the Apple IIe or the built-in drive for the IIc.

2. If the monitor is off, turn it on.

3. If the computer is off, turn it on. If it is already on, press (CONTROL)-(⌘)-(RESET). It takes several seconds for the computer to read the instructions on the *Startup* disk. Then AppleWorks asks for the *Program* disk.

4. Remove the *Startup* disk, insert the *Program* disk, and press
(RETURN). If you use your original *Program* disk rather than a
copy, or if you put the disk in drive 2, you see the message:
`Your copy of the AppleWorks PROGRAM disk`
`must be in drive 1. The write-protect`
`notch must be uncovered.` Then AppleWorks asks
for the date, which it uses when you save files during this
session.

5. Type today's date using the form shown on the screen.
Then press (RETURN). If you have a Thunderclock, first press
(RETURN) to accept the date. AppleWorks displays the Main
Menu.

By the Way: If you have a clock, check the year when you
first use AppleWorks. Correct it if it's wrong *and* when the
year changes.

▲ Warning

*If you are using one disk drive, AppleWorks asks you to switch
the Program disk and the data disks occasionally, whenever it
needs more instructions or more data. Switch the disks then,
but don't switch the disks unless AppleWorks asks you to.
AppleWorks always prompts you at the right time to change
disks.*

If you are using a second disk drive or ProFile for your data
disks, follow directions in "Selecting the Standard Location of
the Data Disk" in this chapter to let AppleWorks know where to
look for your data.

Communicating With AppleWorks

This section provides general information on communicating
with AppleWorks, information relating to your activities with
AppleWorks whether you are working with AppleWorks at the
top level or using the Data Base, the Word Processor, or the
Spreadsheet. It tells how to

- use Open-Apple commands

- respond to prompts

- type and edit information

Chapter 2: Working With AppleWorks

- use (ESC)
- use AppleWorks' Ruler.

Using Open-Apple Commands

Open-Apple commands are instructions to AppleWorks to use a special feature. They are always a combination of (Ć) and another key that reminds you of what you want to do. For example, the Help command is a combination of (Ć) and (?), which is written in this manual as (Ć)-(?). The Save command is a combination of (Ć) and (S), which is written in this manual as (Ć)-(S).

You always hold down (Ć) and press the other key lightly to give the command. Then release both keys.

Open-Apple commands usually mean the same thing whether you are using AppleWorks' Data Base, Word Processor, or Spreadsheet. This means you don't have to learn a lot of new keystrokes when you change applications. The keys that go with (Ć) remind you of what you want to do, so they're easy to remember.

Responding to Prompts

This section tells how to respond to the four types of AppleWorks prompts: prompts that

- ask you to select an option from a menu
- ask you to select an answer to a question
- let you select files from lists
- ask you to type information.

Selecting a Menu Option

A menu, such as the Main Menu, illustrated in Figure 2-1, lists numbered options. You select an option in either of these two ways:

- Press (↑) and (↓) until the option you want is highlighted. Press (RETURN) to confirm your selection.
- Type the number of the option you want and press (RETURN).

After you select an option, its number is replaced by —>.

AppleWorks' **default option** is the option it thinks you'll choose. It's always highlighted, which makes it easy to select that option first.

Figure 2-1. *Main Menu*

```
Disk: Drive 1                              MAIN MENU
================================================================================

        ---------------------------
        |     Main Menu            |----------------------------------------
        |                          |                                       |
        |                                                                  |
        |   1.   Add files to the Desktop                                  |
        |                                                                  |
        |   2.   Work with one of the files on the Desktop                 |
        |                                                                  |
        |   3.   Save Desktop files to disk                                |
        |                                                                  |
        |   4.   Remove files from the Desktop                             |
        |                                                                  |
        |   5.   Other Activities                                          |
        |                                                                  |
        |   6.   Quit                                                      |
        |                                                                  |
        --------------------------------------------------------------------

        --------------------------------------------------------------------
Type number, or use arrows, then press Return          A-? for Help
```
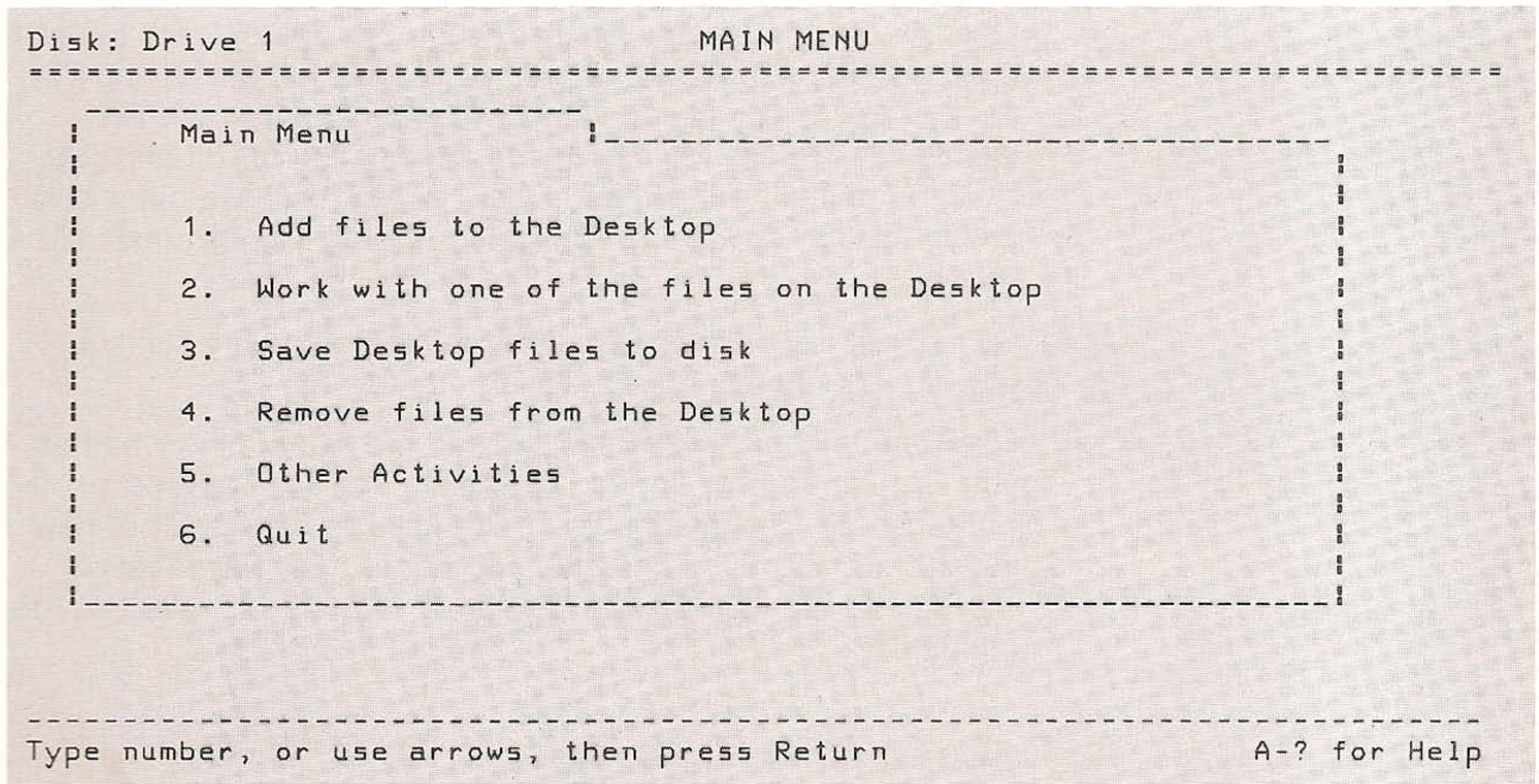
Selecting an Answer to a Question

Sometimes AppleWorks provides several answers to questions and expects you to select one. For example, the following question asks whether you want to print from the beginning of the document, from the beginning of the current page, or from the cursor position:

```
Print from? Beginning This page Cursor position
```

Your three possible responses are Beginning, This page, or Cursor position. To select a response:

- Choose the highlighted answer by pressing (RETURN).

- Choose one of the other answers by using (→) to highlight the answer and then pressing (RETURN).

- Type the first letter of any response, such as b, t, or c.

Chapter 2: Working With AppleWorks

Choosing Files From Lists

AppleWorks presents lists of files from which you choose one or more:

- When you ask for files for the Desktop, you get the list of AppleWorks files on the current disk. Figure 2-2 illustrates such a list.

- When you ask to save files or remove files from the Desktop, you get a list of files on the Desktop.

- When you ask to delete files from the current disk, you get a list of all the files on your disk, not just AppleWorks files.

Here's how to choose files from lists:

- To choose one file from a list, use ⊙ and ⊙ to highlight the file's name. Then press (RETURN).

- To choose more than one file from a list:

  1. Use ⊙ to move the highlight to a file you want. Then use ⊙ to mark the name of the first file.

  2. Use ⊙ to highlight the next file you want and mark its name with ⊙.

  3. Continue to use ⊙ and ⊙ to mark files.

  4. Use ⊙ or ⊙, and then ⊙ to remove arrows if you choose a file by mistake.

  5. Press (RETURN) after you mark all the files that you want.

If you are choosing files by marking their names with arrows, the highlighted file isn't chosen *unless* it has an arrow.

Figure 2-2. *List of AppleWorks Files*

```
Disk: Drive 1              APPLEWORKS FILES             Escape: Add Files
========================================================================
     -------------------------------
   ! |    Main Menu            !-------------------------------------------
   ! -------------------------------                                      !
   ! !     Add Files           !--------------------------------------!--
   ! !  -----------------------------                                  !
   ! ! !    AppleWorks files   !---------------------------------!--
   ! ! ! Disk volume /SAMPLES has 118K available                      !
   ! ! !     Name         Type of file    Size    Date     Time       !
   ! ! ! =========================================================    !
   ! ! ! Moms Bulletin    Word Processor   4K    3/20/84               !
   ! ! ! Organic Pies     Data Base        3K    3/20/84               !
   ! ! ! Organic Growth   Spreadsheet      3K    3/20/84               !
   ! ! ! Our Budget       Spreadsheet      5K    3/20/84               !
   ! ! ! Personal Worth   Spreadsheet      3K    3/20/84               !
   ! ! !                                                               !
   ! ! !                                                               !
   !_! !                                                               !
     ! !                                                               !
     !_!                                                               !
       !                                                               !
------------------------------------------------------------------------
Use Right Arrow to choose files, Left Arrow to undo       30K Avail.
```

Answering Questions by Typing Information

Certain AppleWorks questions ask you to type information in response. For example, when you are creating a new file, AppleWorks asks you to type the name of the new file:

`Type a name for this new file:`

The guidelines that apply when you're answering questions like this are in the next section.

Typing and Editing Information: General Guidelines

This section contains general guidelines for typing and editing AppleWorks information. It describes how to use AppleWorks' two cursors and how to delete information. Specific instructions for typing and editing in the Data Base, the Word Processor, and the Spreadsheet are in Chapters 4, 7, and 10, respectively.

Chapter 2: Working With AppleWorks

Using AppleWorks' Two Cursors

AppleWorks has two cursors:

- The blinking bar is the insert cursor. When you see this cursor, whatever you type is inserted at the cursor position. The characters to the right of the cursor are moved further to the right.

- The blinking rectangle is the overstrike cursor. When you see this cursor, whatever you type replaces the character under the cursor. However, existing carriage returns move to the right.
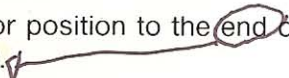
After you type the date when you first start up AppleWorks, you see the insert cursor. Change between the two cursors any time with (ᵹ)-(E) (for edit).

AppleWorks Tip

Some AppleWorks users find it easier to use the overstrike cursor to type new information, as well as to replace existing information.

Deleting Information

There are two ways to delete one or several characters:

- To delete a few letters or numbers, one at a time, use (DELETE). Each time you press (DELETE), one character to the left of the cursor is deleted.

- To delete from the cursor position to the end of an entry or line, press (CONTROL)-(Y).

Instructions for deleting larger groups of information are in the chapter relating to each specific application.

Escaping

(ESC) is AppleWorks' bailout key. When you press (ESC), you return to the previous display or erase your response to a prompt.

When you have the Main Menu displayed and you press (ESC), you return to the last file you were using unless you saved files or used one of the Other Activities menu options in the meantime. Then AppleWorks does not save the name of the file you were last using.

Whenever you get to a place you don't want to be, just press (ESC) and you return to the previous display.

Using AppleWorks' Ruler

AppleWorks' Ruler divides a file into eight approximately equal parts and then lets you move through the file by parts. If you add information to the file or delete information, the size of the parts changes.

The Ruler is a combination of (ᘓ) and (1) through (9). It works whether you are using a Data Base, a Word Processor, or a Spreadsheet file.

Using Main Menu Options

This section tells how to use AppleWorks' Main Menu options, including

- Adding files to the Desktop
- Working with one of the files on the Desktop
- Saving Desktop files to disk
- Removing files from the Desktop
- Quitting

Adding Files to the Desktop

To add files to the Desktop:

1. Make sure you have the Main Menu displayed. If you don't, you can get it by pressing (ESC) one or more times.

2. Choose Add files to the Desktop. AppleWorks displays the Add Files menu, which is illustrated in Figure 2-3.

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Figure 2-3. Add Files Menu

```
Disk: Drive 1                    ADD FILES              Escape: Main Menu
========================================================================

   .----------------------------.
   :      Main Menu             :.----------------------------------.
   :  .-------------------------:----------------------------------.:.
   :  :      Add Files          :.----------------------------------.:.
   :  :                                                              :
   :  :     Get files from: ---7 same as retrieve file               :
   :  :                                                              :
   :  :     1.  The current disk: Drive 1                            :
   :  :     2.  A different disk                                     :
   :  :                                                              :
   :  :     Make a new file for the:                                 :
   :  :                                                              :
   :  :     3.  Word Processor                                       :
   :  :     4.  Data Base                                            :
   :  :     5.  Spreadsheet                                          :
   :  :                                                              :
   :--:                                                              :
      :                                                              :
      .--------------------------------------------------------------.
 -----------------------------------------------------------------------
Type number, or use arrows, then press Return              30K Avail.
```

3. Choose an option from the Add Files menu.

If you choose Get files from the current disk, AppleWorks presents a list of AppleWorks files on the disk. The names of the files are listed alphabetically by type. Besides the filename, you see the size of the file in thousands of characters, and the date (and time, if your Apple computer has a system clock) the file was last saved. The list can contain up to 130 filenames. If there are more than ten files in the list, you see more at the bottom of the screen. Press ⊙ to see the rest of the list.

If you choose Get files from a different disk, AppleWorks asks you to choose the location of the files. After you do, you get the list of AppleWorks files for that disk.

If you choose any of the Make a new file options, AppleWorks asks if you want to make a file from scratch or from an existing file.

Specific directions for making new files are in "Creating a Data Base File" in Chapter 4, "Creating the Document" in Chapter 7, and "Creating the Worksheet" in Chapter 10.

AppleWorks Tip

Sometimes AppleWorks can't find a disk in a drive. Perhaps you haven't closed the door of the disk drive, you inserted a disk that doesn't have AppleWorks files on it, or the disk is in a location other than the one displayed in the top-left corner of the screen. When AppleWorks can't find AppleWorks files in the disk drive, it tells you so. You can check for the reason and then ask AppleWorks to look for the files again in the same location or in a different location.

4. To choose one file from the list, use ⊕ and ⊕ to highlight the file you want. Then press (RETURN).

5. To select several files, use ⊕ and ⊕ to mark the files you want. Then press (RETURN).

If you try to add a file that is already on the Desktop, AppleWorks asks if you really want to do that. If you answer yes, AppleWorks adds the second copy of the file to the Desktop. (You may want to rename one of the two copies.)

After AppleWorks adds two or more files at once to the Desktop, it displays a message telling you how many files have been added. Now either press (ᑕ)-(Q) to get the Desktop Index or press (SPACE) to return to the ADD FILES menu.

By the Way: AppleWorks won't let you add more than 12 files to the Desktop. Neither will it let you add files that take up more than the available Desktop space. AppleWorks displays a message if you try to do either one.

Working With One of the Files on the Desktop

To select one of the files on the Desktop to work with:

1. Make sure you have the Main Menu displayed. If you don't, you can get it by pressing (ESC) one or more times.

2. Choose Work with one of the files on the Desktop. AppleWorks displays the Desktop Index.

3. Choose the file you want to work with. AppleWorks displays that file with the cursor in the same place it was when you last worked with the file, so you don't lose your place when you leave a file.

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If there is only one file on the Desktop, AppleWorks displays that file immediately, skipping the Desktop Index.

> **AppleWorks Tip**
>
> (ᶜ)-(Q) gets you the Desktop Index from anywhere in AppleWorks.

Saving Desktop Files to Disk

Sometimes you want to save one or more files to disk but keep them on the Desktop so you can continue to work with them. When you save a changed file, AppleWorks saves it to disk before it deletes the original file. That is, it doesn't just replace the old file with the changed file until the changed file is successfully saved. This is a safety feature to make sure you don't lose your original file before the new one is saved. There must be enough room on the disk for AppleWorks to save the changed file.

Here's how to save a file:

1. Make sure you have the Main Menu displayed. If you don't, you can get it by pressing (ESC) one or more times.

2. Choose Save Desktop files to disk. AppleWorks displays the SAVE FILES menu, illustrated in Figure 2-4.

Figure 2-4. *Save Files Menu*

```
Disk: Drive 1                        SAVE FILES                  Escape: Main Menu
================================================================================

       ----------------------------------------
       :     Main Menu                          :-------------------------------------
       :  ------------------------------------  :                                    :
       :  :   Save Files                        :-----------------------------------:--
       :  :   Name                  Status      :Document type   Size              :
       :  :   =======================================================================
    ---:--:--Car Letter            Changed      :Word Processor   2K               :
       :  :   Car Contacts          Changed      :Data Base        1K               :
       :  :                                      :                                  :
       :  :                                      :                                  :
       :  :                                      :                                  :
       :  :                                      :                                  :
       :  :                                      :                                  :
       :  :                                      :                                  :
       :  :                                      :                                  :
       :  :                                      :                                  :
       :  :                                      :                                  :
       :  :                                      :                                  :
       :  :                                      :                                  :
       :  :__:                                   :                                  :
       :                                         :                                  :
       :------------------------------------------------------------------------------:
       
    --------------------------------------------------------------    ---------------
Use Right Arrow to choose files, Left Arrow to undo                   30K Avail.
```

The last file you used is highlighted.

The status of the file: whether it's new, changed, unchanged, or saved.

The type of file: whether it was created by the Word Processor, the Data Base, or the Spreadsheet.

The size of the file, in thousands of characters.

Space Available: Depending on the size of your computer's memory, the *space available* number you see on the display may be larger or smaller than that in the manual's illustrations.

3. Use (↓) to choose the file you want to save. Then press (RETURN).

Or use (↓) and (→) to highlight more than one filename. Then press (RETURN).

4. AppleWorks asks if you want to save the file on the current disk or on a different disk or directory.

- If you choose the current disk, you specify whether you want to replace the old file with the new, unchanged file or save the file with a different name. Then you type the new name of the file and press (RETURN).

- If you choose to save the file on a different disk or directory, you have to specify which disk or directory.

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Removing Files From the Desktop

When the Desktop is too full, you can remove files from the Desktop. When you remove an unchanged file, you won't be asked first if you want to save it. It is immediately removed.

To remove files from the Desktop:

1. Make sure you have the Main Menu displayed. If you don't, you can get it by pressing (ESC) one or more times.

2. Choose Remove files from the Desktop. AppleWorks displays the Remove Files menu, which is illustrated in Figure 2-5.

Figure 2-5. Remove Files Menu

```
Disk: Drive 1                    REMOVE FILES              Escape: Main Menu
============================================================================
    ----------------------------------
    !    Main Menu            !------------------------------------------!
    --------------------------                                           !
    !  !    Remove Files      !--------------------------------------!__
    !  !    Name                 ┌ Status   ┌ Document type  ┌Size      !
    !  !                         =======================================  !
    !  !    Car Letter           Changed    Word Processor   2K         !
    !  !    Car Contacts         Changed    Data Base        1K         !
    !  !    User Group           Unchanged  Data Base        6K         !
    !  !                                                                !
    !  !                                                                !
    !  !                                                                !
    !  !                                                                !
    !  !                                                                !
    !  !                                                                !
    !__!                                                                !
    !                                                                   !
    !    -------------------------------------------------------------- !
    ----------------------------------------------------------------------
Use Right Arrow to choose files, Left Arrow to undo            30K Avail.
```

The status of the file: whether it's new, changed, unchanged, or saved.

The type of file: whether it was created by the Word Processor, the Data Base, or the Spreadsheet.

The size of the file, in thousands of characters.

3. Use (↓) to highlight the file you want to remove. Then press (RETURN). Or use (↓) and (→) to highlight more than one filename. Then press (RETURN).

4. What you do now depends on whether a file is new, changed, unchanged, or saved:

- If the file you designated is unchanged or saved, AppleWorks immediately removes it and displays the Remove Files menu again.

- If the file you designated is new or changed, you can choose from these options:

  Remove the file and save it on the current disk;

  Change to another disk or directory, then save the file there;

  Throw out the file with its changes. Then AppleWorks asks you if you really want to permanently erase from the Desktop the file you designated. This is a precautionary measure to make sure you don't erase a file by mistake.

  If you change your mind and decide you don't want to permanently erase the file, choose No. If you want to permanently erase the file, choose Yes. AppleWorks takes you back to the Main Menu.

Quitting AppleWorks

There are two ways to leave AppleWorks. One is safer than the other! The unsafe way is to just turn off your Apple computer. Or start up another program. If you choose this method, you may lose information you should have saved.

Here's the safe way to leave AppleWorks:

1. Make sure you have the Main Menu displayed. If you don't, you can get it by pressing (ESC) one or more times.

2. Choose Quit.

3. Choose Yes. (No gives you a chance to change your mind.)

4. AppleWorks then asks you how to take care of all the new and changed files on the Desktop, one by one. You can choose to

- Save files on the current disk.

- Change to a different disk or directory. Then you designate the other disk or directory.

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- Throw out the file. Then AppleWorks asks you if you really want to throw out the file you designated. This is a precautionary measure to make sure you don't erase a file by mistake.

  If you have made a mistake and don't want to throw out the file, choose No. AppleWorks presents the three options again.

  If you want to throw out the file, choose Yes. AppleWorks asks you then how to take care of the next new or changed file on the Desktop.

5. If a file is changed, AppleWorks asks you if you want to replace the old file with the changed one or save it with a new name. If you choose the second option, type the new name and press (RETURN).

Warning

Using the Quit option to leave AppleWorks ensures that you will always at least think about saving new or changed files before you quit using AppleWorks.

After you choose Main Menu option 6 to quit AppleWorks and you take care of all new and changed files, AppleWorks displays a ProDOS prompt as follows:

ENTER PREFIX (PRESS "RETURN" TO ACCEPT)

/APPLEWORKS

If you aren't running programs from a ProFile, it's easy to start up another application. Just insert the startup disk and press (á)-(CONTROL)-(RESET). If you are running programs from a ProFile, follow these steps:

Press (RETURN) to continue using the present volume. If you want to set the prefix to some other volume name where the program you wish to run is located, type the new volume name and press (RETURN). For example, you might type /PROFILE, which is the volume name of your ProFile.

After you press (RETURN), the display clears and you see this prompt:

ENTER PATHNAME OF NEXT APPLICATION

Now type the name of the program (in the volume you set above) that you want to run. For example, if you have the Filer program on your ProFile, you can just type `Filer` to cause it to run.

Using Other Activities Menu Options

This section tells how to use the options available from AppleWorks' Other Activities menu, including

- Changing the current disk drive or ProDOS prefix
- Listing all files on the current disk
- Creating a subdirectory
- Deleting files from disk
- Formatting a blank disk
- Selecting the standard location of the data disk.

The last Other Activities menu option, `Specify information about your printer(s)`, is described in Chapter 13.

Changing the Current Disk Drive or ProDOS Prefix

When you want to make a temporary change to the location where AppleWorks automatically looks for files, you can specify a current location. That lets you change to a different disk drive. Or you can specify a ProDOS prefix so AppleWorks looks in another location, perhaps in a subdirectory on a ProFile, for files. This change lasts until you quit AppleWorks or until you change it again, whichever comes sooner.

Any time you change the standard location by using Other Activities menu option 6, the current location changes automatically to that value.

Here's how to make the change:

1. Make sure you have the Main Menu displayed. If you don't, you can get it by pressing (ESC) one or more times.

2. Choose `Other Activities`.

3. Choose `Change current disk drive or ProDOS prefix`. AppleWorks displays the `CHANGE CURRENT DISK` menu.

4. Choose the device you want.

5. Type the ProDOS prefix if you chose `ProFile or other ProDOS directory`.

> **AppleWorks Tip**
>
> AppleWorks does not check the validity of ProDOS prefixes when you change the current location. If AppleWorks can't find the location when you ask for files or try to save files, it asks you whether to try again or to try in a different location.

Listing Files on the Current Disk

It's handy to be able to get a list of all files (up to 130) on the current disk, not just AppleWorks files. Here's how:

1. Make sure you have the Main Menu displayed. If you don't, you can get it by pressing (ESC) one or more times.

2. Choose `Other Activities`.

3. Choose `List all files on the current disk drive`. AppleWorks displays the list, with AppleWorks files first and other files listed alphabetically at the bottom and designated as `Other` or `Subdirectory`. If the list contains more than ten files, you see `more` at the bottom of the display. Use (↓) to see the rest of the list. To see the list of files in a subdirectory, change the current location to a ProDOS prefix that includes the subdirectory name.

4. Press (ESC) to return to the Other Activities menu.

Creating a New Subdirectory

You can create a new subdirectory on the current disk or on a ProFile. Subdirectories group files on a volume logically. Here's how to create a new one:

1. Make sure you have the Main Menu displayed. If you don't, you can get it by pressing (ESC) one or more times.

2. Choose `Other Activities`.

3. Choose `Create a subdirectory`.

4. Type the complete pathname of the subdirectory. Then press `RETURN`. After AppleWorks creates the subdirectory, it reports `Success!`

Deleting Files From the Disk

Here's how to get rid of old files from your data disks or ProFile by deleting files:

1. Make sure you have the Main Menu displayed. If you don't, you can get it by pressing `ESC` one or more times.

2. Choose `Other Activities`.

3. Choose `Delete files from disk`. AppleWorks shows the `DELETE FILES` display, which lists all files on the current disk.

4. Use ⊕ to highlight the file you want to get rid of. Then press `RETURN`. Or use ⊕ and ⊖ to mark more than one filename. Then press `RETURN`. (Remember, you can unmark files with ⊖.)

Then AppleWorks asks if you really want to erase the file you designated. This is a precautionary measure to make sure you don't erase a file by mistake.

If you don't want to permanently erase the file, choose `No`. AppleWorks takes you back to the Other Activities menu or to the next file you chose.

If you want to permanently erase the file, choose `Yes`. AppleWorks takes you back to the `DELETE FILES` menu.

This activity also lets you delete a subdirectory if it contains no files.

Formatting a Blank Disk

To format a blank disk for use as a AppleWorks data disk or for use with other ProDOS applications:

1. Make sure you have the Main Menu displayed. If you don't, you can get it by pressing `ESC` one or more times.

2. Choose `Other Activities`.

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3. Choose Format a blank disk. AppleWorks asks you to type the volume name for the disk. The volume name can contain up to 15 letters, numbers, and periods, with no spaces. It must begin with a letter. Press (RETURN) after you type the name.

4. Make sure the disk is in the current drive. Press (SPACE) when you are ready to format.

After AppleWorks formats the disk it reports Success!

▲ **Warning**
AppleWorks formats disks in ProDOS format, which is not the same as DOS format. Use ProDOS-formatted disks for AppleWorks and other ProDOS applications. Use DOS-formatted disks with DOS systems. You can't use DOS-formatted disks with AppleWorks.

Note: You can't use AppleWorks-formatted disks to make startup disks.

Selecting the Standard Location of the Data Disk

The standard location of the data disk is where AppleWorks looks for files when you first start up and until you specify a current, different location. This information is saved from one session to the next.

When you first start up AppleWorks, the standard location is drive 1 (which is the built-in drive in the Apple IIc). Select a different standard location if you are using a drive other than drive 1 for your data disks.

Here's how to select the standard location:

1. Be sure you are at the Main Menu. If you're not, press (ESC) one or more times to get there.

2. Choose Other Activities.

3. Choose `Change standard location of data disk`. AppleWorks presents the Standard Data Disk display, which allows you to name a disk drive or ProFile or other ProDOS directory as the standard location.

4. If you chose ProFile or other ProDOS directory, AppleWorks asks you to type the ProDOS prefix. After you press (RETURN), AppleWorks displays the Other Activities menu again.

When you change the standard location, the current location changes automatically to the new standard location.

AppleWorks Tip

Initially, the standard location for disks is drive 1. If you are using any other location for AppleWorks data, such as drive 2 or a ProDOS prefix, select a new standard location. Selecting the standard location is probably a one-time only task.

Using Special Features

This section tells how to use AppleWorks' special features, including

- Asking for help
- Moving back and forth between files
- Saving the file you're using
- Printing a copy of the screen display
- Keeping track of available Desktop space.

Chapter 2: Working With AppleWorks

Asking for Help

Whenever ⌘-? for Help appears in the bottom-right corner of the display, you can get help information. To display help information:

1. Press ⌘-⟨?⟩. AppleWorks displays the help information.

2. Use ⟨↓⟩ and ⟨↑⟩ to move the information displayed so you can see all of it.

3. Press ⟨ESC⟩ to leave the help information and return to where you were.

Moving Back and Forth Between Files

When you want to change to another file on the Desktop, press ⌘-⟨Q⟩ (for quick change). AppleWorks presents the Desktop Index, from which you can choose the file you want. The Desktop Index is available from anywhere in AppleWorks, so use it any time to get to the file you want. The file type is shown in abbreviated form after the filename.

Saving the File You're Working On

Any time you want, you can save the file you're working on at the moment. To do so, press ⌘-⟨S⟩. AppleWorks saves the file immediately on the current disk. It replaces the original file by that name, if there is one. As it saves the file, it displays the index cards that show the save procedure. Then it returns you to the Review/Add/Change display of the file.

If you decide to stop this operation while it is still in progress, press ⟨ESC⟩. Your original file is still on the disk.

This is probably the easiest and fastest way to make sure you don't lose information as you work with AppleWorks. It's a good idea to do it every 15 minutes or so.

Printing a Copy of the Display

To print a copy of what's displayed on the screen, press (⌘)-(H) (for hard copy). Before you do, however, you should make sure the printer designated for hard copies is the one you want.

You can print a copy of the display any time you are using AppleWorks. This feature can help you keep a written record of what Data Base report formats and customized record layouts look like, and what printer options are in effect.

Keeping Track of Available Desktop Space

Whenever you want, you can find out how much Desktop space is available for files. To do so, you get the Available Space sign at the bottom-right corner of the screen by pressing (⌘)-(?) whenever (⌘)-? for Help appears at the bottom-right corner of the screen. The Available Space sign tells how much space is available in thousands of characters, or kilobytes (K).

The Available Space sign usually appears in the bottom-right corner of the screen whenever (⌘)-? for Help does not.

Understanding the Data Base

Understanding the Data Base

AppleWorks' Data Base allows you to work with information you normally keep in lists: names and addresses, schedules, inventories. The Data Base makes it easy to organize the information, keep it current, and get copies of it whenever you want.

This chapter discusses the Data Base's two main functions, illustrates its flow of activities, and lists its file guidelines.

The Data Base's Two Main Functions

AppleWorks' Data Base performs two main functions, as Figure 3-1 illustrates. These two main functions are Review/Add/Change and Report.

Figure 3-1. *Data Base's Two Main Functions*

```
                        ┌─────────────────┐
                        │  Data Base File │
                        └─────────────────┘
                 ┌───────────────┴───────────────┐
        ┌────────────────────┐          ┌──────────────┐
        │ Review/Add/Change  │          │    Report    │
        └────────────────────┘          └──────────────┘
```
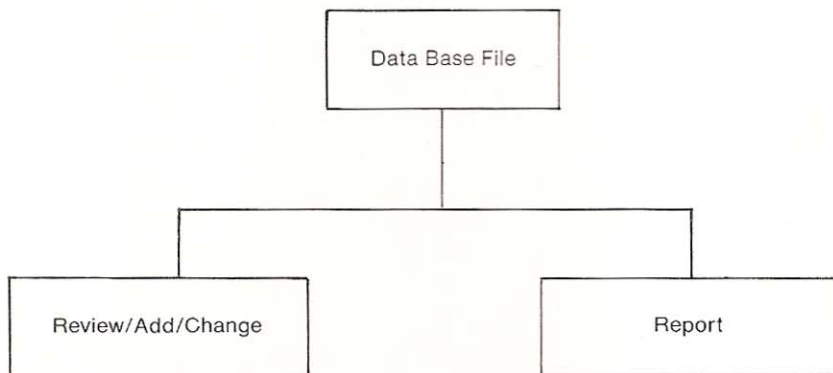
When you use Review/Add/Change, you work with information in a file to add new information, change incorrect information, and delete out-of-date or unnecessary information. You also use features that allow you to display only certain information, arrange records in the order you want them, and change the way information is displayed on the screen.

When you work in Report, you create and print reports. To create reports, you make a set of specifications that tell exactly what information you want to print and the way you want the information placed. You also specify calculations, subtotals, and grand totals.

The report specifications you make become part of the Data Base file but they do not change the information in the file. You save the specifications so you can print the report any time you want with current information.

As well as printing a report on a printer, you can *print* it to the clipboard to include in a Word Processor document.

Activity Flow

The activities that lead to Review/Add/Change and those included in Review/Add/Change are described in Chapter 4. Those that have to do with Report are described in Chapter 5.

Figure 3-2 shows your activities when you are using Data Base files.

Figure 3-2. *Flowchart of Data Base Activities*
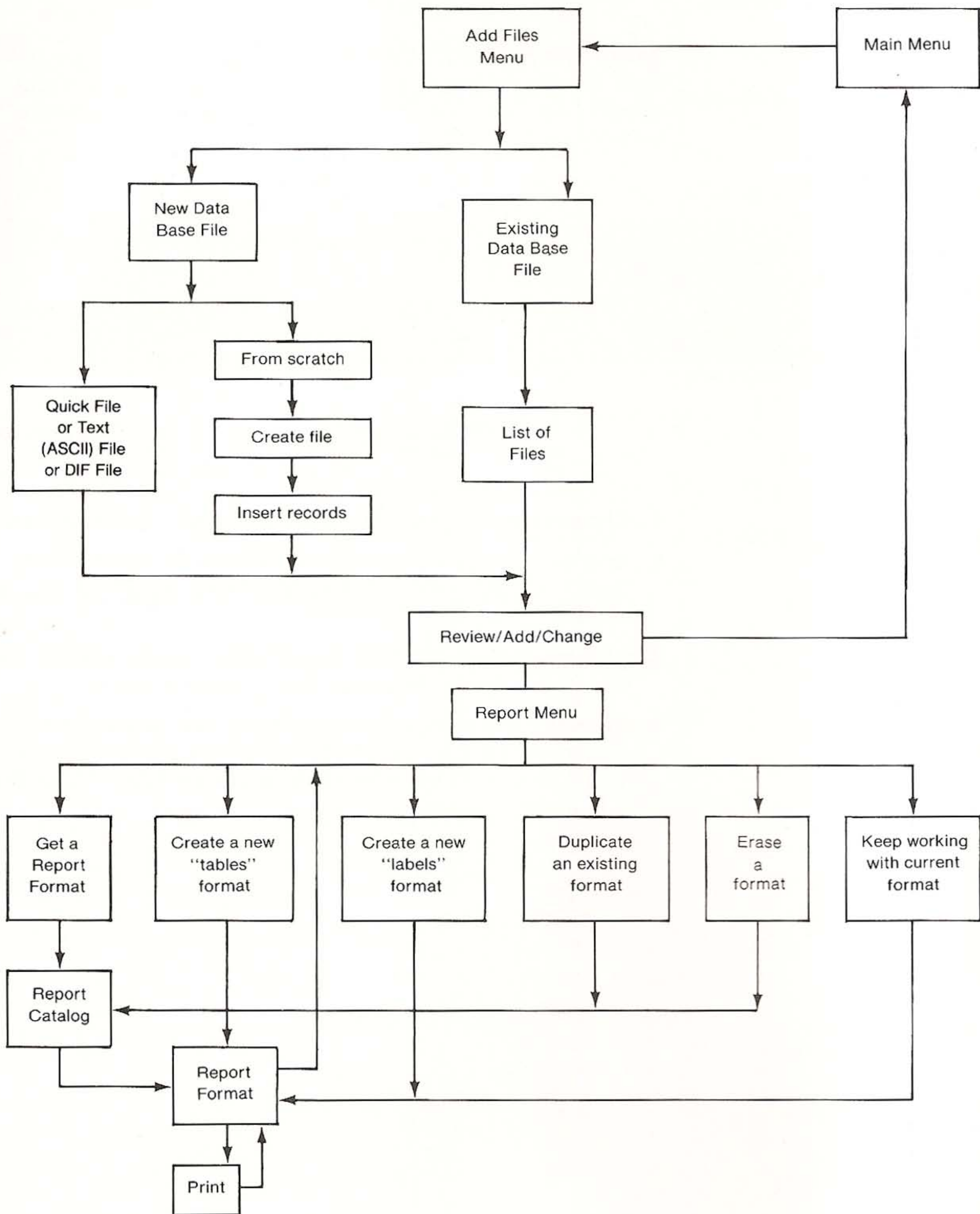
File Guidelines

Before studying Data Base file guidelines, you can review Data Base terminology by looking at Figure 3-3, which illustrates a sample Data Base file. The numbers refer to the explanations of terminology that follow.

Figure 3-3. Data Base Terminology

```
Item                              Item No.─────────────────┐   ┌──Cost
- - - - - - - - - - - - - - - -   - - - - - - - - - - -    │   │ - - - - - -
Courier 10 Printwheel──────────┐  FF3882                   │   │    6.95
Flip-top Disk File             │  FF1928                        39.00
Flexible Disk Carrying Case    ├──FF9711                        59.95
Flexible Disk Binder           │  DD2837                         6.95
                               │
 └─1                              2            4            3
```

1. **Characters** are letter or numbers. C and 1 are characters.

2. **Entries** are individual pieces of information within a Data Base file. `Courier 10 Printwheel` and `FF9711` are entries.

3. **Categories** are one kind of information within a Data Base file. `Item`, `Item No.`, and `Cost` are categories.

4. **Records** are all the information about one person or item in the file. All the information about the Courier 10 Printwheel is in one record. All the information about the Flip-top Disk File is in another record.

Working With Data Base Information

Table 3-1 lists guidelines for Data Base files.

Table 3-1. *Data Base File Guidelines*

File Feature	Guideline
Maximum number of records, no matter what the record size or number of categories	1350
Maximum number of records in a file assuming an average record size of 75 characters	Apple computer with 64K RAM: About 140 Apple computer with 128K RAM: About 750
Maximum number of categories per record	30
Maximum length of a record	1024 characters
Maximum length of an entry	76 characters
Maximum number of characters in a category name	20

Working With Data Base Information

The activities described in this chapter allow you to create Data Base files, browse through them, and keep information current. They also let you control what information is displayed and how it's displayed.

Creating a Data Base File

This section tells how to plan a new Data Base file and how to create a Data Base file from scratch, from a text (ASCII) file, from a DIF file, and from a Quick File file.

Planning a New Data Base File

When you plan a Data Base file, you first decide in general what the file should contain. That is, similar items of information logically belong together in a file. For example, your index of baseball cards belongs in one file, while your list of office inventory items belongs in another.

After you decide in general what the file should contain, you should analyze exactly what the similar items of information in the file have in common. For example, the items in the office inventory file probably have the following information in common: name of inventory article, date it was bought, where it was bought, original price, depreciated value, and warranty information. These become the **categories** in the file.
└─ field

Each office item has a **record** in the file. For example, your copy machine and your answering machine each has a record.
└─ form

So the file looks like that illustrated in Figure 4-1.

Figure 4-1. *Office Inventory File*

Item	DateBought	Where	DeprecVal	Price	Warranty
Copy Mach.	Jan 03 83	Fred's Off.Sup.	1500.00	2299.95	3 years
Answering Mach.	Nov 15 82	Sam's WholSl	0.00	159.95	1 year

Records   Entries   Categories

Creating the File

Follow these steps to create the file:

1. Choose `Add files to the Desktop` from the Main Menu.

2. Choose `Make a new file for the Data Base` from the Add Files menu.

3. Choose `From scratch, From a text (ASCII) file, From a Quick File file`, or `From a DIF file` from the Data Base menu.

From Scratch

Follow these steps if you're creating your file from scratch:

1. Type the name of the new file in response to `Type a name for this new file`. Filenames can be up to 15 characters long. They must begin with a letter, and they can contain uppercase or lowercase letters, numbers, periods, and spaces. Then press (RETURN).

2. Type the names of the categories in the file. Category names can be up to 20 characters long. Use the overstrike cursor to type over `Category` 1. Press (RETURN) after each category name, including the last.

3. Press (ESC) when you are satisfied with the filename and the category names. AppleWorks then tells you the file doesn't contain any information and that you can begin inserting new records by pressing (SPACE). The section "Records Into a New File" tells how to continue.

To correct the filename, press (↑) to return to the filename. Then retype it and press (RETURN).

Chapter 4: Working With Data Base Information

To correct category names:

- Press ⬆ to go to the previous category name.

- Press ⬇ to go to the next category name.

- Press ⬥-Ⅰ to insert a category name ahead of the one the cursor is on.

- Press ⬥-Ⓓ to delete a category name.

- Use the insert or the overstrike cursor to make corrections to category names.

After you correct the category name, press ⌜RETURN⌟.

AppleWorks Tip

Use category names that contain the words *date* and *time*, such as *Birthdate* or *arrivaltime*. Then AppleWorks converts entries in that category to standard date and time format.

It's easy to change a file's structure after you create it, and even after you create records for the file.

See "Using Dates and Times" in this chapter for more information about standard dates and times.

See "Changing a File's Structure" in this chapter for more information about how to change the structure of a file.

From a Text (ASCII) File

You can use a text (ASCII) file as the source of your AppleWorks Data Base file. Text files are files created by systems such as the Apple Pascal Editor when the environment is set to ASCII, Apple Writer, and some data base systems.

AppleWorks requires that

- Each entry in the file be on a separate line and followed by a carriage return

- Entries be grouped by record and in the same order throughout the file.

▲ **Warning**
You must convert text files on DOS disks to ProDOS with the ProDOS User's Disk before you can use them to make AppleWorks files.

Follow these steps to make a Data Base file from a text file:

1. If you chose `From a text (ASCII) file,` AppleWorks asks for the text file's **pathname**. Type the complete pathname and press (RETURN).

2. Type the number of categories each record will have and press (RETURN).

3. Type the AppleWorks name for the file. Filenames can be up to 15 characters long. They must begin with a letter, and they can contain uppercase or lowercase letters, numbers, periods, and spaces. Then press (RETURN).

Pathnames are discussed briefly in Chapter 1 of this manual and in the *ProDOS User's Manual.*

AppleWorks Tip

When you first get the text file, categories are named *Category 1* and so on. You can change the categories' names with the (⌂)-(N) command.

From a DIF File

You can use a DIF file—a file created by VisiCalc and other programs—as the source of a Data Base file. (AppleWorks' Spreadsheet also creates a DIF file when you choose the print option that lets you print to a DIF file.) When you first create the DIF file, however, use the C, or *column-wise* option. Then all information for one record is automatically grouped together.

Warning
You must convert text files on DOS disks to ProDOS with the ProDOS User's Disk before you can use them to make AppleWorks files.

Follow these steps to make a Data Base file from a DIF file:

1. If you chose `From a DIF file,` AppleWorks asks for the file's pathname. Type the complete pathname and press (RETURN).

2. Type the AppleWorks name for the file. Filenames can be up to 15 characters long. They must begin with a letter, and they can contain uppercase or lowercase letters, numbers, periods, and spaces. Then press (RETURN).

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From a Quick File File

You can use a Quick File file as the source of a AppleWorks
Data Base file, too. Here's how:

1. If you chose `From a Quick File file`, AppleWorks
   gets the Quick File file catalog from the disk in the current
   drive.

2. Select the Quick File file you want.

AppleWorks adds the file to the Desktop, and you're on your
way.

Single- and Multiple-Record Layouts

You work with records in Data Base files in two different
formats: single-record layout, and multiple-record layout. You
can change from one record layout to the other whenever you
want to see how your records appear in the other format.

Single-Record Layout

The **single-record layout** contains all the information in *one*
record. This information, listed vertically by category, includes
all the categories that you chose for this Data Base file.

Single-record layout displays records one at a time, so you use
it to insert information when you are making new records.
Figure 4-2 shows a sample single-record layout.

Figure 4-2. *Single-Record Layout*

```
File: User Group            REVIEW/ADD/CHANGE            Escape: Main Menu

Selection: All records


Record 1 of 30
=================================================================================
First Name: Paula
Initial: E.
Last Name: Tuerk
Tel. No.: 555-0110
St. Address: 1423 Lochner Dr.
City: Plains
State: TX
Zip: 77480
Computer: II
Date Joined: Apr  8 81
Occupation: Artist, designer
Special Interest: Landscaping
Etc.     : Has data base of impressionist art


--------------------------------------------------------------------------------

Type entry or use A commands                            A-? for Help
```

Multiple-Record Layout

Multiple-record layout shows up to 15 of the records in your Data Base file at once. It does not, however, include all the categories that you defined but only those that you choose to display. Each record appears horizontally in one row with the appropriate information beneath the category name at the top of each column.

In multiple-record layout you can browse through all your records, position the cursor on a particular record, and then press (ó)-(Z) to zoom in to single-record layout to see the details of that record. You can also use multiple-record layout when you want to rearrange the categories in your file, or when you want to change a number of entries in the same category.

Figure 4-3 illustrates a multiple-record layout from the same file shown in Figure 4-2.

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Figure 4-3. *Multiple-Record Layout*

```
File: User Group            REVIEW/ADD/CHANGE           Escape: Main Menu

Selection: All records


First Name Init Last Name   Tel. No.   St. Address      City            State
=============================================================================
Paula      E.   Tuerk       555-0110   1423 Lochner Dr. Plains          TX
Lana       B.   Hayder      555-0987   4473 E. Wimby Cr Scotts Valley   TX
Robert     C.   Lawton      -          20627 Sunrise    Plains          TX
Jacline    A.   Lasurdis    555-2736   210 Valmy        Scotts Valley   TX
Fred       H.   Manzini     555-2738   20 Linden Dr.    Scotts Valley   TX
Meg        -    Beeler      555-2948   449 S. San Onofr Scotts Valley   TX
Annie      F.   Oakley      555-2809   4839 Peony Ct.   Plains          TX
Homer      B.   Atkins      555-2938   1443 Valley Dr.  Plains          TX
Hardin     Fitz Simmons     555-3047   19376 Schubert C Scotts Valley   TX
J.         R.   Dermaly     555-3049   3888 S. First St Scotts Valley   TX
Horace     P.   Floriss     555-3284   13711 Newcomb Rd Scotts Valley   TX
Harry      T.   Johnson     555-3625   2704 Church St.  Scotts Valley   TX
Sam        E.   Jones       555-3635   1407 Mt. Eden Av Scotts Valley   TX
Scott      R.   Lorentz     555-3647   2183 McClellan R Scotts Valley   TX
Theodore   J.   Chu         555-3711   2100 Forest Ave. Scotts Valley   TX
-----------------------------------------------------------------------------
Type entry or use A commands                              A-? for Help
```

Zooming In and Out

Zooming in means changing from multiple- to single-record layout, and *zooming out* means changing from single- to multiple-record layout. You can usually see a complete entry in single-record layout whereas you may be able to see only part of it in multiple-record layout.

To change from multiple- to single-record layout, or vice versa:

1. Press ⌘-Z.

After you move from one layout to the other, you can move about through records by using the cursor movement keystrokes allowable in that layout.

■ Inserting Records

This section tells you how to insert records into a new file or into an existing file in single-record layout.

AppleWorks Tip

Use standard values to put the same information into every entry in most or all records.

Records Into a New File

After you create a new Data Base file, you can insert records into it. Follow these steps:

1. Press (ESC) after you set up the filename and the category names. AppleWorks tells you there are no records in the file and that you should press (SPACE) to begin inserting records.

2. Press (SPACE). AppleWorks presents the first blank record in single-record layout.

3. Type information for each entry and press (RETURN). Or just press (RETURN) if you want the entry to be blank. When you press (RETURN) after the last entry in the first record, AppleWorks presents the second blank record. Continue to create records until you are through.

4. Press (ESC) after you finish creating new records. AppleWorks presents the new records displayed in multiple-record layout.

AppleWorks Tip

You can make the information in an entry long enough so that it fits in the space next to the category name. Actually, an entry can be up to 76 characters long, almost the width of the screen, in single-record layout. You may not be able to see the whole entry in multiple-record layout, however, unless you change the multiple-record layout with (ú)-(L).

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Records Into an Existing File

You can insert records into an existing file from Review/Add/Change multiple- or single-record layout.

In Single-Record Layout

Here's how to insert records when you're in single-record layout:

1. Press (ᑌ)-(Ⅰ). AppleWorks presents a blank record in single-record layout. Type information into entries and press (RETURN) after each.

2. Press (RETURN) after you type information into the last entry in the first blank record. AppleWorks presents the second blank record.

3. Continue to create new records until you are through. Press (RETURN) after the last entry in the last new record. Then press (ESC). AppleWorks returns you to the place in Review/Add/Change where you were when you pressed (ᑌ)-(Ⅰ).

See "Arranging Records."

New records go immediately *before* the record the cursor is on when you press (ᑌ)-(Ⅰ). You can arrange records in the order you want them.

> **AppleWorks Tip**
>
> Pressing (ESC) while you are inserting records always returns you to the place in Review/Add/Change where you were when you began to insert records. If you were in single-record layout before you began inserting, you will return to single-record layout when you press (ESC). Then press (ᑌ)-(Z) to zoom out to multiple-record layout.
>
> You can insert new records at the end of a file, too. Move the cursor to the last record in the file. Then, press (ᑌ)-(Z) to zoom into the record in single-record layout. Press (ᑌ)-(↓) to get past this record. AppleWorks asks you if you want to insert new records. Choose Yes. AppleWorks presents a blank record.
>
> Changing the single-record layout makes it easier to add records because you can display categories and type in information in the same order and layout as your data input forms. Use (ᑌ)-(L) to change the record layout.

In Multiple-Record Layout

You can insert records in multiple-record layout, too, although you should make sure you get information into entries not displayed in this layout. To insert records in multiple-record layout, you first create blank records and then type information into them:

1. Press (ᯂ)-(I) when you are in multiple-record layout. AppleWorks displays a record in single-record layout.

2. Press (RETURN) to create blank entries in the record. Stop when the cursor is on the first entry in the second record.

3. Press (ᯂ)-(Z) to return to multiple-record layout.

4. Use (ᯂ)-(C) to make multiple copies of the blank record.

5. Whenever you want, type information into the blank entries. Press (RETURN) after each new entry. If you use the insert cursor, long entries slide to the right and under the next category entry, so entries are not limited in length by the catagory's column width.

If you are going to type information into entries in multiple-record layout, you may want to set the cursor so that it moves to the right instead of down when you press (RETURN). To do this, type (ᯂ)-(L), press (ESC), and choose Right.

Putting Information Into Entries

It's easy to type and edit information in Data Base entries and then use special Data Base features that let you create special entries. This section tells how. It includes instructions on

- typing and editing entries

- dittoing entries

- using standard values

- using dates and times

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Typing and Editing Entries

Here's how to add or edit information in your Data Base entries:

What You Want	What You Use
To type information into entries	Both cursors. The **overstrike cursor**, which is the blinking rectangular cursor, replaces information under the cursor. The **insert cursor**, which is the blinking bar cursor, puts information to the left of the character the cursor is on. Information to the right moves to the right.
To switch back and forth between cursors	(ᑕ)-(E)
To delete one character to the left of the cursor	(DELETE)
To confirm an entry	(RETURN)
To restore the former entry and move the cursor to the first character of the entry	(ESC)
To move the cursor past characters without changing them	(←) and (→)
To erase the rest of an entry starting from where the cursor is	(CONTROL)-(Y) and (RETURN) Pressing (RETURN) in the middle of an existing entry does not truncate the rest of the entry.
To insert characters into entries in multiple-record layout	The insert cursor If the entry becomes too long for the available space, the information to the right of the cursor slides under the entry in the next column.

Dittoing Entries

In multiple-record layout you can ditto, or copy, the entry above the one the cursor is on into the current entry just by pressing ⌘-" (do not press SHIFT). Existing entries are replaced by the entry above.

Using Standard Values

Standard values are values you create that AppleWorks automatically inserts in new Data Base records. After you create a standard value for a category, each new record's entry in that category gets the standard value until you enter a different value for it. Standard values save you time because you don't have to retype the same information again and again and correct mistakes along the way when you are inserting many records with the same data.

For example, when many people in your name and address file live in the same city, say, Chicago, then you would make Chicago the standard value for the city category. Chicago is the entry for the city category for each new record and you change the entry only for the records of people who *don't* live in Chicago.

Here's how to create standard values:

1. Make sure you are in Review/Add/Change or Insert New Records (⌘-I).

2. Press ⌘-V. AppleWorks presents a record with the standard values for categories that have them.

3. Type a standard value for a category. Then press RETURN. Type standard values for other categories if necessary.

4. Press ESC to return to Review/Add/Change or Insert New Records.

To remove a standard value, start from Review/Add/Change or Insert New Records. Press ⌘-V. Put the cursor on the category whose standard value you want to remove. Press CONTROL-Y and then RETURN. The standard value is removed.

Press ESC to return to Review/Add/Change or Insert New Records.

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Using Dates and Times

AppleWorks converts dates you type to a standard format if you make sure the category name contains the word *date*, as in *Date, Expiration Date, Date of Hire*. That is, all dates appear as three-letter months, one- or two-digit days, and two-digit years. Examples are Sep 4 83 and Nov 24 83.

When dates are in this standard format, AppleWorks' Arrange feature can easily arrange the records in a file by date. Table 4-1 shows some date entries that have been converted to standard format. They have already been arranged by date.

Table 4-1. *Dates Converted to Standard Format*

When You Enter	AppleWorks Converts To
May 3	May 3
5.3.71	May 3 71
3 83	Mar 83
6April83	Apr 6 83
May 1983	May 83
May 7, 1983	May 7 83
5-10-84	May 10 84
5/12/83	May 12 83
June 1983	Jun 83

Likewise, whenever a category name contains the word *time*, as in *Time*, or *StartTime*, or *TIME*, AppleWorks converts the times you enter to a standard format. Because AppleWorks is attuned to the business day, it assumes all times you enter to be within the business day without your having to enter the a.m. or the p.m. Table 4-2 shows some sample time conversions.

Table 4-2. *Times Converted to Standard Format*

When You Enter	AppleWorks Converts To
700	7:00 AM
1	1:00 PM
7	7:00 AM
12	12:00 PM
3	3:00 PM
659	6:59 PM

To enter a time and not have it be considered part of the business day, you should enter an a or a p.

When You Enter	AppleWorks Converts To
7 p or 7p	7:00 PM
12 a	12:00 AM
3 a	3:00 AM
659 a	6:59 A

When you don't enter the day, month, or year, AppleWorks automatically considers the entry as 00, and leaves that part of the entry blank. That's why, if you were to order records by date using the Arrange feature, Mar 83 would follow May 3. To AppleWorks they are May 3 00 and Mar 00 83.

The following dates won't be converted:

042783
42783
27483
Ap

AppleWorks converts 24-hour time to 12-hour time. Thus, when you enter 1300, AppleWorks converts it to 1:00 PM. When you enter 0001, AppleWorks converts it to 12:01 AM.

If you don't want dates or times converted, don't include *date* or *time* in the category name.

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Moving the Cursor

The cursor movement keystrokes that are common to multiple-record or single-record layout are listed in the first section. The ones that are specific to multiple-record layout are listed next, and then those specific to single-record layout.

Cursor Movement In Multiple- and Single-Record Layout

The chart below explains cursor movement options common to both multiple-record and single-record layout.

What You Want	What You Use
Move cursor to next entry	(TAB) when the cursor is on the first character of an entry
Move cursor to previous entry	(á)-(TAB) when the cursor is on the first character of an entry
Move the cursor to the right within an entry	(→)
Move the cursor to the left within an entry	(←)
Use AppleWorks' Ruler to move the cursor proportionally through a file	(á)-(1) through (9)
Move cursor down one category	(↓) when cursor is on the first character of an entry
Move cursor up one category	(↑) when cursor is on the first character of an entry

See "Using AppleWorks' Ruler" in Chapter 2 for a discussion of how the Ruler works.

Cursor Movement In Multiple-Record Layout

Here are additional cursor movement options you can use in multiple-record layout.

What You Want	**What You Use**
Move the cursor to the top of the display and then to the top of the previous screenful, or *page*, of records	(⌘)-(↑) To move quickly toward the beginning of a long file, screenful by screenful, hold down (⌘)-(↑).
Move the cursor to the bottom of the display and then to the bottom of the next screenful, or *page*, of records	(⌘)-(↓) To move quickly toward the end of a long file, screenful by screenful, hold down (⌘)-(↓).
Change the direction the cursor moves when you press (RETURN)	(⌘)-(L) then (ESC) Choose the direction in which the cursor should go.

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Cursor Movement In Single-Record Layout

Here are additional cursor movement options you can use in single-record layout.

What You Want	What You Use
Move the cursor to the next entry	⬇, TAB, or RETURN when the cursor is on the first character in an entry
Move the cursor to the previous entry	⬆ when the cursor is on the first character in an entry
Display the next record in a file, leaving the cursor in the same category	⌘-⬇
Display the previous record in a file, leaving the cursor in the same category	⌘-⬆

Deleting Records

To delete one or more records in multiple-record layout:

1. Put the cursor on a record you want to delete.

2. Press ⌘-D. AppleWorks highlights the record the cursor is on.

3. Use the arrow keys to highlight the other records you want to delete. After you highlight a record in multiple-record layout, you can use AppleWorks' cursor movement keystrokes to highlight more records. You can use ⌘-⬆ or ⌘-⬇ and the Ruler.

4. Press RETURN.

To delete one or more records in single-record layout:

1. Press ⌘-Z to zoom in to single-record layout.

2. Press ⌘-D

3. Choose No or Yes, depending on whether you want to delete the record displayed.

4. Continue to choose No or Yes as AppleWorks displays succeeding records.

5. Press (ESC) after you finish deleting.

AppleWorks Tip

Choose specific records to delete by using the Data Base's Find feature or by creating a record selection rule ((⌂)-(R)). Then use (⌂)-(D) for these records.

You can delete all the information in a file but keep its structure. Here's how: First, in single-record layout, create a blank record as the first record in the file. Second, move the cursor to the second record. Third, zoom out to multiple-record layout. Fourth, press (⌂)-(D). Then press (⌂)-(9) and (RETURN). All but the first record are deleted. (You can't delete every record in a file.) Now add new information.

Copying Records

You can copy one record one or more times, or you can copy a group of records.

Copying One Record

You can make one or more copies of a record in a Data Base file. For example, if many of your records have the same entries, you can make a number of copies of the record and then change the entries that are unique.

You can make copies of a record from Review/Add/Change multiple-record or single-record layout. Here's how:

1. Put the cursor on an entry in the record you want to make one or more copies of.

2. Press (⌂)-(C).

3. Choose Current record.

4. Type the number of copies you want and press (RETURN).

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Copying Groups of Records

When you copy groups of records, you use AppleWorks' clipboard to hold the records temporarily. The clipboard is used for cutting and pasting information. To make one or more copies of a group of records:

1. Make sure you are in multiple-record layout.

2. Place the cursor on the first record of the group to be copied.

3. Press (⌘)-(C).

4. Choose To clipboard (cut).

5. Use the arrow keys to highlight the records you want to copy.

6. Press (RETURN). The records are copied to the clipboard.

7. Move the cursor to the place in the file where you want the copied records to go.

8. Press (⌘)-(C).

9. Choose From clipboard(paste). The records are immediately copied from the clipboard.

Moving Records

When you move groups of records, you use AppleWorks' clipboard to hold the records temporarily. The clipboard is used for cutting and pasting information. To move a group of records:

1. Make sure you are in multiple-record layout.

2. Place the cursor on the first or last record of the group to be moved.

3. Press (⌘)-(M).

4. Choose To clipboard(cut).

5. Use the arrow keys to highlight the records you want to move.

6. Press (RETURN). The records are moved to the clipboard.

7. Move the cursor to the place in the file where you want the records to go.

8. Press ⌘-Ⓜ.

9. Choose `From clipboard(paste)`. The records are immediately moved from the clipboard.

Displaying Certain Records

By changing record selection rules or using the Find command, you can display only certain records from the file. You can then use other Data Base features with these records, features such as Delete, Arrange, and Cut and Paste.

Changing Record Selection Rules

When you first create a file, the record selection rule is `Selection: All records`. Thus, all records are displayed. You can change record selection rules so only records that meet the rule you specify are displayed.

To change the record selection rule:

1. Press ⌘-Ⓡ.

2. Choose the category you want to use as a basis for the selection. You can use any category, even one not displayed in the file's multiple-record layout.

3. Choose a comparison.

4. Type the value each entry in the specified category should be compared with (unless your choice is `is blank` or `is not blank` in step 3). Then press (RETURN).

5. Press (ESC) if your record selection rule is complete. AppleWorks displays all the records that meet the rule.

Or choose a connector: *and, or, through*. Then make up another record selection rule.

AppleWorks Tip

You can construct a record selection rule with one or two connectors.

Thus, you can display the records of all baseball players in your file who play for the Houston Astros *and* make over $75,000.00 a year. Or you can display the records of those whose batting average is over .300 *or* who drink lite beer.

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When you want to go back to Selection: All records:

1. Press ⌘-R.

2. Choose Yes to indicate that you want to display all records. AppleWorks displays all records again.

Finding Certain Records

You can ask AppleWorks to find all records that contain information you specify. The information may be in any category in a record and anywhere within an entry.

To find certain records:

1. Press ⌘-F.

2. Type the value you want AppleWorks to look for. AppleWorks displays the records that contain the value you provide.

3. Press ESC to return to Review/Add/Change.

AppleWorks Tip

The Find feature gives you a lot of flexibility in locating records because AppleWorks finds the records that contain the value regardless of where the value is. If you ask AppleWorks to find all records that contain *ace*, it will display the following two records:

```
Last Name First Name Off. Phone    Company    Title
--------------------------------------------------------
Bradshaw  Horace     408-174-3948 County      DA
Wilford   Winnifred  408-555-2938 Secretemps PlaceOfc
```

On the other hand, by providing record selection rules ((⌘-R)) that tell AppleWorks what to look for, you can be much more specific, because you can say exactly what category the value you provide should be found in.

Arranging Records

AppleWorks lets you arrange, or sort, records by the values of entries within a category. You can arrange records in alphabetical order from *A* to *Z* or *Z* to *A*, or in numeric order from *0* to *9* or *9* to *0*. And you can arrange records with standard dates or times in chronological or reversed chronological order.

To arrange records:

1. Move the cursor to any entry in the category by which you want your records arranged.

2. Press (⌂)-(A).

3. Choose the way you want the records arranged.

To arrange records by several categories: first arrange by the values in the least important category and then arrange by the values in the next most important category. You can arrange by any number of categories.

AppleWorks does not distinguish between uppercase and lowercase letters. Here is the order in which AppleWorks arranges values in a category. Read down these columns and then across.

SPACE	)	;	]
!	*	<	^
"	+	=	_
#	,	>	`
$	-	?	{
%	.	@	|
&	/	A-Z and a-z	}
'	0-9	[	
(	:	\	

Thus, these addresses	Would be arranged in this order
650 Banyan Street	#5 Downing Street
Periwinkle Drive	650 Banyan Street
#5 Downing Street	650-A Banyan Street
650-A Banyan Street	Periwinkle Drive

Changing the Record Layout

You can customize screen displays by changing the multiple- or single-record layout so that records are displayed exactly the way you want them. For example, you can lengthen or shorten columns or rearrange them to suit your needs. Changing the record layout does not change the file, only the way information is displayed.

Warning
When you change a file's structure by deleting or inserting a category, you lose all customized record layouts.

Changing the Multiple-Record Layout

Follow these steps to change the multiple-record layout:

1. Make sure you are in multiple-record layout.

2. Press ⌘-L. AppleWorks displays your options on top and three sample records on the bottom. The records are examples of how all the records will look after you make your changes.

3. Change the record layout, choosing from the following options:

What You Want	What You Use
Move the cursor to the next category	(→) or (TAB)
Move the cursor to the previous category	(←) or (⌘)-(TAB)
Switch the position of the category the cursor is on with the one on its right	(⌘)-(>) (You shouldn't use (SHIFT) for (>).)
Switch the position of the category the cursor is on with the one on its left	(⌘)-(<) (Again, no (SHIFT) allowed.)
Increase the width of the column the cursor is on	(⌘)-(→)
Decrease the width of the column the cursor is on	(⌘)-(←)
Delete the category the cursor is on from the multiple-record display. The information in this category stays in the record and continues to appear when you display the record in single-record layout.	(⌘)-(D)
Insert a previously deleted category just to the left of the category the cursor is on	(⌘)-(I)
	After you type (⌘)-(I), a list of previously deleted categories is displayed. Type the number of the category you want to reinsert and press (RETURN).

4. After you change the record layout so that the records are displayed the way you want them, press (ESC).

5. Choose the way you want the cursor to go when you press (RETURN) in Review/Add/Change multiple-record layout.

AppleWorks Tip
You may want to use all the above options until you see MARGIN appear on the right side of the screen. Then the width of the records will fit on the Review/Add/Change screen.

Changing the Single-Record Layout

A customized single-record layout often makes it easier to insert records into the file, because you can arrange categories to match the layout of your input forms. When you change the single-record layout, you just move categories around:

1. Zoom into single-record layout with (Ć)-(Z).

2. Press (Ć)-(L). AppleWorks displays the CHANGE RECORD LAYOUT screen.

3. Changing the single-record layout involves putting the cursor on the first letter of the name of the category whose position you want to change, and then moving the category.

What You Want	What You Do
To move the cursor	Press (←), (→), (↑), (↓), or (RETURN)
To move categories	Press (Ć)-(←), (Ć)-(→), (Ć)-(↑), or (Ć)-(↓)

4. Press (ESC) after you have customized the single-record layout.

Changing a File's Structure

AppleWorks lets you change the name of your Data Base file or the names of the categories in it. It also lets you change the structure of the file itself: you can add new categories at any time and delete categories you no longer need.

Suppose you have a Data Base file for every company you do business with. You keep reports of contacts with that company in the file: Date, Time, Name of Contact, Comments. After working with the file for a while, you decide you need another category, Follow Up, which will remind you of how you are supposed to follow up on the contact. It's easy to add this new category to your Data Base file.

The ability to change your Data Base files' structures is invaluable, because you can't always know ahead of time exactly how a file should be put together. So you can learn from your experience, and easily make required changes.

Warning
Changes to the filename or category names have no impact on customized record layouts and report formats. But inserted or deleted categories do; whenever you delete a category you lose your customized record layouts and your report formats.

It's to your benefit to change the file structure if you really want to add or delete categories and then recreate special record layouts and report formats. You may want to make a copy of record layouts and report formats by using ⌘-Ⓗ (for hard copy). Then they're easy to recreate.

Here's how to change the way a file is put together:

1. Make sure you are in Review/Add/Change for the file you want to change.

2. Press ⌘-Ⓝ. AppleWorks presents the CHANGE NAME/CATEGORY display, with the cursor at the bottom with the prompt Type filename.

3. Type the new filename and press (RETURN). Just press (RETURN) if you don't want to change it.

4. Use the following cursor movement keystrokes and special keys to fix the file:

What You Want	What You Do
Move cursor to previous or next category	Press (↑) or (↓).
Change a category name	Put the cursor on the category name you want to change.
	Use editing features to change the name of the category and press (RETURN).
Insert a new category	Put the cursor where you want the new category.
	Press (⌘)-(I).
	Answer Yes if there is a question whether you really want to set the custom record layouts back to standard.
	Type in the name of the new category and press (RETURN).
Delete a category	Put the cursor on the category you want to delete.
	Answer Yes if there is a question whether you really want to set the custom record layouts back to standard.
	Press (⌘)-(D).

5. Press (ESC) after you finish fixing the file.

AppleWorks Tip

If you add new categories, you probably will want to insert information into those categories. If the entries are short, you may find it easy to insert in multiple-record layout with the cursor going down after you press (RETURN). Then you can easily go from one record to another, inserting new information in each.

Chapter 4: Working With Data Base Information

Reporting With the Data Base

Chapter 5: Reporting With the Data Base

Reporting With the Data Base

This chapter tells all about reporting using the Data Base. It includes general information describing report styles, report formats, and the Report menu. It also tells how to create a tables-style report and a labels-style report and how to set printer options for reports.

Report Styles

AppleWorks lets you create **tables-style reports** and **labels-style reports**. Tables-style reports list records in rows and columns, down the page. Figure 5-1 illustrates a tables-style report, which inventories the contents of your wine cellar.

Figure 5-1. *Tables-Style Report*

```
File:    Wine Inventory                                              Page  1
Report:  Wine Inventory                                      March 20, 1984
Year     Origin             Vintner         Type            Quantity    Cost
------   -----------------  ----------------  ---------------  ----------  --------
1978     Napa Valley        Heitz Cellars     Cabernet         2           12.75
1980     Alexander Valley   Grand Cru         Cabernet         5            8.00
1978     Napa Valley        Robert Mondavi    Cabernet         8           40.00
1978     Ohio               Mitchell Bros.    Cabernet         5           14.00
1981     New York State     Lissner Brothers  Chenin Blanc     3           12.00
1981     Napa Valley        Burgess Cellars   Chenin Blanc     3            9.00
1980     Napa Valley        Burgess Cellars   Chenin Blanc     3           10.00
1979     Sonoma Co., Cali   J. W. Morris      Vintage Port     3           10.00
1980     Alexander Valley   Woodbury          Petite Sirah     4            7.50
1979     Napa Valley        Caymus Vineyards  Cabernet Sauvi   9           12.50
1979     Napa Valley        Burgess           Cabernet Sauvi   3           18.00
1980     Sonoma County, C   Bellerose Vineyard Cabernet Sauvi  2           12.00
1977     Napa Valley        Beaulieu          Cabernet Sauvi   3           15.75
1980     Napa Valley        Robert Mondavi    Johannisberg R   3            8.00
1981     Napa Valley        Silverado Vineyard Sauvignon Blan  3            8.00
1979     Santa Ynez Valle   J. Carey Cellars  Merlot           3            7.00
1977     Sonoma County, C   Chateau St. Jean  Merlot           3            9.00
1979     Alsace, France     Trimbach          Pinot Blanc      5            6.00
1978     Cotes du Rhone,    E. Guigal         Cotes du Rhone   3            4.50
1978     Bordeaux           Bagel Brothers    Bordeaux Red     8            5.50
```

A labels-style report, on the other hand, lists records with categories printed vertically down the page. Mailing labels are examples of labels-style reports. Figure 5-2 illustrates a labels-style report from the same file as the Wine Inventory. This time, though, more specific information about each type of wine is included.

Chapter 5: Reporting With the Data Base

Figure 5-2. *Labels-Style Report*

```
File:    Wine Inventory                              Page  1
Report: Comments about Wine                     March 20, 1984

1978
Heitz Cellars
Cabernet
Medium-full bodied with simple favors of moderate depth.  Drink now

1980
Grand Cru
Cabernet
Briary, tannic quality.  Best right away

1978
Robert Mondavi
Cabernet
Supple and well balanced.  Best in about 1985

1978
Mitchell Bros.
Cabernet
Volatile smells, firm structure suggestions of varietal fruit

1981
Lissner Brothers
Chenin Blanc
Medium sweet.  Full, distinctly varietal aromas.  Melony

1981
Burgess Cellars
Chenin Blanc
Spicy, slightly grassy fruit and toasty oak elements

1980
Burgess Cellars
Chenin Blanc
Medium intense, slightly complex, fruity-earthy

1979
J. W. Morris
Vintage Port
Deep, fruity, plummy, ripe aromas.  Curranty, chocolatey character

1980
Woodbury
Petite Sirah
Surprisingly berryish, fruity, sweet.  Full and rich

1979
Caymus Vineyards
Cabernet Sauvignon
Good buy!  Balance of oak, boysenberries, spice.  Mint and truffles
```

When you think about whether you want to create a tables-style report or a labels-style report, decide whether you want your records in rows and columns across the page, like the Wine Inventory, or grouped vertically down the page, like the Wine Descriptions.

> **By the Way:** Tables-style reports are similar to records in **multiple-record layout**, and labels-style reports are similar to records in **single-record layout**.

Report Formats

Report formats are specifications you give AppleWorks to describe how a report should be put together. For a tables-style report format, you tell how records should be arranged, whether all categories should be included or whether some should be deleted, and where categories should go. Your specifications about group totals and grand totals are also included in a tables-style report format.

In the Wine Inventory report, the year, the vintner, the type, the quantity on hand, and the cost per bottle are included in the report format. So is a total cost category, called a **calculated category**, which is a total of quantity-on-hand times cost-per-bottle. The total cost category has a grand total.

For labels-style reports, you tell which categories should be included and how they should be placed. In the Comments About Wine report, cost information is left out, but a comment category is included.

Report formats are saved with and become a part of the Data Base file, although they don't affect the data itself in any way. They are always available when the file is on the Desktop.

One Data Base file can have up to eight report formats.

When you are in Review/Add/Change for a file and indicate you want to report (($\boxed{\circ}$)-($\boxed{P}$)), AppleWorks displays the Report menu, which is illustrated in Figure 5-3. It presents all your options for beginning reporting.

Figure 5-3. *Report Menu*

```
File: Wine Inventory           REPORT MENU          Escape: Review/Add/Change
Report: Wine Inventory



================================================================================


            1.   Get a report format
            2.   Create a new "tables" format
            3.   Create a new "labels" format
            4.   Duplicate an existing format
            5.   Erase a format
            6.   Keep working with current format




------------------------------------------------------------------------------
Type number, or use arrows, then press Return                      30K Avail.
```
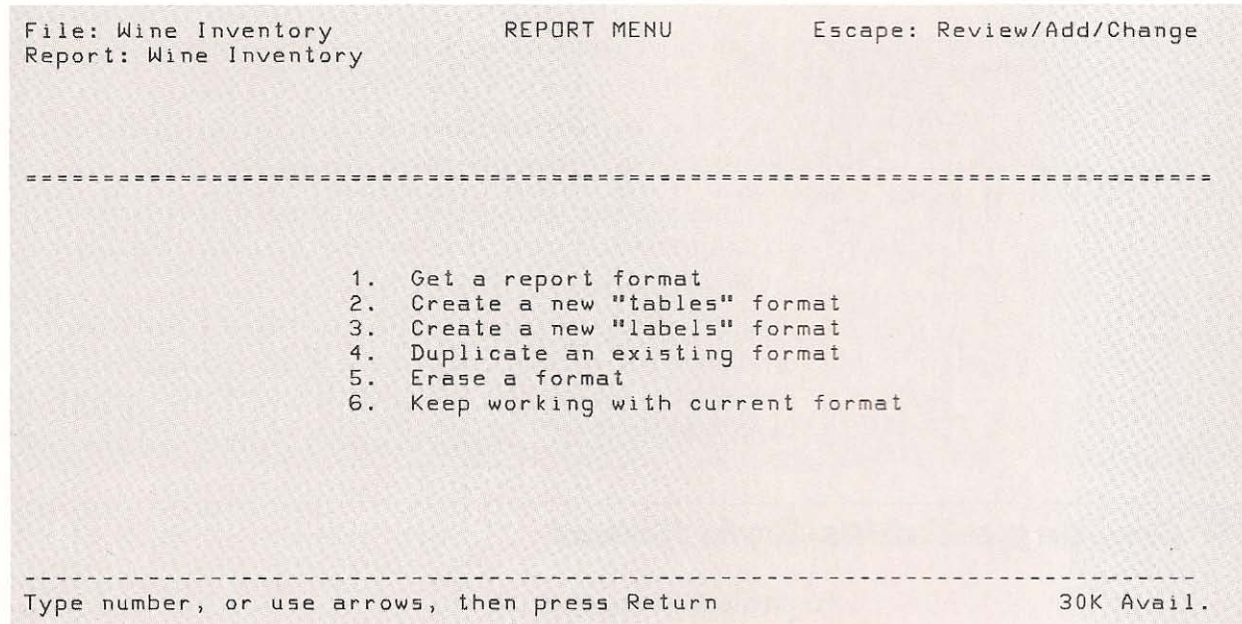
1. `Get a report format` displays the `Report Catalog`, which lists the report formats you have already created for the file. After you select one, you get the Report Format display for the report, so you can make any necessary changes and print the report.

   Option 1 isn't highlighted if you have no report formats. If you choose it anyway, AppleWorks replies that you have none, and lets you choose whether you want to create a tables-style or labels-style report format.

2. `Create a new "tables" format` asks for a report name for your new report. Then it presents the Report Format display for tables-style reports for the file.

3. **Create a new "labels" format** asks for a report name for your new report. Then it presents the Report Format display for labels-style reports for the file.

4. **Duplicate an existing format** presents the Report Catalog so you can select an existing format from the file and duplicate it. After you give it a new name, AppleWorks presents the Report Format display for the report.

   Choose this option if you want to use an existing format as a basis but change its name and any other of its specifications.

5. **Erase a format** presents the Report Catalog for the file, so you can select the report you want to erase.

   You must choose **Yes** in response to the double-check erase question to make it definite that you really want to erase the format.

6. **Keep working with current format** appears only when you have report formats. When you select it, AppleWorks returns you to the report format you have just been working with.

Creating a Tables-Style Report

To create a tables-style report:

1. Start in Review/Add/Change of the file you want to create a report for.

2. Press (ᦰ)-(P). AppleWorks presents the Report menu.

3. Choose **Create a new "tables" format**. AppleWorks prompts you for the name of the report.

4. Type the name of the report, which can have up to 19 letters, numbers, or special characters. The name can be the same as the filename. Press (RETURN). AppleWorks presents the Report Format display.

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Figure 5-4 illustrates the tables-style Report Format display for the Wine Inventory file.

Figure 5-4. Tables-Style Report Format Display

```
File: Wine Inventory        REPORT FORMAT           Escape: Report Menu
Report: Wine Inventory
Selection: All records




===============================================================================
—> or <—   Move cursor                 A-J  Right justify this category
 >  A  <    Switch category positions   A-K  Define a calculated category
—> A  <—    Change column width         A-N  Change report name and/or title
A-A  Arrange (sort) on this category    A-O  Printer options
A-D  Delete this category               A-P  Print the report
A-G  Add/remove group totals            A-R  Change record selection rules
A-I  Insert a prev. deleted category    A-T  Add/remove category totals
-------------------------------------------------------------------------------

Year   Origin            Vintner          Type          Quantity     Cost
--A---- -B--------------- -C--------------- -D----------- -E--------- -F-----
 1978   Napa Valley       Heitz Cellars    Cabernet      2            12.75
 1980   Alexander Valley  Grand Cru        Cabernet      5            8.00
 1978   Napa Valley       Robert Mondavi   Cabernet      8            40.00

------------------------------------------------------------- More --->
Use options shown above to change report format              30K Avail.
```

Examples of records from the file. The changes you make are reflected in the record examples, so you can see exactly what you are doing as you go along.

Categories are designated A through Z, to make it easy for you to create calculated categories.

The options you have now for creating the report format.

Options for creating the tables-style report format are described in the following sections.

Summary of Considerations and Features

You have several main considerations in creating a tables-style report format. These main considerations are listed in Table 5-1, along with the Data Base reporting features that relate to them.

Table 5-1. *Main Considerations for Tables-Style Reports*

Main Consideration	See This Section
Moving the cursor on the Report Format display	"Moving the Cursor"
Placing categories on the report	"Changing Column Width" "Switching Category Positions"
Including the categories you want	"Deleting Categories" "Inserting Previously Deleted Categories"
Including the records you want	"Changing Record Selection Rules"
Getting records in the right order	"Arranging Records for the Report"
Lining up entries	"Right Justifying Categories"
Providing a title for your report	"Adding or Changing Report Names and Titles"
Calculating in reports	"Creating Calculated Categories"
	"Adding and Removing Totals"
	"Controlling Group Totals"
Communicating with your printer	"Working With Printer Options" Chapter 13, "Printers and Printing"

Moving the Cursor

When you move the cursor from category to category in the record examples, use the following cursor movement keystrokes:

What You Want	What You Use
Move the cursor one category to the right	(→)
Move the cursor one category to the left	(←)

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Changing Column Width

You can increase the width of a column for a report because information in the category is too wide for the current column width. Or you can decrease the width of a column because information in the category is narrower than the column. Increasing or decreasing column width helps you make a report look exactly the way you want it and shows the information most effectively. It also ensures that information fits correctly on your printer.

To change the width of columns:

What You Want	What You Do
Increase the width of a column	Put the cursor on the column Press (⌥)-(→)
Decrease the width of a column	Put the cursor on the column Press (⌥)-(←)

AppleWorks Tip

Be sure columns are wide enough to hold information in the categories. Columns that are too narrow to hold the widest entry for numerical categories cause AppleWorks to display pound signs (#) instead.

Switching Category Positions

You can switch categories with each other, thus placing categories exactly where you want on the report. To do this:

What You Want	What You Do
Switch a column with the one on its right	Place the cursor on the category to be moved. Press (⌥)-(>) (do not press (SHIFT)).

What You Want	What You Do
Switch a column with the one on its left	Place the cursor on the category to be moved. Press ⌘-< (again, don't press SHIFT).

AppleWorks Tip

You can also move a category where you want it by deleting it from one position (⌘-D) and inserting it where you want it (⌘-I).

Deleting Categories

You can delete unnecessary categories from a report format without affecting the file. You can reinsert the category into the report format any time you want.

To delete a category:

1. Place the cursor on the category you want to delete.

2. Press ⌘-D.

AppleWorks Tip

To insert or delete a category from your file, use the ⌘-N function while you are in Review/Add/Change. Remember, though, that you lose your report formats when you delete a category from the file.

Inserting Previously Deleted Categories

After you delete a category from a report format by using the ⌘-D feature, you can insert it again whenever you want. You can also insert new categories.

To reinsert a previously deleted category:

1. Decide where you want to reinsert the previously deleted category. Then place the cursor on the category just to the right of that position.

2. Press ⌘-I. AppleWorks presents a numbered list of previously deleted categories.

3. Choose the category you want to insert.

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Changing Record Selection Rules

When you first create a report format, you'll see the record selection rule in effect on the Review/Add/Change display. You can change record selection rules so that only records that meet the rule you specify are printed. Record selection rules stay with the report format until you change them.

To change the record selection rule, use the Ć-R command.

Arranging Records for the Report

You can arrange records for the report so they are printed in any order you want. To arrange records:

1. Move the cursor to the category by which you want your records arranged.

2. Press Ć-A.

3. Choose the way you want the records arranged.

The record arrangement specification is not saved with the report format.

Right Justifying Categories

You can right justify information in categories with alphabetic or numeric information in them. When you right justify information in alphabetic categories, the entries in the category line up right under each other, with an even right margin. When you right justify information in categories with numeric information, the decimal points line up under each other.

To right justify a column, follow these steps:

1. Move the cursor to the column you want to right justify.

2. Press Ć-J. AppleWorks asks you to specify the number of decimal places that should be included in each entry in the specified column.

3. Type the number of decimal places and press RETURN. (If you are right justifying alphabetic information, type 0 and press RETURN.) AppleWorks asks you how many blank spaces should be placed after each entry. This is important in spacing columns across the page.

4. Type the number of blank spaces you want included and press RETURN.

After you respond to these prompts, AppleWorks fills the appropriate column in the record examples with 9's to show how the information will line up when it is printed.

Adding or Changing Report Names and Titles

The report name you give a report format appears at the top left of the report and at the top-left corner of the REPORT FORMAT display. You can change this name whenever you want.

In addition, you can give a report a title. The title can be up to 78 characters wide. It is printed at the top of each page of your report.

To change a report name or to give the report a title:

1. Press (⌘)-(N). AppleWorks prompts you for the new report name.

2. Type in the new name of the report, which can be up to 19 characters long. Then press (RETURN). Just press (RETURN) if you don't want to change the report's name.

3. Type in the report's title at the cursor position just above the category names, and press (RETURN). Just press (RETURN) if you don't want to change the title you previously gave the report.

Creating Calculated Categories

AppleWorks lets you create a new category by manipulating numerical information contained in other categories. If you are keeping an inventory file for the parts you sell in your bicycle shop, for example, you want a total for the amount invested in each part. To get that total, you multiply the quantity of each part (in one category) by the cost of each part (in the second category). You can have up to three calculated categories in each AppleWorks Data Base report.

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To use a category as part of a formula for a calculated category, you use the letter under the category name. That is, if the quantity of each part in the inventory file is in column B and the cost of each part is in column D, then the formula for the total investment per part is B * D.

To get the total of an order for a sales invoice, on the other hand, you multiply the cost of the item (in column A) by the sales tax percentage (a constant you include in the formula) and add this number to the cost of the item. The formula for this calculated category is $A*.05+A$ (or $A*1.05$ or $1.05*A$).

The first 26 columns in a report format are lettered from A through Z under the category name and can therefore be included in calculated categories. If you have more than 26 categories, and thus more than 26 columns in your report, columns 27 through 30 won't have letters. If you want to use information in columns 27-30 as the basis for your calculations, you must make sure the columns you want to include have letters. To do so, either delete columns in the A-Z group, thus moving columns 27 through 30 into the A-Z group, or physically move columns 27-30 to the left into the A-Z group.

The calculated categories are part of the report format, not part of the information in Review/Add/Change.

Warning

Calculation rules are based on column letters. If you rearrange columns, your calculated categories may need to be revised. If you delete a category used in a calculation, the results will be incorrect.

Rules for Calculated Categories: If there is more than one calculated category, the leftmost calculation is done first. Successive calculated categories, therefore, can refer to a calculated category to the left. If a calculated category refers to a calculated category to the right, the result of the calculation will be a zero. Calculated categories can refer to any noncalculated category, to the right or to the left.

Here are the steps for creating a calculated category:

1. Place the cursor one column to the right of where you want the calculated category to appear.

2. Press ⌘-K (for calculated category). A column called *Calculated* appears in the space. The 9's you see in the column are placeholders, and mean that the category will be right justified. (You only see the real numbers when you print the report.)

    In addition, AppleWorks requests a name for the calculated category.

3. Type the name of the category and press RETURN. The category's name can be up to 20 characters long. This is the name that will appear on the report.

4. Type the calculation rules using the letters associated with the appropriate columns. The rules define what the calculated category will equal, so you don't use = in your calculation rules.

    Use the following keys to designate the four functions:

plus	+
minus	–
multiply	*
divide	/

    All operations are performed from left to right.

5. AppleWorks then asks you how many decimal places to include in this category. Type the number of decimal places to include and press RETURN. Just press RETURN if you want to accept AppleWorks' default value for this number. AppleWorks asks you how many blank spaces to include after this category.

6. Type the number of blank spaces you want to follow the category and press (RETURN). Or accept the default by pressing (RETURN).

▲ **Warning**
Be sure there are enough 9's on both sides of the decimal point to hold the largest and smallest calculated numbers. If #### appears when the column is printed or displayed, the field is too short.

AppleWorks Tip

You can't see the contents of the new column until you either print the report on a printer or display it on the screen. To do either, you use (⌘)-(P).

You can use (⌘)-(T) to get a group total and a grand total for the numbers in the calculated category. You can't, however, use (⌘)-(G) on the calculated category to make it control group totals in *other* categories. Neither can you arrange records by the value in the calculated category.

Adding and Removing Totals

It's easy to get group totals (or subtotals) and report totals for specified categories. Here's how:

1. Place the cursor on the column you want to total.

2. Press (⌘)-(T). AppleWorks asks the number of decimal places that should be included in the category total.

3. Type the number of decimal places for the total and press (RETURN). Or accept AppleWorks' default by pressing (RETURN). AppleWorks asks the number of blank spaces to include to the right of the total.

4. Type the number of blank spaces to include and press (RETURN). Or accept AppleWorks' default by pressing (RETURN).

AppleWorks inserts 9's in the category with the appropriate number of decimal places. The 9's will be replaced by the entries in the category when you print the report or by blanks if there is no information in the entry.

The double dashed line below the category indicates that the report will include totals for this category.

If you are creating group totals, use the (⌂)-(G) feature on the category that should *control* the group totals.

Here's how to remove totals:

1. Place the cursor on the category with totals.

2. Press (⌂)-(T). Information from the sample records will replace the 9's.

Controlling Group Totals

To specify group totals, or subtotals, for a category, follow the directions in "Adding and Removing Totals." In addition, specify which category will control the group totals. To do so, use (⌂)-(G). Whenever a change in value occurs in this controlling category, a group total is calculated and printed for categories you specified with (⌂)-(T).

To specify the controlling category for group totals:

1. Put the cursor on the controlling category.

2. Press (⌂)-(G).

3. Choose No or Yes depending on whether you want to print group totals only, or whether you want to print all the records as well.

4. Choose No or Yes depending on whether you want to go to a new page after each group total. Your answer is probably *yes* if many records will be included in each group total.

AppleWorks displays the controlling category for the group totals to the left and above the double line on the Report Format display.

AppleWorks Tip

You may want to arrange the records in your report according to the controlling category, too.

Chapter 5: Reporting With the Data Base

Creating a Labels-Style Report

To create a labels-style report, follow these instructions:

1. Start in Review/Add/Change of the file you want to create a report for.

2. Press ⌘-Ⓟ. AppleWorks presents the Report menu.

3. Choose `Create a new "labels" format`. AppleWorks prompts you for the name of the report.

4. Type the name of the report, which can have up to 19 letters, numbers, or special characters. Press (RETURN). AppleWorks presents the Report Format display.

Figure 5-5 illustrates the labels-style Report Format display for the Wine Inventory file.

Figure 5-5. Labels-Style Report Format Display

```
File: Wine Inventory            REPORT FORMAT              Escape: Report Menu
Report: Comments about Wine
Selection: All records



================================================================================
 Year
 Vintner
 Type
 Comments


 --------------------------Each record will print  6 lines-----------------------




 -----------------------------------------------------------------------------\
Use options shown on Help Screen                          A-? for Help
```

Number of lines that each record will print, to a maximum of 15

Category names
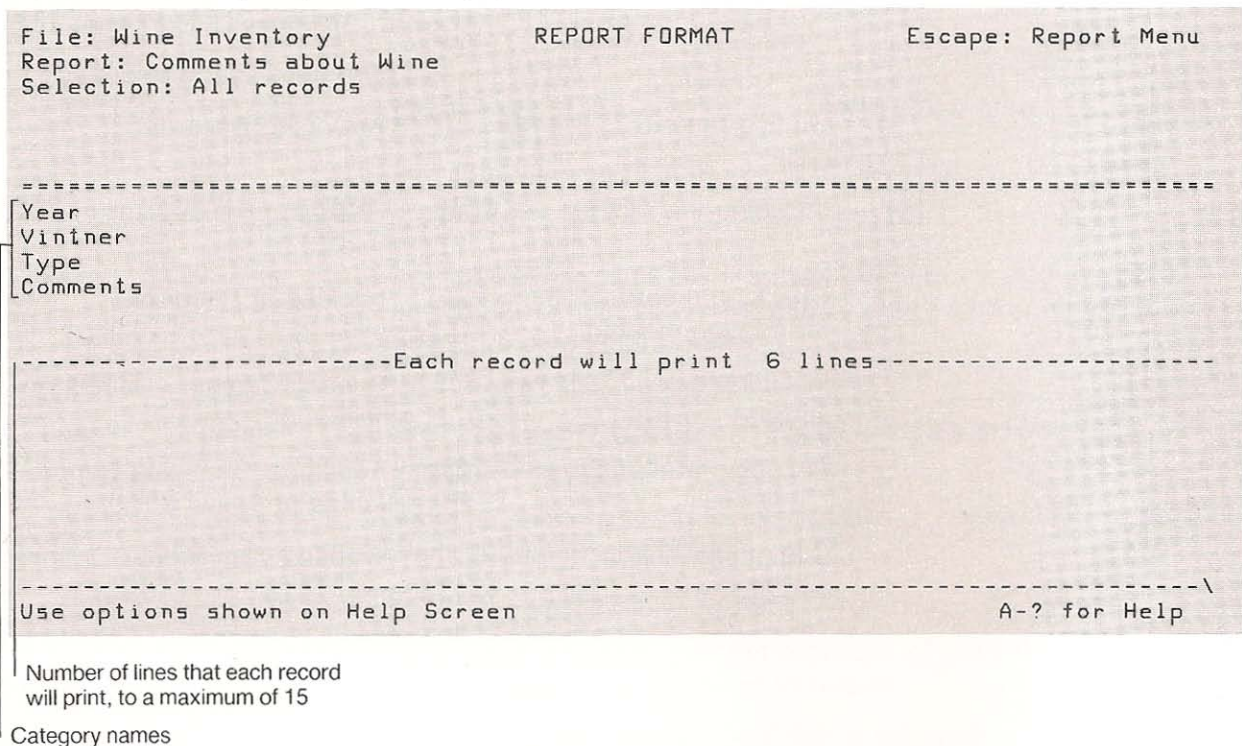
Options for creating the labels-style report are described in the following sections.

Summary of Considerations and Features

You have several main considerations in creating a labels-style report format. These main considerations are listed in Table 5-2, along with the Data Base reporting features that relate to them.

Table 5-2. *Main Considerations for Labels-Style Reports*

Main Consideration	See This Section
Moving the cursor on the Report Format display	"Moving the Cursor"
Placing categories on the report	"Moving Categories"
	"Deleting Categories or Spacing Lines From the Report"
	"Inserting Spacing Lines or Previously Deleted Categories"
	"Left Justifying Categories"
Getting records in the right order	"Arranging Records"
Including the records you want	"Changing Record Selection Rules"
Checking records in the format you created	"Looking at Records"
Including category names with entries	"Printing Category Names on the Report"
Providing a title for your report	"Adding or Changing Report Names or Titles"
Communicating with your printer	"Working With Printer Options"
	Chapter 13, "Printers and Printing"

Moving the Cursor

To move the cursor about on the display, use the following cursor movement keystrokes:

What You Want   **What You Use**

Move the cursor left, right, up,   ⊝, ⊛, ⊙, ⊙, and (RETURN)
or down

Moving Categories

To place categories where you want them on the report, AppleWorks lets you move them about on the display. To move categories:

1. Put the cursor on the first character of the category you want to move.

2. Use the following cursor movement keystrokes:

What You Want   **What You Use**

Move the category left, right,   (ᘓ)-(←), (ᘓ)-(→), (ᘓ)-(↑), or
up, or down   (ᘓ)-(↓)

AppleWorks protects the first two letters of a category name and thus won't let you move one category on top of or through these first two letters.

Deleting Spacing Lines or Categories From the Report

You can delete spacing, or blank, lines or categories you don't want to print on the report.

To delete spacing lines or categories:

1. Put the cursor on the first character of the category or on the spacing line you want to delete.

2. Press (ᘓ)-(D). When you delete a category, a spacing line remains, which you may delete if you want.

Deleting categories means they don't print on the report, not that they are deleted from the file. You can reinsert deleted categories any time you want by using the ⌘-Ⓘ feature.

AppleWorks Tip

Spacing lines enable you to place categories correctly in a labels-style report. You can control spacing lines by deleting and inserting them.

Inserting Spacing Lines or Previously Deleted Categories

You can insert spacing lines or previously deleted categories. To do so, follow these steps:

1. Put the cursor where you want the category or spacing line to be inserted.

2. Press ⌘-Ⓘ. AppleWorks displays the names of deleted categories so that you can choose the one you want. It also gives you the option of inserting a spacing line above the cursor position or one below the cursor position, unless you already have the maximum, 15 lines. If you want to insert a line below the last category, just press (RETURN).

3. Choose the option you want. It is inserted into the report format.

Left Justifying Categories

AppleWorks lets you place two categories so that they print right next to each other. This is called **left justifying** categories. It is most useful when you are creating a report format to print labels.

Here are examples of names on labels with and without justifying the last name category:

With Left Justifying	Without Left Justifying
Joe Maxwell	Joe Maxwell
Josephine Maxwell	Josephine Maxwell

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Follow these steps to left justify categories:

1. Place the categories side by side in the order you want them. (⌘) and the arrow keys move the categories around.

2. Put the cursor on the first character of the category you want to left justify. This is the category on the right.

3. Press (⌘)-(J). AppleWorks displays the ‹ character to the left of the left justified category.

AppleWorks Tip

You can see the effect of left justifying a category only by using the (⌘)-(P) command to actually print the report or display it on the screen.

Arranging Records for the Report

See "Arranging Records" in Chapter 4 for information on how records are arranged.

You can arrange records for the report so the records are printed in any order you want. The record arrangement specification is not saved with the report format, however. To arrange records:

1. Move the cursor to the category by which you want your records arranged.

2. Press (⌘)-(A).

3. Choose the way you want the records arranged.

Changing Record Selection Rules

See "Changing Record Selection Rules" in Chapter 4.

When you first create a report format, you'll see the record selection rule in effect on the Review/Add/Change display. You can change record selection rules so that only records that meet the rule you specify are displayed or printed. Record selection rules stay with the report format and change only when you change them.

To change the record selection rule, use the (⌘)-(R) command.

Looking at Records

The Report Format display shows the category names for the report format you are working on. You can zoom in to check actual records, if you want. When you do, you see what the information looks like in the format you have specified. After

you have zoomed in to the first record in the file, you can move through the file, looking at other records.

What You Want	What You Do
To zoom in to actual records	Press (⌂)-(Z).
To move about through the file after you zoom in	Press (⌂)-(1) through (9) to move proportionally through the file.
	Press (⌂)-(>) (no (SHIFT)) to display the next record.
	Press (⌂)-(<) (no (SHIFT)) to display the previous record.
To zoom out to the category names again	Press (⌂)-(Z).

Printing Category Names on the Report

You can specify that category names should be printed on the report as well as the actual entries. To request a category name with the entries:

1. Put the cursor on the first character of the category name you want to appear on the report.

2. Press (⌂)-(V). The entry from the first record in the file appears next to the category name to show you how the printed information will look.

To remove a category name from the report:

1. Put the cursor on the first letter of the category name you want to remove from the report.

2. Press (⌂)-(V).

Adding or Changing Report Names or Titles

The report name you give a report format appears at the top left of the report when you print it and at the top-left corner of the REPORT FORMAT display. You can change this name whenever you want.

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In addition, you can give a report a title. The title can be up to 78 characters wide. It is printed at the top center of each page of your report.

To change a report name or give the report a title:

1. Press ⌘-Ⓝ. AppleWorks prompts you for the new report name.

2. Type in the new name of the report, which can be up to 19 characters long. Then press (RETURN). Or just press (RETURN) if you don't want to change the report's name.

3. Type in the report's title at the cursor position, above the double line, and press (RETURN). Just press (RETURN) if you don't want to change a title you previously gave the report.

> **AppleWorks Tip**
>
> To print the title but not the report header, use ⌘-Ⓞ to get the `Printer Options` Menu. Change the value of PH to `No`.

Working With Printer Options

After you create a report format for a tables-style or labels-style report, you must communicate certain information to AppleWorks about how it should work with your printer. You do that by using printer options.

Here's how to tell AppleWorks you want to work with printer options:

1. To indicate that you want to work with printer options, press ⌘-Ⓞ from the Report Format display.

2. Set printer options using information in the remainder of this chapter.

3. To return to the Report Format display after you are finished with the printer options, press (ESC).

After you indicate you want to work with printer options, AppleWorks presents the Printer Options display. The Printer Options display for tables-style reports is illustrated in Figure 5-6, and the Printer Options display for labels-style reports is illustrated in Figure 5-7.

Figure 5-6. *Tables-Style Printer Options*

```
File: Wine Inventory          PRINTER OPTIONS          Escape: Report Format
Report: Wine Inventory
============================================================================

-------Left and right margins--------        ------Top and bottom margins-----
PW: Platen Width          8.0 inches     PL: Paper Length       11.0 inches
LM: Left Margin           0.0 inches     TM: Top Margin          0.0 inches
RM: Right Margin          0.0 inches     BM: Bottom Margin       2.0 inches
CI: Chars per Inch        10             LI: Lines per Inch      6


    Line width            8.0 inches         Printing length     9.0 inches
    Char per line (est)   80                 Lines per page        54


            --------------------Formatting options--------------------
        SC:   Send Special Codes to printer                      No
        PD:   Print a Dash when an entry is blank                No
        PH:   Print report Header at top of each page            Yes
                  Single, Double or Triple Spacing (SS/DS/TS)    SS



        "Specify information about your printer(s)" (on Other Activities menu)
         gives you additional control over printers.
----------------------------------------------------------------------------
Type a two letter option code                                   30K Avail.
```

Left and right margin options   Option for determining spacing: Other formatting options
Code that stands for the option   unique to tables-style reports   Top and bottom margin options

Figure 5-7. *Labels-Style Printer Options*

```
File: Wine Inventory          PRINTER OPTIONS          Escape: Report Format
Report: Comments about Wine
============================================================================

-------Left and right margins--------        ------Top and bottom margins-----
PW: Platen Width          8.0 inches     PL: Paper Length       11.0 inches
LM: Left Margin           0.0 inches     TM: Top Margin          0.0 inches
RM: Right Margin          0.0 inches     BM: Bottom Margin       0.0 inches
CI: Chars per Inch        10             LI: Lines per Inch      6


    Line width            8.0 inches         Printing length    11.0 inches
    Char per line (est)   80                 Lines per page        66


            --------------------Formatting options--------------------
        SC:   Send Special Codes to printer                      No
        PD:   Print a Dash when an entry is blank                No
        PH:   Print report Header at top of each page            Yes
        OL:   Omit Line when all entries on line are blank       Yes
        KS:   Keep number of lines the Same within each record   Yes


        "Specify information about your printer(s)"(on Other Activities  menu)
         gives you additional control over printers.
----------------------------------------------------------------------------
Type a two letter option code                                   30K Avail.
```

Other formatting options   Options for determining spacing: Top and bottom margin options
Left and right margin options   unique to labels-style reports

Chapter 5: Reporting With the Data Base

Using Left and Right Margin Options

Table 5-3 describes left and right margin options.

Table 5-3. *Left and Right Margin Options*

The Printer Option	Controls
Platen width (PW)	The distance in inches the printer's printhead travels across the paper. This number can be no greater than the platen width you specify in Other Activities menu option Specify information about your printer(s).

Default = 8.0 inches

The maximum you can use is 13.2 inches. |
| Left margin (LM) | The width of the left margin in inches

Numbers can be in tenths of inches, that is, 1.5 inches, 1.6 inches, 2.0 inches.

Default = 0 inches

The maximum you can use is 9.0 inches. |
| Right margin (RM) | The width of the right margin in inches

Numbers can be in tenths of inches

Default = 0 inches

The maximum you can use is 9.0 inches. |

The Printer Option	**Controls**
`Characters per Inch`	The number of printed characters per inch
	Characters per inch can be from 4 through 24.
	Default = 10 characters per inch
	If you choose a characters per inch that your printer can't do, your report is printed in the same characters per inch as whatever you printed last.

When you change any of the above values, AppleWorks instantly recalculates the line width and the estimated characters per line according to the following formulas:

	Platen width	For example:	8.0 inches
-	Left margin		1.5 inches
-	Right margin		1.0 inches
=	Line width	=	5.5 inches

	Line width		5.5 inches
x	Characters per inch	x	12 characters per inch
=	Characters per line	=	66 characters per line

Follow these steps to change the value of the left and right margin options:

1. Type the code that stands for the option and press (RETURN).

2. Type the new value for the option and press (RETURN). You don't have to type .0 if the new value is a whole number. For example, if the new right margin is 1 inch, type 1.

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Using Top and Bottom Margin Options

Table 5-4 describes top and bottom margin options.

Table 5-4. *Top and Bottom Margin Options*

The Printer Option	Controls
Paper length (PL)	The vertical measurement of the paper you are using, in inches
	Default = 11 inches
	The maximum you can use is 25.4 inches.
Top margin (TM)	The length in inches from the top of the paper to the first line of printing
	Default = 0.0 inches. This default value accommodates AppleWorks users who have sheet feed printers (printers with no tractor). If you have one of these printers, you should leave the default at 0 and position the paper exactly where you want the first line to be.
	If you have a tractor feed printer, you will probably want to change this value.
	The maximum you can use is 9.0 inches.

The Printer Option	Controls
Bottom margin (BM)	The length in inches from the last line of printing to the bottom of the paper
	Default for tables-style reports = 2.0 inches
	Default for labels-style reports = 0.0 inches
	The maximum you can use is 9.0 inches.
Lines per inch (LI)	The number of lines to be printed per vertical inch on the page
	Default = 6
	You can use 6 or 8.

When you change any of the above values, AppleWorks instantly recalculates the printing length and the lines per page according to the following formulas:

		For example:	
	Paper length		11.0 inches
-	Top margin	-	2.0 inches
-	Bottom margin	-	1.5 inches
=	Printing length	=	7.5 inches
	Printing length		7.5 inches
x	Lines per inch	x	6 lines per inch
=	Lines per page	=	45.0 lines per page

Follow these steps to change the value of the top and bottom margin options:

1. Type the code that stands for the option and press (RETURN).

2. Type the new value for the option and press (RETURN). You don't have to type .0 if the new value is a whole number. For example, if the new bottom margin is 1 inch, type 1.

Chapter 5: Reporting With the Data Base

Using Other Formatting Options

Table 5-5 describes other formatting options.

Table 5-5. *Other Formatting Options*

The Printer Option	Controls
Send Special Codes to Printer (SC)	This option lets you define a printing feature not provided for in Data Base reports, such as proportional spacing or boldface. To find out what special codes your printer can use, check in the manual that came with it.
	This printer option can have the value *yes* or *no*. Default = *no*.
	If you change the option to *yes*, AppleWorks asks for the control characters.
	Type the control characters and type ^ when you finish.
	If there are codes in effect, AppleWorks displays them and asks if they're OK. Choose Yes or No.
Print a Dash When an Entry Is Blank (PD)	If an entry is blank, AppleWorks can print a single dash to mark its place, or it can print a zero if the category is justified.
	This printer option can have the value *yes* or *no*.
	Default = *no*

The Printer Option	Controls
`Print Report Header at top of each page (PH)`	The report header consists of the filename, the report name, the record selection rule, the page number, and the date. If you don't print a report header, the only information that appears across the top of each page of your report is the title (created with ⌘-N).

The value for this option can be *yes* or *no*.

Default = *yes*

Choose *no* for labels. |

To change the value of the above options, type the code that stands for the option and press RETURN.

▲ **Warning**

Any key you type becomes a special code except ^. So if you press RETURN or ESC, they are assumed to be special codes.

If you make a mistake, type ^ and then type SC again. Retype the code(s) and type ^

Determining Spacing in Tables-Style Reports

You can specify whether you want your tables-style report to be single, double, or triple spaced. AppleWorks' default is single spacing. To change the spacing, type the code that stands for the spacing you want, SS for single spacing, DS for double spacing, or TS for triple spacing.

Determining Spacing in Labels-Style Reports

Two printer options determine spacing in labels-style reports. They are very important for labels themselves because labels are a fixed length, usually one inch, and you usually want to control the number of lines on each label. These two options allow you to be precise because they control the number of lines that will appear on each record.

Chapter 5: Reporting With the Data Base

The Printer Option	**Controls**
`Omit line when all entries on line are blank (OL)`	If you leave the value of this option at AppleWorks' default, *yes*, AppleWorks will not substitute a blank line when all entries on a line are blank. That is, it will close up lines with blank entries.

If you change this option to *no*, AppleWorks will include a blank line in your record even if there is no entry for any category on that line.

If you change this option to *no*, the next option, `Keep number of lines the same within each record`, is eliminated. |
| `Keep number of lines the same within each record (KS)` | If OL is *yes* and you leave the value of this option at AppleWorks' default, *yes*, AppleWorks will make sure that all of your records have the same number of lines by adding extra blank lines at the bottom of the record.

If OL is *yes* and you change this option to *no*, all your records won't contain the same number of lines if there are blank entries. |

To change the value of the above options, type the code that stands for the option and press (RETURN).

AppleWorks automatically changes the value to its opposite.

AppleWorks Tip

Making Labels: Here's how the OL and KS options apply specifically to printing labels. Suppose you have the following report format and record:

Name:	Randy Sletter
Company:	-
Address:	P.O. Box 2
City/State/Zip:	Central City, TX 77047
(spacing line)	
(spacing line)	

Here is how the record would print with the various OL and KS options.

With OL = *yes* and KS = *yes*:

Randy Sletter
P.O. Box 2
Central City, TX 77047
(spacing line)
(spacing line)
(spacing line)

With OL = *yes* and KS = *no*:

Randy Sletter
P.O. Box 2
Central City, TX 77047
(spacing line)
(spacing line)

With OL = *no*:

Randy Sletter

P.O. Box 2
Central City, TX 77047
(spacing line)
(spacing line)

Understanding the Word Processor

Understanding the Word Processor

AppleWorks' Word Processor allows you to work with documents: reports, letters, memos, chapters. The Word Processor makes it easy for you to create professional looking documents in record time.

This chapter discusses the Word Processor's two main functions, illustrates its flow of activities, and discusses its file guidelines.

The Word Processor's Two Main Functions

AppleWorks' Word Processor features have two main functions, as Figure 6-1 shows. The first function, working with information in Word Processor documents, allows you to type documents quickly and easily, edit mistakes, and make other necessary changes. You can also use other special features that allow you to delete, move, or copy blocks of text within documents, replace old information with new information, and find specific information.

The second function, formatting documents, lets you specify the exact layout, or arrangement, of your document. When you format documents, you create specifications for each document that control margins, paging, and special printing techniques such as boldface and underlining.

Figure 6-1. *Overview of Word Processor*

```
                    ┌──────────────────┐
                    │  Word Processor  │
                    │       File       │
                    └────────┬─────────┘
                             │
              ┌──────────────┴──────────────┐
    ┌─────────┴─────────┐         ┌─────────┴─────────┐
    │   Work With       │         │    Format         │
    │  Information in   │         │   Documents       │
    │   Documents       │         │                   │
    └───────────────────┘         └───────────────────┘
```
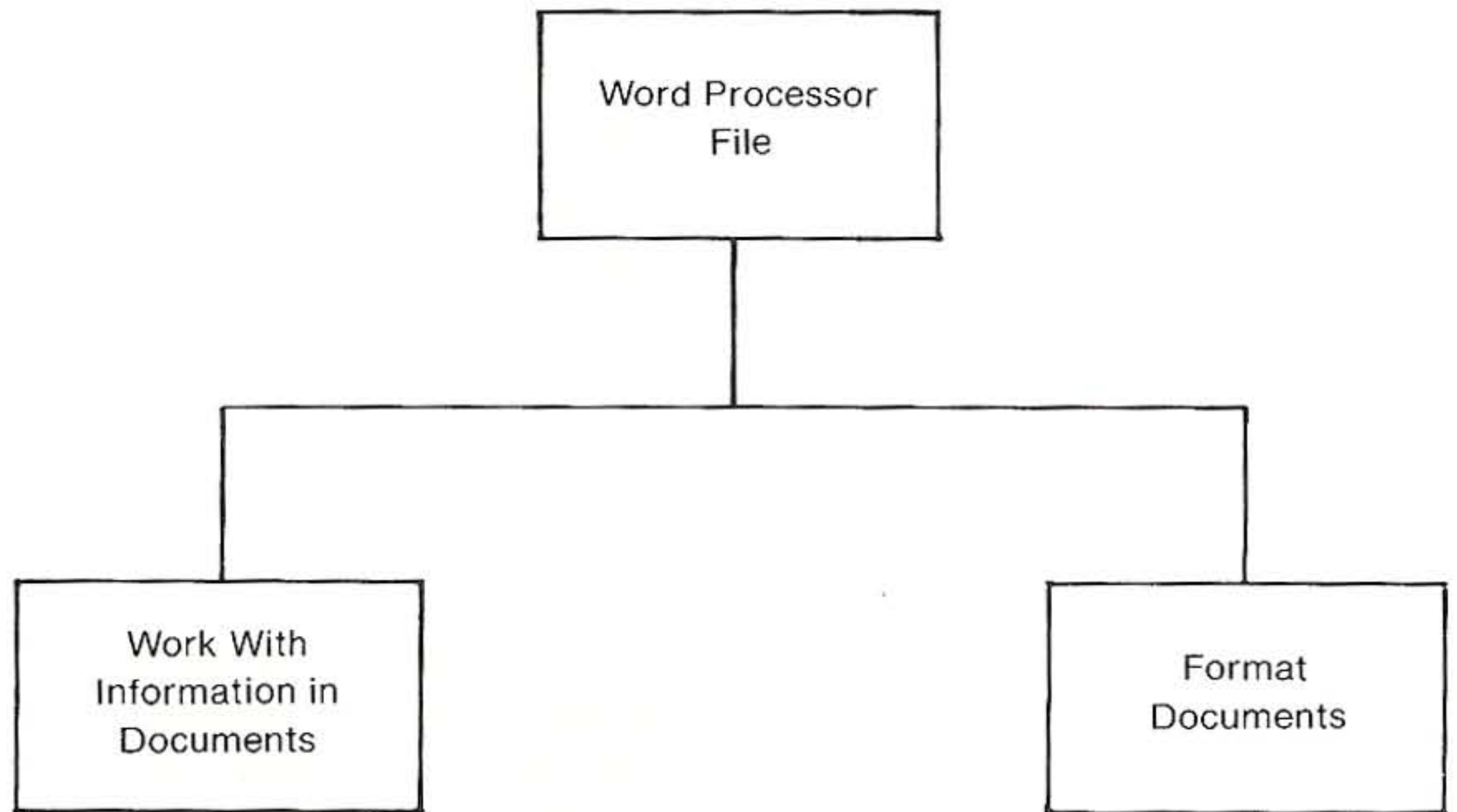
Activity Flow

Figure 6-2 is a flowchart of your activities with Word Processor files. Whereas the activities of AppleWorks' Data Base fall into two different areas, Review/Add/Change and Report, all the Word Processor's activities take place in Review/Add/Change.

Figure 6-2. Word Processor Flowchart
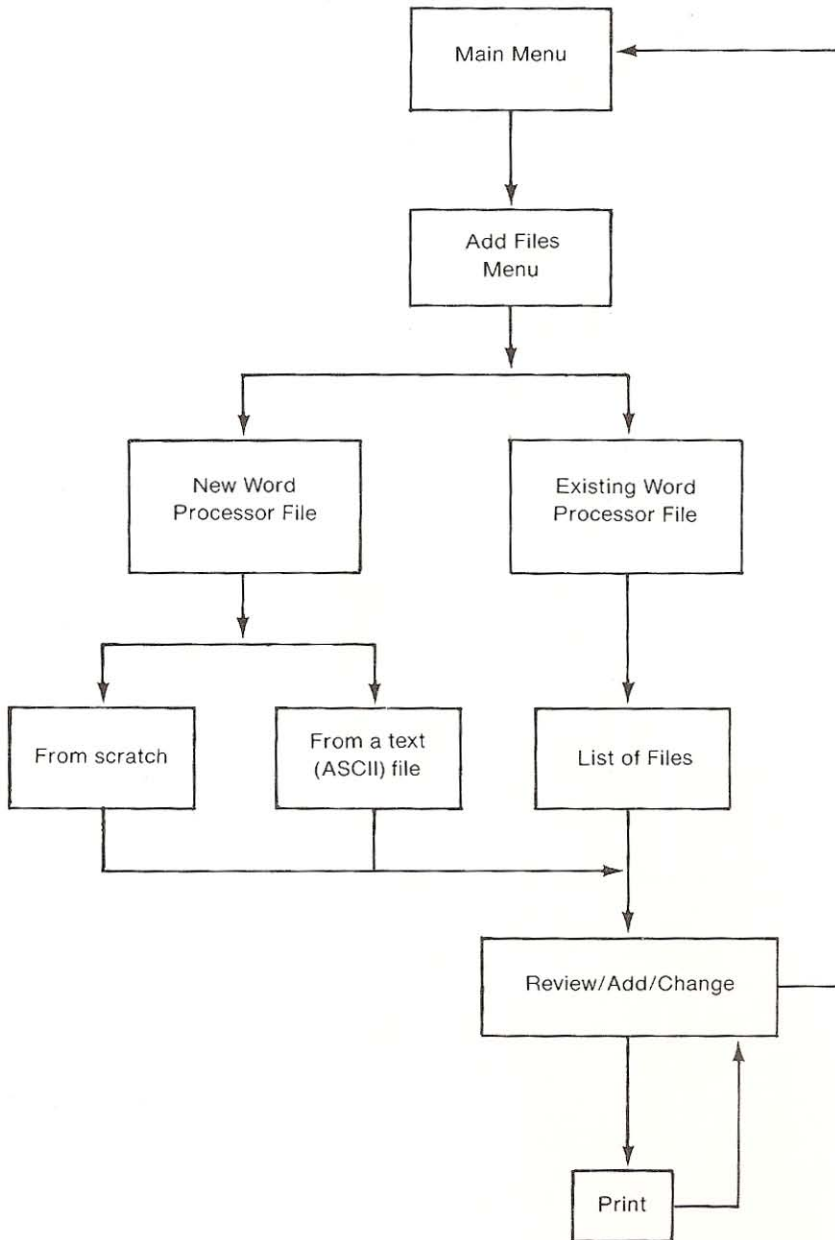
File Guidelines

The only Word Processor file guideline is for the length of a Word Processor file. A Word Processor file can be 2250 lines maximum. For single-spaced pages of 54 lines each, that's about 28 pages.

Another way of judging Word Processor file size is by number of characters: a file with 10,000 characters (maximum size for a computer with 64K RAM) is about eight pages long. A file with 56,000 characters (maximum size for a computer with 128K RAM) is about 26 pages.

Chapter 6: Understanding the Word Processor

Working With Word Processor Documents

Working With Word Processor Documents

It's easy to use the Word Processor's features to type documents, editing information as you go; moving, copying, and deleting blocks of text whenever necessary; finding information; and replacing incorrect information. This chapter explains features that allow you to get the information you want in your documents with a minimum of effort.

Making a Document

This section tells how to plan a new Word Processor document and how to make a Word Processor document from scratch or from a text (ASCII) file.

Planning a Word Processor Document

AppleWorks' Word Processor is very flexible. Assuming that you have some vague idea of what you want your document to say, all that's required when you plan it is that you know AppleWorks' default settings about how your document should look. These default values are contained in specifications that come with all new Word Processor documents. You can use these default values or change them.

Here are the default values that will be beginning specifications for every new document you create:

See "Controlling Horizontal Spacing" in Chapter 8.

1. Specifications for horizontal spacing. AppleWorks' default values are:

   - Platen width = 8.0 inches
   - Left Margin = 1.0 inches

- Right Margin = 1.0 inches

- Characters per inch = 10

2. Specifications for vertical spacing. AppleWorks provides these default values:

- Paper length = 11.0 inches

- Top margin = 0.0 inches

- Bottom margin = 2.0 inches

- Lines per inch = 6

3. Whether lines should be

- Unjustified—that is, even left margin and uneven right margin

- Justified—that is, both margins even

- Centered

AppleWorks' default is that you'll want your lines unjustified.

4. Spacing:

- Single spacing

- Double spacing

- Triple spacing

AppleWorks' default is that you'll want single spacing.

Just a few keystrokes let you change any of the above default values to the value you want, either at the beginning of or within your document.

In addition to the specifications listed above, you may want to think ahead about tabs. Tabs are set initially every five spaces. You can reset them at the beginning or as you go.

If you're formatting certain types of formal business documents, you may want to think about these specifications:

- Layout techniques such as page headers and footers. You may have standard ones in your company, or you can create them as you go. You can create them after you're finished with the document, too, if you want.

- Section headers. If you're following a standard procedure or want to create one, you may want to use a system of headers to start with.

Chapter 7: Working With Word Processor Documents

Creating the Document

Follow these steps to create a new document:

1. Choose Add files to the Desktop from the Main Menu.

2. Choose Word Processor from the Add Files menu.

3. Choose From scratch or From a text (ASCII) file from the Word Processor menu.

From Scratch

Follow these steps to make a file from scratch:

1. Type the name of the new file in response to Type a name for this new file. Filenames can be up to 15 characters long. They must start with a letter, and they can contain uppercase or lowercase letters, numbers, periods, and spaces. Then press (RETURN).

Figure 7-1 illustrates the display for a new Word Processor document.

Figure 7-1. *New Word Processor Document*

```
File: Letter to IRS              REVIEW/ADD/CHANGE              Escape: Main Menu
===!====!====!====!====!====!====!====!====!====!====!====!====!====!====!===
※
```

Type entry or use Å commands   Line 1   Column 1   Å-? for Help

Where you'll start typing   The name of your   The line indicator and the column   Where tabs are set now,
your new document   new file   indicator tell cursor position   every five spaces
                                               on the display.
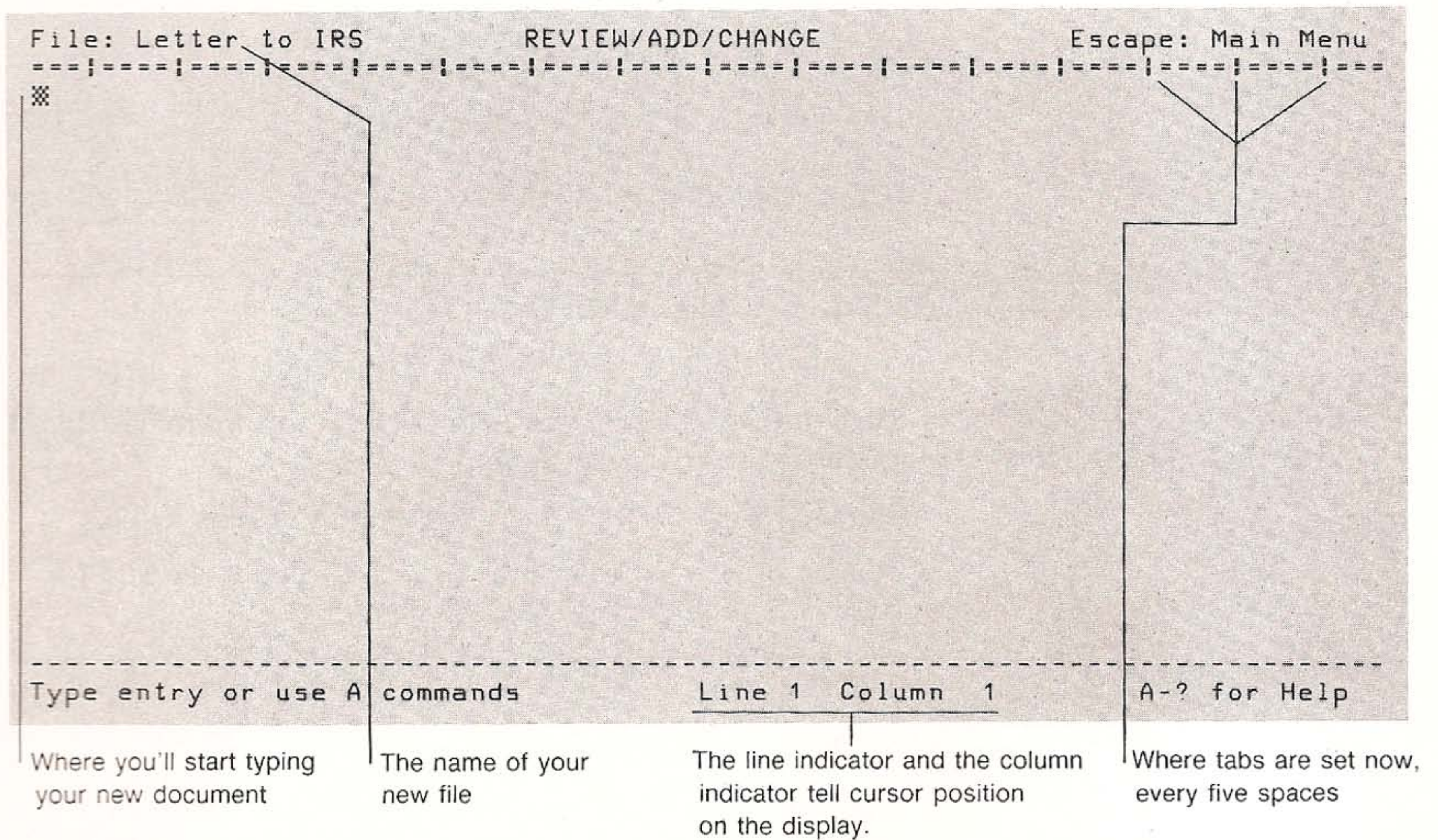
At first you may be a bit intimidated by a blank screen. Most writers are. If you don't know how to begin, type anything. You can always delete it. Or, if you're having trouble thinking of an opening line, start with another line, perhaps in the middle. Hardly anyone does an opening line first, anyway.

From a Text (ASCII) File

AppleWorks' Word Processor can use ASCII text files on ProDOS-formatted disks as sources for its own documents. Text files are made by systems such as Apple Writer, the Pascal Editor when the environment is set to ASCII, and other word processors (although ASCII may not be their native mode).

Check the user's manual of the system that originated your file to see if it creates ASCII text files.

▲ **Warning**
You must convert text files on DOS disks to ProDOS with the ProDOS User's Disk before AppleWorks can use them.

Chapter 7: Working With Word Processor Documents

Follow these steps to make a Word Processor file from a text file:

1. If you chose `From a text (ASCII) file`, AppleWorks asks for the text file's pathname. If the file is in the current drive, you can type the name of the file and press `RETURN`. If the file is in another drive, type the complete pathname and press `RETURN`.

2. Type the name of the new file in response to `Type a name for this new file`. Filenames can be up to 15 characters long. They must start with a letter, and they can contain uppercase or lowercase letters, numbers, periods, and spaces. Then press `RETURN`.

Typing and Editing Information

It's easy to type information into Word Processor documents and then edit incorrect information. Guidelines follow.

Word Wraparound

When you type information into a document, AppleWorks formats each line for you according to the margins you have set. If you come to the end of a line in the middle of a word, AppleWorks brings the whole word to the beginning of the next line. This feature, called **word wraparound**, is illustrated in Figure 7-2.

Controlling Wraparound: Control word wraparound by using **sticky spaces**, which do not allow breaks between specified words.

Figure 7-2. Word Wraparound

I have spent considerable time trying to get this prob

I have spent considerable time trying to get this prob

problem

I have spent considerable time trying to get this

problem solved.
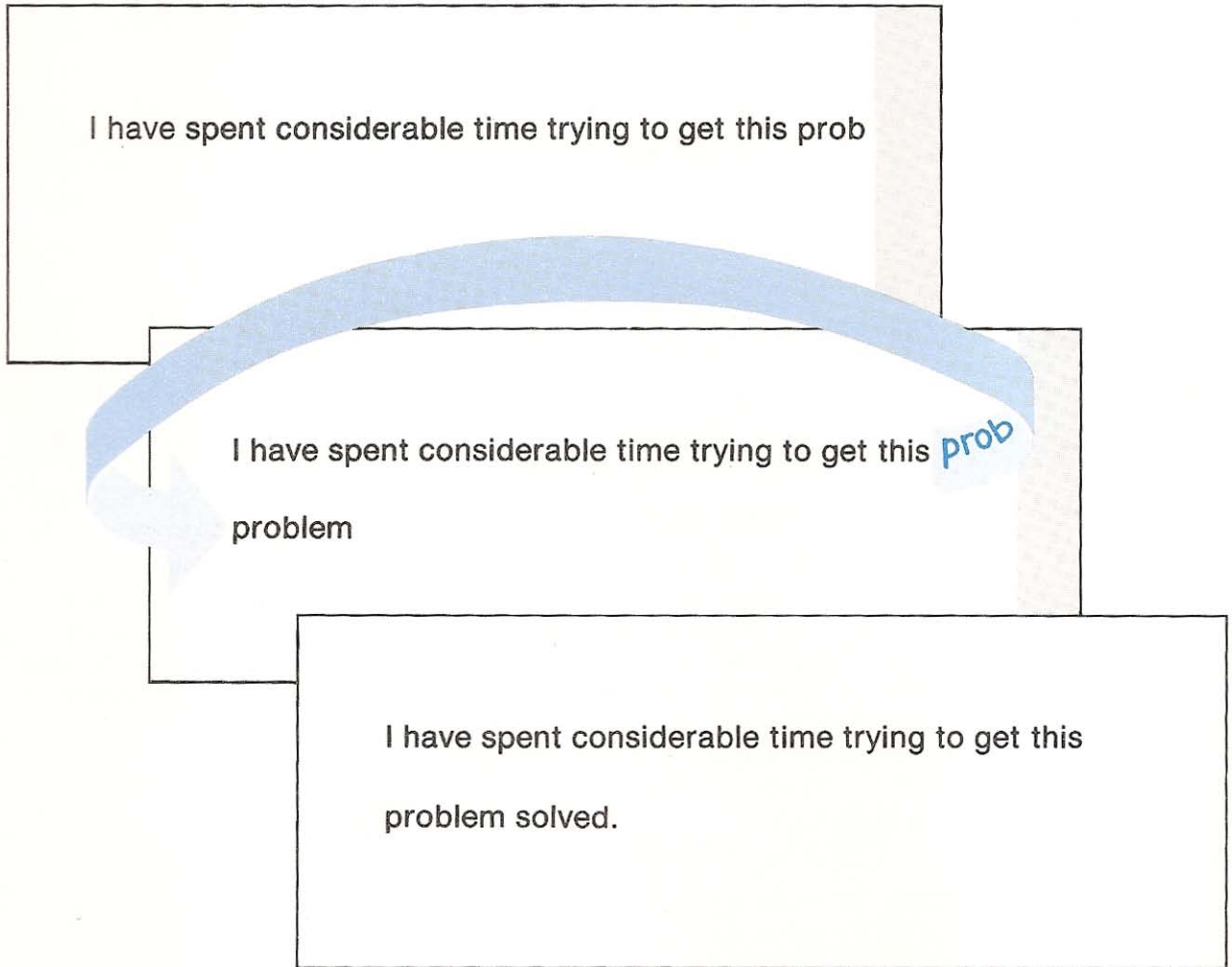
Using the RETURN Key

Each time you press (RETURN), you start a new line. You do not press (RETURN) at the end of each line of information within a paragraph as you do when you type with a typewriter. Instead, you just keep typing. A paragraph has only one (RETURN)—at its end.

Press (RETURN) when you want

- to end a paragraph

- to create a blank line

- to end a line without any punctuation—at the end of each line of the name and address lines in a letter, for example.

AppleWorks Tip

Zoom in to see all the existing carriage returns. They're shown as **blots**, or dotted squares, when you're zoomed in to the text. Press (ᵈ)-(Z) to zoom in.

You can be zoomed in or out when you insert new information or strike over existing information.

Inserting Information

Use the insert cursor, which is the blinking bar cursor, when you want information you type to be inserted. Anything you type with the insert cursor goes to the left of the character the cursor is on. The character the cursor is on and information to the right of it moves to the right.

Use (ᵈ)-(E) to change between the insert and the overstrike cursor.

Striking Over Existing Information

Use the overstrike cursor, which is the blinking rectangular cursor, when you want to type over existing information with new information. Strikeover within old text is limited by existing carriage returns. That is, you can strike over characters up to an existing carriage return. When the cursor comes to the carriage return, characters are inserted. They push the carriage return along until you finish what you are typing.

Use (ᵈ)-(E) to change between the overstrike and the insert cursor.

Editing Information

Here's how to edit your Word Processor documents:

What You Want	What You Use
To erase one character to the left of the cursor	(DELETE)
To delete information to the end of the line the cursor is on	(CONTROL)-(Y) (CONTROL)-(Y) deletes information. The Word Processor closes the space created.
To move the cursor past characters without changing them	The Word Processor's cursor movement keystrokes
To change between the insert and the overstrike cursors	(⌘)-(E)

Moving the Cursor Within a Document

It's easy to move the cursor through a Word Processor document. You can move it character by character, word by word, and line by line, or you can move it through larger units of information.

Chapter 7: Working With Word Processor Documents

To move the cursor within a Word Processor document:

What You Want	**What You Use**
Move the cursor to the right or to the left from character to character	→, ← ← moves the cursor backwards from the first character on a line to the last character on the preceding line. If that line is blank, the cursor moves to the first space on it and then immediately to the end of line above it.
Move the cursor up or down from line to line	↑, ↓
Move the cursor to the right or left to the first character of the next or preceding word or group of characters	(⌘)-(→) or (⌘)-(←)
Move the cursor to the next tab stop	(TAB)
Move the cursor to the previous tab stop	(⌘)-(TAB)
Move the cursor proportionally through a document	(⌘)-(1) through (9)
Move the cursor to the bottom of this screen and then to the bottom of the next screenful of information (20 lines)	(⌘)-(↓)
Move the cursor to the top of this screen and then to the top of the previous screenful of information (20 lines)	(⌘)-(↑)

Deleting Information

You can delete information in two ways: you can use (DELETE) or the Delete command. Both delete methods take you at your word: anything you delete is gone.

If you are typing and make a mistake, you should delete backwards, character by character: Press (DELETE) to erase incorrect information and to back the cursor up to where you can start typing again.

If you want to delete larger chunks of text, follow these steps:

1. Move the cursor to the beginning or the end of the information you want to delete.

2. Press (Ć)-(D).

3. Move the cursor to the beginning or end of the information you want to delete. AppleWorks highlights this information as you go.

4. Press (RETURN). AppleWorks closes up the space where the deleted information was. (If you change your mind about deleting, press (ESC) instead before you press (RETURN).)

To delete printer options, zoom in, move the cursor to the line you want to delete, press (Ć)-(D), and then press (RETURN).

To delete a pagebreak line, put the cursor anywhere on the line, press (Ć)-(D), and then press (RETURN). If you do delete these lines, however, the existing page calculations go away, and you will have to recalculate page breaks. Page break options set with the NEW PAGE option are not deleted.

AppleWorks Tip

Follow this procedure to delete screenfuls of information at a time: press (Ć)-(D). Then press (Ć)-(↑) or (Ć)-(↓) until you have highlighted enough information. Then press (RETURN).

You can delete to the end of your document, too. As a matter of fact, you can delete your whole document at once. First, press (Ć)-(1). Then press (Ć)-(D) and (Ć)-(9). Then press (RETURN).

Replacing Existing Information

AppleWorks lets you replace one, several, or all occurrences of information within a document with new information. Whether you decide to replace occurrences one at a time or all at once depends on whether you want to see each occurrence before the replacement.

The replaced text is the existing information. The replacing text is the new information. Both can be up to 30 characters long.

AppleWorks keeps a record of the last text you asked it to replace *or* find (ᘍ-Ⓕ). When you ask to replace text the next time, AppleWorks supplies the last replaced or found text as its default for what you want this time. Press (RETURN) if you want to replace the next occurrence of this same information. Or type new text and press (RETURN) if you want to replace different information.

For example, if you last asked AppleWorks to replace `mountains` with `molehills, mountains` will be the default for the next Replace or Find.

If the text cannot be found, AppleWorks responds with `Not found, press Space Bar to continue`. That message means the text isn't in that part of the file you asked AppleWorks to search, or in the whole file if you started at the beginning.

Text and Case Sensitive Text

There are two types of text that can be found or replaced. When you choose Find or Replace, you must also choose what type of text you want to work with:

- **Text** will find or replace text that is written in any combination of uppercase or lowercase characters. For example, if you want to find the word *the*, text will also find *The* and *THE*.

- **Case sensitive text** will find or replace only those occurrences of text that *exactly* match the characters you type. For example, if you specify the word *The*, it will only find *The*, and not *the* or *THE*.

Replacing One or Several Occurrences of Information

When you follow these instructions to replace one or several occurrences of information with new information, you can decide whether or not to make the replacement beforehand:

1. Move the cursor to wherever you want AppleWorks to start searching. (Remember you can easily get to the beginning of a document with ⌘-①.)

2. Press ⌘-Ⓡ (for replace).

3. Choose Text or Case sensitive text. AppleWorks supplies the last found or replaced text if you have used Find or Replace in this session.

4. Type the replaced text. Then press (RETURN). Or press (RETURN) to accept the last replaced text.

5. Type the new text. Then press (RETURN). Or press (RETURN) to accept the last new text.

6. Choose One at a time.

7. AppleWorks highlights the first occurrence of the old information. Choose No or Yes, depending on whether or not you want to replace it.

8. If you choose Yes, AppleWorks replaces it and then asks Find next occurrence? Choose No or Yes.

9. AppleWorks continues to highlight occurrences of the old information and asks you if you want to replace it, until it finds no more occurrences.

If you want to stop replacing at any time, press (ESC).

Replacing All Occurrences of Information

You can replace all occurrences of information automatically, without having to check and respond yes or no before each replacement. Here's how:

1. Move the cursor to wherever you want AppleWorks to start searching.

2. Press ⌘-Ⓡ (for replace).

3. Choose Text or Case sensitive text.

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4. Type the text you want to replace. Then press ⌐RETURN⌐. Or press ⌐RETURN⌐ to accept the last replaced text.

5. Type the new text. Then press ⌐RETURN⌐. Or press ⌐RETURN⌐ to accept the last new text.

6. Choose All.

AppleWorks makes all the replacements automatically.

Making replacements automatically gives you less control over the replacements. For example, supposing you want to replace the with those. Each occurrence of the, including there, is replaced by those. This means that there becomes thosere.

To make sure AppleWorks replaces only what you want it to, you should make the text to be replaced unique. You could do this by typing a space at the beginning and at the end of the replaced text and the new text. AppleWorks considers spaces at the beginning or end of the information you type to be part of the text.

Moving Text Within a Document

It's easy to move text within a document: words, paragraphs, or blocks of information up to a total of 250 lines.

To move text within a document:

1. Move the cursor to the first or the last character of the information you want to move.

2. Press ⌐á⌐-⌐M⌐ (for move).

3. Choose Within document. Then AppleWorks presents the text in zoomed-in format, so you can see all the carriage returns and printer options in the text. They help you be very specific about what information you move.

4. Move the cursor to the end or the beginning of the information you want to move. Then press ⌐RETURN⌐.

5. Move the cursor to the place where you want to move the information.

6. Press ⌐RETURN⌐ again. The information is moved.

If you move part of a paragraph, AppleWorks closes up the space where the information was.

Copying Text Within a Document

Copying text within a document makes it easy to duplicate (or *boilerplate*) paragraphs or sections you want to appear several times. You can make an exact copy of text wherever you want and then make changes if necessary. You can copy up to a total of 250 lines at once.

To copy text within a document:

1. Move the cursor to the first or last character of the information you want to copy.

2. Press (⌘)-(C) (for copy).

3. Choose Within document. Then AppleWorks presents the text in zoomed-in format, so you can see all the carriage returns and printer options in the text. That makes it easy for you to copy exactly what you want.

4. Move the cursor to the end or the beginning of the information you want to copy. Then press (RETURN).

5. Move the cursor to the place where you want to copy the information.

6. Press (RETURN) again. The information is copied.

Chapter 7: Working With Word Processor Documents

AppleWorks finds five types of information in your document for you:

- Text—words or phrases, usually—that you provide as comparison information. It finds text regardless of uppercase or lowercase characters in the comparison information.

- A specific page

- Case sensitive text, which finds text exactly as you typed it in the comparisons, including uppercase and lowercase characters.

- Printer options

Finding markers is discussed in the section, "Using Markers."

- A marker, which identifies a certain spot in the document.

This section provides information about the first four.

Finding Text

When you supply text for AppleWorks to find, AppleWorks begins looking at the cursor position for the first occurrence of the text, which can be up to 30 characters long. Then you can ask for the next occurrence, if you want.

AppleWorks keeps a record of the last text you asked it to find *or* replace (with $\circ$-$\mathbb{R}$). When you ask to find text the next time, AppleWorks supplies the last found or replaced text as its default for what you want this time.

To find specific text, ignoring uppercase or lowercase:

1. Move the cursor to wherever you want AppleWorks to start searching. (Remember you can easily get to the beginning of a document with $\circ$-$\mathbb{1}$.)

2. Press $\circ$-$\mathbb{F}$ (for find).

3. Choose Text to indicate you want to find any text that matches your comparison. If you have already used Find or Replace, AppleWorks supplies the last found or replaced text.

4. Type the text and press (RETURN). Press (RETURN) if you want to find the next occurrence of the last found or replaced text. AppleWorks moves the cursor to the text and highlights it.

5. Choose No or Yes, depending on whether you want AppleWorks to find the next occurrence of the text.

Spaces at the beginning or end of the comparison information are part of the text.

Finding a Specific Page

To find a specific page, follow these steps:

1. Press ⌘-F.

2. Choose Page.

3. Type the page number and press RETURN.

AppleWorks starts searching for pages from the beginning of the document. The cursor moves to the first character on the page you request.

> **AppleWorks Tip**
>
> To get to any page past page 1, you must have already calculated page numbers (⌘-K) or printed the document (in which case AppleWorks automatically paginates the document).

Finding Case Sensitive Text

When you supply text for AppleWorks to find, AppleWorks begins looking at the cursor position for the first occurrence of the text, which can be up to 30 characters long. Then you can ask for the next occurrence, if you want.

AppleWorks keeps a record of the last text you asked it to find or replace (⌘-R). When you ask to find text the next time, AppleWorks supplies the last found or replaced text as its default for what you want this time.

To find specific text with characters in uppercase or lowercase *exactly* as you typed them:

1. Move the cursor to wherever you want AppleWorks to start searching. (Remember you can easily get to the beginning of a document with ⌘-1.)

2. Press ⌘-F (for find).

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3. Choose `Case sensitive text` to indicate you want to find any text that exactly matches your comparison. If you have already used Find or Replace, AppleWorks supplies the last found or replaced text.

4. Type the text and press (RETURN). Or just press (RETURN) to find the next occurrence of found or replaced text. AppleWorks moves the cursor to the text and highlights it.

5. Choose `No` or `Yes`, depending on whether you want AppleWorks to find the next occurrence of the text.

Spaces at the beginning or end of the comparison information are part of the text.

Finding a Printer Option

To find a printer option within a document, follow these steps:

1. Press (ᵹ)-(F).

2. Choose `Options for Printer`.

3. Type the two-letter option code (`CI` or `PH`, for example) that identifies the printer option you want to find and press (RETURN).

Viewing Your Document

For the most part, AppleWorks follows this rule: What you see is what you get! That is, whatever you see displayed is what you will get when you print. It's easy, therefore, to get a pretty accurate idea of how a document will look just by looking at how it's displayed.

Several AppleWorks features will bend the rule a bit:

● Characters printed in proportional spacing will look different from those on the screen because characters on the screen are all the same width.

● Printer options noted by a caret on the screen cause the number of characters per line on the screen to be different from the number of characters when printed, because carets don't print.

- Printing with more than 12 characters per inch or 79 characters per line may cause what's printed to look different from what's on the display.

- Double or triple spacing.

- Page headers and footers are not shown on each page of the display.

For example, if you print with 10 characters per inch and use no printer options with carets, you can expect that what you see is what you get. If you have a wide printer platen or use very narrow margins, however, the rule doesn't work because more characters will print on each line than can be displayed.

Using Markers

Markers are places you identify in your document. They help you move the cursor to specific places quickly. After you identify a place (or *set a marker*), it's easy to jump to that place (or *find a marker*).

Setting Markers

Follow these steps to set a marker:

1. Move the cursor to the place in the document where you want to set the marker.

2. Press (ᶜ)-(O) (for printer options).

3. Type SM (for set marker) and press (RETURN).

4. Type the number of the marker, 1, 2, or 3, for example. The marker number can be any number between 1 and 254. That's probably enough!

5. Press (ESC).

Finding a Marker

Once you identify the spot by setting a marker, it's easy to jump to that spot by asking AppleWorks to find the marker. AppleWorks starts searching for markers at the beginning of the document regardless of cursor position.

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To find a marker:

1. Press (⌘)-(F).

2. Choose Marker.

3. Type the number of the marker (1, 2, or 3, for example), and press (RETURN).

Using Tabs

Tabs are always noted by a vertical line in the dashed line across the top of the display. Tabs let you control the movement of the cursor across a line. New documents have tabs every five spaces. Using tabs involves setting and clearing the tabs and then moving the cursor to the tabs.

AppleWorks Tip

Set tabs for formatting columns within text.

Watch the column indicator as you are setting tabs.

Setting and Clearing Tabs

Here's how to set and clear tabs.

1. Press (⌘)-(T). The cursor moves to the double line at the top of the screen, where tabs are noted with a vertical line.

2. Use (←) and (→) to move the cursor to wherever you want to set or clear a tab. Press (S) to set a tab or (C) to clear a tab in that spot.

   Or press (R) to remove all existing tabs.

3. Press (ESC) when you finish setting or clearing tabs.

Moving the Cursor to Tabs

To move the cursor to tabs, just press (TAB). Use (⌘)-(TAB) to move the cursor to the previous tab.

Changing the Name of Your File

Here's how to change the name of your file:

1. Press ⌘-N.

2. Type the new name of the file. The name can be up to 15 characters long. It must start with a letter, and it can contain uppercase and lowercase letters, numbers, spaces, and periods. Then press RETURN.

AppleWorks Tip

AppleWorks changes the name of the file on the Desktop. When you save the file, it is saved with the new name. That means you still have the file under its old name if it is an old file. You may want to delete the file from the disk under its old name.

Changing the name of the file is one way to keep several copies of the same file and make sure you know the difference between them.

Formatting a Word Processor Document

Formatting a Word Processor Document

Formatting a Word Processor document involves using printer options

- to control horizontal spacing

- to control density of printing

- to control vertical spacing

- to control layout, such as hanging paragraphs, and headers and footers

- to use special printing techniques, such as boldface and underlining

- to control paging

- to provide information from the keyboard during printing.

Sample Documents

Several sample documents show some of AppleWorks' features for formatting Word Processor documents. The first, shown in Figure 8-1, illustrates a simple memo.

Figure 8·1.

Tower of Mammon Document

```
Subject:      Tilt in the Tower of Mammon

To:           Nicholas Beelzebub, Commissioner, Infernal
              Works

From:         Emperor Nero I, Superintendent, Buildings and
              Grounds

Date:         13 July 1973

Measurements confirm our citizens' impression that the Tower
of Mammon is tilting.  Immediate relocation of the gold
bullion reserves to the west wing of the tower is the best
first step toward a solution.

The Tower of Mammon now leans eastward 5 degrees from the
vertical.  The tilt is progressing at an estimated 0.1
degrees per year.  Toppling will occur in appproximately 400
years.

As the Pisan architects in Buildings and Grounds can state
from previous experience, instability in the foundation soil
at the east of the tower is the main cause of the tilt.  In
addition, a significant contributing factor is the
concentration of the gold bullion reserves in the tower's
east wing.  Support for this explanation lies in the
observations (1) that the Styx River is gradually edging
westward toward the tower and (2) that the temperature rise
of the foundation soil from the west face to the east face
of the tower is nearly 200° F.

A study of the possibility of diverting the Styx merits
implementation and may yield a long-term remedy.
Advertising the tower as a tourist attraction and charging
admissions fees could provide funds for this study.  To
check and perhaps reverse the tilt, the only practical
solution immediately available is to shift the bullion to
the west wing.  The temperature-rise problem, however, seems
at present insoluble; it is an aspect of our environment's
basic thermal problem, which as you know has thus far
resisted solution despite our most strenuous efforts.
```

The formatting options in Figure 8-1 are set as follows:

1. Platen width = 8 inches
2. Paper length = 11 inches
3. Top margin = 1 inch
4. Left margin = 1 inch
5. Right margin = 1 inch
6. Right margin is unjustified.
7. Characters per inch = 10
8. Lines per inch = 6
9. Single spacing
10. Superscript

Chapter 8: Formatting a Word Processor Document

Figure 8-2 shows a more formal document with several special formatting techniques.

Figure 8-2. *Qualifications Document*

```
                              STATEMENT OF QUALIFICATIONS AND EXPERIENCE

    1.    INTRODUCTION

    1.1   FOREWORD

    Our Company (OC) is a division of The Big Company, Inc. (TBCI) and its primary
    business is providing engineering consulting services for the development of
    computer-based supervisory control and data acquisition systems.  TBCI staff
    members have been leaders in the control system field over the past 20 years.
    TBCI staff also have experience in planning and development of large systems
    that require computers for information management and engineering planning and
    design.

    TBCI is uniquely qualified to supply consulting services for these types of
    computer-based systems projects for the following reasons:

        o    Key personnel have successfully completed projects that
             embrace every discipline and technological area required of
             computer-based  process  control  systems  and  information
             management systems.

        o    TBCI staff also have experience in research and development
             projects that use computer-based systems to assist in
             analysis of research efforts including:

             -    Intelligent information retrieval

             -    Computer system architecture

             -    Distributed decision making

        o    Members  of  the  staff  are  acknowledged  leaders  in  the
             supervisory control and energy management system fields.

        o    TBCI organizes and communicates information according to
             industry standards in order to maximize its usefulness for
             TBCI clients.

    1.2   ORGANIZATION

    TBCI corporate headquarters office is located in Cupertino, California. Its
    projects are managed by a Senior Consultant who may be a specialist in one or
    more of the technical disciplines included in the total computer-based control
    system.   The Project Manager is assisted as required by other TBCI staff
    members, who are specialists in complementary technical disciplines.

                                   Page 1
```

The formatting options in Figure 8-2 are set as follows:

1. Platen width = 8 inches
2. Paper length = 11 inches
3. Top margin = 1 inch
4. Centered title
5. Left margin = .5 inch
6. Right margin = 1 inch
7. Right margin is justified.
8. Characters per inch = 12
9. Lines per inch = 6
10. Single spacing
11. Bullets
12. Page footer with page number
13. Bottom margin = 1 inch

Sample Documents

Using the Word Processor's Printer Options

This section

- defines the Word Processor's printer options.
- tells how to change them.
- discusses AppleWorks' default values for the main printer options.

What Are Printer Options?

Printer options are specifications that control the format of your document and how it prints. Some printer options control all following text, such as margins; spacing; whether text should be justified, unjustified, or centered. These options remain in effect in your document until you change them. Single spacing remains in effect, for example, until a new point where you change the spacing to double or triple. Margins stay the same until the new point where you change them. And text is justified until you specify that you want it unjustified or centered. Thus you may have different margins and spacing in the same document, as well as justified, unjustified, and centered text.

Other options stay in effect in your document until you end them or until the end of the paragraph or line they're in, whichever is sooner. For example, text is underlined until you stop the underlining or until the end of the paragraph. The same goes for boldface. Superscripting and subscripting stop automatically at the end of the current line.

Still other printer options communicate information to the printer. For example, Skip Lines tells the printer to skip a number of lines you specify; Enter Keyboard tells the printer to stop at this point so you can type information from the keyboard.

AppleWorks' printer options give you a great deal of control over printing your documents.

Chapter 8: Formatting a Word Processor Document

Zooming In on Printer Options

Any time you want to see the text marked with printer options, zoom in. To do so, press $\circ$-$\boxed{Z}$.

The document illustrated in Figure 8-2 looks like the display in Figure 8-3 if you zoom in.

Figure 8-3. *Zoomed-In Qualifications Document*

```
File: Qualifications          REVIEW/ADD/CHANGE          Escape: Main Menu
=========!==================================================================
————Bottom Margin: 1.0 inches
————Top Margin: 1.0 inches
————Chars per Inch: 12 chars
————Left Margin: 0.5 inches
————Centered
^STATEMENT OF QUALIFICATIONS AND EXPERIENCE^※

※
————Justified
※
1. INTRODUCTION※
※
1.1 FOREWORD※
※
Our Company (OC) is a division of The Big Company, Inc. (TBCI) and its primary
business is providing engineering consulting services for the development of
computer-based supervisory control and data acquisition systems. TBCI staff
members have been leaders in the control system field over the past 20 years.
TBCI staff also have experience in planning and development large systems that
require computers for information management and engineering planning and
design.※
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Type entry or use  commands   Line 6 Column 6              -? for Help
```

Carriage returns are marked by blots.   Special printer options.

The printer options you see when you zoom in are the ones added or changed from AppleWorks' default values. You can see AppleWorks' defaults by using the $\circ$-$\boxed{O}$ feature, described next.

AppleWorks Tip

You can use all the Word Processor's features while you are zoomed out or in. Zoom in to keep track of printer options while you are working with a document.

Changing Printer Options

Follow these steps to change printer options:

1. Put the cursor where you want the printer option to take effect. If you want an option to apply to your entire document, press (ᑕ)-(1) to get to the top of the document.

2. Press (ᑕ)-(O) (for options).

AppleWorks displays the text in zoomed-in format and the list of printer options. It asks you which option you want to change, as Figure 8-4 illustrates.

Figure 8-4. Printer Options

```
File: Tower of Mammon          PRINTER OPTIONS          Escape: Review/Add/Change
================================================================================



Subject:       Tilt in the Tower of Mammon


To:            Nicholas Beelzebub, Commissioner, Infernal
               Works


From:          Emperor Nero I, Superintendent, Buildings and
               Grounds


Date:          13 July 1973
PW=8.0 LM=1.0 RM=1.0 CI=10 UJ PL=11.0 TM=1.0 BM=2.0 LI=6 SS
Option:                 UJ: Unjustified    GB: Group Begin     BE: Boldface End
                        CN: Centered       GE: Group End       +B: Superscript Beg
PW: Platen Width        PL: Paper Length   HE: Page Header     +E: Superscript End
LM: Left Margin         TM: Top Margin     FO: Page Footer     -B: Subscript Begin
RM: Right Margin        BM: Bottom Margin  SK: Skip Lines      -E: Subscript End
CI: Chars per Inch      LI: Lines per Inch PN: Page Number     UB: Underline Begin
P1: Proportional-1      SS: Single Space   PE: Pause Each page UE: Underline End
P2: Proportional-2      DS: Double Space   PH: Pause Here      PP: Print Page No.
IN: Indent              TS: Triple Space   SM: Set a Marker    EK: Enter Keyboard
JU: Justified           NP: New Page       BB: Boldface Begin
```

Code that stands for the option

Options are grouped by function.

List of printer options

Main printer options in effect right now. You can always find out the current values for the main printer options by checking this display.

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3. Type the code that stands for the printer option you want to change or start using. Then press (RETURN).

4. Type the new value if AppleWorks asks for one. If the value is a whole number, such as 1 inch or 2 inches, you don't have to type the decimal. Then press (RETURN).

5. Change more printer options, if you want.

6. Press (ESC) after you finish.

AppleWorks' Default Values for Main Printer Options

The following are AppleWorks' default values for the main printer options. These printer options and their defaults are in effect for all new documents. You can change them if you want a different value:

- Platen width = 8.0 inches
- Left margin = 1.0 inches
- Right margin = 1.0 inches
- Characters per inch = 10
- Text is unjustified
- Paper length = 11 inches
- Top margin = 0 inches
- Bottom margin = 2 inches
- Lines per inch = 6
- Single spacing

These options are described in the sections that follow.

Controlling Horizontal Spacing

Table 8-1 lists the three printer options that control horizontal spacing.

Table 8-1. *Printer Options for Horizontal Spacing*

The Printer Option	Controls
Platen width (PW)	The distance in inches the printer's printhead travels across the paper. This number should be the same as the printer's platen width you specify in `Other Activities` menu option `Specify information about your printer(s)`. Default = 8.0 inches The maximum you can use is 13.2 inches.
Left margin (LM)	The width of the left margin in inches Numbers can be in tenths of inches, that is, 1.5 inches, 1.6 inches. Default = 1.0 inches The maximum you can use is 9.0 inches.
Right margin (RM)	The width of the right margin in inches Numbers can be in tenths of inches, that is, 1.5 inches, 1.6 inches. Default = 1.0 inches The maximum you can use is 9.0 inches.

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Horizontal spacing is also controlled by print density.

Use the following formula to figure out the width of your text:

	Platen Width	For example:		8.0 inches
-	Left Margin		-	1.5 inches
-	Right Margin		-	1.0 inches
=	Text Width		=	5.5 inches

Controlling Print Density

You can control print density by choosing to print from 4 through 24 characters per inch depending on the capability of your printer. Then you print nonproportionally. That is, all letters take up the same amount of space, whether they are narrow, like *i*'s, or wide, like *m*'s.

You can also choose to print proportionally, again depending on the capability of your printer. Then narrow and wide letters take up narrow and wide spaces. *l*'s take up narrow spaces and *m*'s take up wide spaces. Table 8-2 shows the number of proportional spacing types on various printers.

If you are unsure of how your printer will treat a specific print density, try it!

Table 8-2. *Printers and Proportional Spacing Types*

Printer	Number of Proportional Spacing Types
Apple Dot Matrix, Imagewriter	2
Apple Daisy Wheel	1
Other Daisy Wheel	Varies
Other Dot Matrix	Varies
Silentype	0

Table 8-3 shows comparable examples of text printed in different type densities using a Dot Matrix Printer and a Daisy Wheel Printer.

Table 8-3a. *Printing Examples: Dot Matrix Printer*

10 Characters per Inch

Humpty Dumpty experienced a rather substantial diminution in the magnitude of the coordinates of his vertical elevation as measured skywise from an origin coincident with the surface component of the terra firma in this planetary body.

12 Characters per Inch

Humpty Dumpty experienced a rather substantial diminution in the magnitude of the coordinates of his vertical elevation as measured skywise from an origin coincident with the surface component of the terra firma in this planetary body.

17 Characters per Inch

Humpty Dumpty experienced a rather substantial diminution in the magnitude of the coordinates of his vertical elevation as measured skywise from an origin coincident with the surface component of the terra firma in this planetary body.

Proportional 1

Humpty Dumpty experienced a rather substantial diminution in the magnitude of the coordinates of his vertical elevation as measured skywise from an origin coincident with the surface component of the terra firma in this planetary body.

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Table 8-3b. *Printing Examples: Daisy Wheel Printer*

10 Characters per Inch

Humpty Dumpty experienced a rather substantial diminution in the magnitude of the coordinates of his vertical elevation as measured skywise from an origin coincident with the surface component of the terra firma in this planetary body.

12 Characters per Inch

Humpty Dumpty experienced a rather substantial diminution in the magnitude of the coordinates of his vertical elevation as measured skywise from an origin coincident with the surface component of the terra firma in this planetary body.

Proportional 1

Humpty Dumpty experienced a rather substantial diminution in the magnitude of the coordinates of his vertical elevation as measured skywise from an origin coincident with the surface component of the terra firma in this planetary body.

To change the print density:

1. Put the cursor where you want the new print density to start. Put the cursor at the beginning of the document if you are changing from AppleWorks' default value, 10 characters per inch, to a new one for the whole document.

2. Press ⌘-Ⓞ.

3. Type P1 or P2 and (RETURN) if you are choosing a proportional printing style, or type CI and (RETURN) if you want to change the characters per inch value. Then type the new value, from 4 through 24, and press (RETURN).

4. Press (ESC).

If you choose a print density your printer doesn't have, you will continue to print using whatever print density was just in effect. When in doubt, try it out!

AppleWorks Tip

Each of these different print densities affects the display of your document.

The print density you select remains in effect until you change it within your document. For example, you may print a letterhead at 10 characters per inch and then change the print density for the text to 12 characters per inch.

P1 and P2 don't work well with tabular information.

Controlling Vertical Spacing

The eight printer options that control vertical spacing are listed in Table 8-4.

Table 8-4. Printer Options for Vertical Spacing

The Printer Option	Controls
Paper length (PL)	The vertical measurement of the paper you are using, in inches
	Default = 11 inches
	The maximum you can use is 25.4 inches.

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The Printer Option	Controls
Top margin (TM)	The length in inches from the top of the paper to the first line of printing
	Default = 0.0 inches. This value accommodates AppleWorks users who have sheet-feed printers (printers with no tractor). If you have one of these printers, you should leave the default value at 0 and position the paper exactly where you want the first line to be.
	AppleWorks users with tractor-feed printers will probably want to change this value.
	The maximum you can use is 9.0 inches.
Bottom margin (BM)	The length in inches from the last line of printing to the bottom of the paper
	Default = 2.0 inches
	The maximum you can use is 9.0 inches.
Single, double, or triple spacing (SS, DS, or TS)	Whether the information is single, double, or triple spaced. Only one of these, the last one specified, can be in effect.
	You can change the spacing whenever you want within a document.
	Default setting is single spacing.
	Displayed lines are single spaced. Double and triple spacing takes effect when you print.

Controlling Vertical Spacing

The Printer Option	Controls
Lines per inch (LI)	How many lines will be printed per vertical inch on the page
	Default = 6
	You can use 6 or 8.
Skipping lines (SK)	The number of lines the printer should leave blank at this point. Use this option to leave space for illustrations.
	The most lines you can skip is the number it takes to make a page.

Use the following formula to figure out the length of your text:

	Paper Length	For example:		11.0 inches
-	Top Margin		-	1.5 inches
-	Bottom Margin		-	1.5 inches
=	Text Width		=	8.0 inches

Controlling Layout

AppleWorks offers you a number of ways to control layout:

- Hanging paragraphs and bullets
- Justification
- Page headers and footers

This section tells you how to use them.

Making Hanging Paragraphs and Bullets (Indenting)

Hanging paragraphs and bulleted items may sound violent, but they're used frequently in business documents. The first line of a hanging paragraph begins at the left margin and succeeding lines are indented. The numbered steps in this manual are hanging paragraphs. And here are other examples of hanging paragraphs (and not necessarily of good English!):

```
Reserve the apostrophe for it's proper use
        and omit it when its not needed.

Place pronouns as close as possible,
        especially in long sentences,
        as of 10 or more words, to
        their antecedents.

If you reread your work, you will find on
        rereading that a great deal of
        repetition can be avoided by
        rereading and editing.
```

The first line of a bulleted item has an *o* or asterisk or another character in the left margin, and succeeding lines are indented. Here are some examples of bulleted items (and again, not necessarily of good English):

```
o Hyphenate only between two sy-llables,
and avoid un-necessary hyphens.

o A writer must not shift your point of
view.

o Last but not least, avoid cliches like
the plague; seek viable alternatives.
```

To create hanging paragraphs and bulleted items with AppleWorks:

1. Put the cursor at the beginning of the line where you want the hanging paragraphs or bulleted items to begin.

2. Press (⌂)-(O).

3. The first line of the hanging paragraph or bulleted item is the left margin of the document. Change the left margin temporarily if you want the paragraphs or items to start further to the right than the rest of the document.

You may want to change the right margin, too, to make the bulleted items narrower than the rest of the document.

4. Type I N (for indent after the first line) and press (RETURN).

5. Type a number to specify the number of spaces you want succeeding lines to be indented. Then press (RETURN).

6. Press (ESC).

Now begin typing the hanging paragraphs and bulleted items. When you type the bulleted items, type the o (or * or – or number) at the left margin. Then space over (or tab) to where you want to start typing. Beginning with the second line, lines are indented the number of spaces you request in step 4. Figure 8-5 shows a display with indenting commands and text.

Figure 8-5. Indented Text

```
File: Qualifications          REVIEW/ADD/CHANGE             Escape: Main Menu
==========!===================================================================
---------Group Begin
TBCI is uniquely qualified to supply consulting services for these types of
computer-based systems projects for the following reasons:

---------Left Margin:   1.0 inches
---------Right Margin:   1.5 inches
---------Indent: 5 chars
        o       Key personnel have successfully completed projects that
                embrace every discipline and technological area required of
                computer-based process control systems and information
                management systems.

        o       TBCI staff also have experience in research and development
                projects that use computer-based systems to assist in
                analysis of research efforts including:

                -       Intelligent information retrieval

                -       Computer system architecture

----------------------------------------------------------------------------
Type entry or use A commands              Line 41   Column  1     A-? for Help
```

Indented text as a result of new left margin.   Indented text as a result of new right margin.

Indented text as a result of Indent command.

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To stop the hanging paragraphs or bulleted items, follow these steps:

1. Press ⌘-Ⓞ again.

2. Type I N and press RETURN.

3. Type 0 and press RETURN.

4. Reset margins you changed previously.

5. Press ESC.

AppleWorks Tip

When you indent while using proportional printing or justification, each indented space is the width of a *0*. You can indent up to 64 spaces (which equals 64 *0*'s).

You have to use the Indent command to indent anything other than a line following a carriage return. If you try to use spaces to indent, the program will remove them.

Justifying, Unjustifying, and Centering

Text is either justified, unjustified, or centered. Figure 8-6 illustrates all three.

Figure 8-6. Justified, Unjustified, and Centered Text

```
Humpty Dumpty experienced a rather substantial diminution in
the magnitude of the coordinates of his vertical elevation
as measured skywise from an origin coincident with the
surface component of the terra firma in this planetary body.
```

```
                Humpty Dumpty experienced a rather
           substantial diminution in the magnitude of
           the coordinates of his vertical elevation as
           measured skywise from an origin coincident
        with the surface component of the terra firma
                      in this planetary body.
```

```
Humpty Dumpty experienced a rather substantial
diminution in the magnitude of the coordinates of his
vertical elevation as measured skywise from an origin
coincident with the surface component of the terra
firma in this planetary body.
```

Centered   Justified (even right edge)

Unjustified (uneven right edge)

Whichever option of these three is in effect remains until you select another one. For example, if you choose *centered* for headers, you will probably want to change to *justified* or *unjustified* for the text.

To change these options:

1. Put the cursor on the line where you want the change to take effect.

2. Press (ⓒ)-(O).

3. Type the option you want: UJ for unjustified, JU for justified, or CN for centered. Then press (RETURN).

4. Press (ESC).

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You can put a one-line page header at the top of each page. AppleWorks prints the page header on the first printing line after the top margin. Then it skips two lines and begins to print the text.

And you can put a one-line page footer at the bottom of each page. AppleWorks prints the page footer on the last printing line before the bottom margin. It skips two or more lines between the last line of the text and the page footer.

Figure 8-7 shows several examples of page headers and footers.

Figure 8-7. *Headers and Footers*
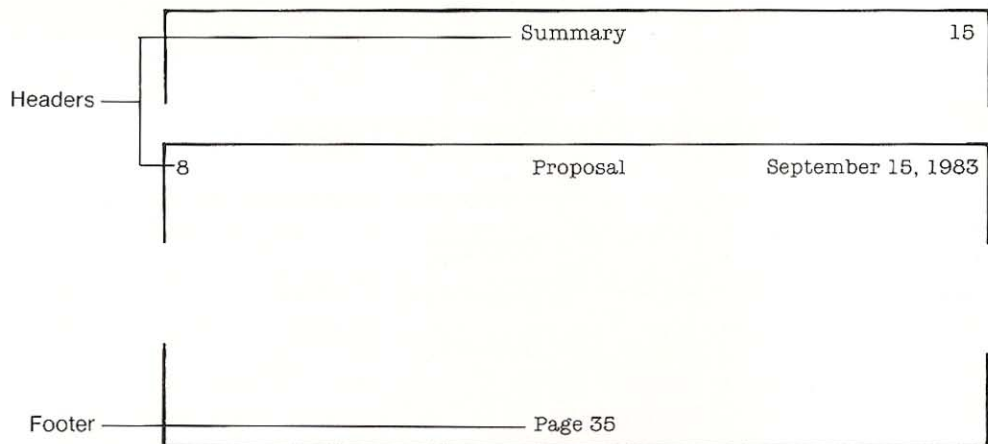
Here's how to specify page headers and footers:

1. Position the cursor correctly for the header or footer. The page header printer option must be on the top line of the page where you want the headers to start. The page footer printer option can be anywhere on the page where you want the footers to start.

2. Press Ⅾ-Ⅾ.

3. Type HE for a header or FO for a footer and press (RETURN).

4. Press (ESC).

5. Type the header or footer as if you were typing a line of text. The line that follows the `-------Page Header` or `-------Page Footer` notation becomes the header or footer.

Any page header or footer you specify prints at the top or bottom of each page until you change it.

To cause page headers and footers to stop, follow the page header or footer printer option with a blank line.

Page header and footer printer options display, but they don't print.

AppleWorks Tip

Use the `Print Page No. (PP)` printer option to get page numbers on headers or footers.

Using Special Printing Techniques

Special printing techniques let you use

- Boldface
- Underlining
- Subscripts
- Superscripts
- Sticky spaces.

Using Boldface and Underlining

To specify boldface or underlining:

1. Put the cursor on the first character to be boldfaced or underlined.

2. Press (Ġ)-(O).

3. Type BB for boldface begin or UB for underline begin. Then press (RETURN).

4. Press (ESC).

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AppleWorks inserts a caret (^) right before the first boldfaced or underlined character. All succeeding characters are boldfaced or underlined when they print until you either stop the boldfacing or underlining or the paragraph ends.

To stop boldfacing or underlining:

1. Put the cursor on the character or space just past those to be boldfaced or underlined.

2. Press ⟨ó⟩-⟨O⟩.

3. Type BE for boldface end or UE for underline end. Then press ⟨RETURN⟩.

4. Press ⟨ESC⟩.

AppleWorks inserts a caret (^) right after the last boldfaced or underlined character.

When you want to find out what the carets mean, move the cursor to each one. Depending on the meaning of the caret, Boldface Begin, Boldface End, Underline Begin, or Underline End appears at the bottom of the screen.

To shortcut the printer options when you want to underline or boldface text, use these special commands:

• Press ⟨CONTROL⟩-⟨B⟩ to begin and end boldface.

• Press ⟨CONTROL⟩-⟨L⟩ to begin and end underlining.

⟨CONTROL⟩-⟨B⟩ and ⟨CONTROL⟩-⟨L⟩ either start or stop boldface and underlining, depending on what's in effect when you use each. They also display the carets.

Using Superscripts and Subscripts

To specify text for superscripts and subscripts:

1. Put the cursor on the first character to be superscripted or subscripted.

2. Press ⟨ó⟩-⟨O⟩.

3. Type +B for superscript begin or -B for subscript begin. Then press ⟨RETURN⟩.

4. Press ⟨ESC⟩.

AppleWorks inserts a caret (^) right before the first superscripted or subscripted character. All succeeding characters are superscripted or subscripted until you either stop the superscripting or subscripting or the current line ends.

To stop superscripting or subscripting:

1. Put the cursor on the character or space just past those to be superscripted or subscripted.

2. Press ⌘-O.

3. Type +E for superscript end or -E for subscript end. Then press RETURN.

4. Press ESC.

AppleWorks inserts a caret (^) right after the last superscripted or subscripted character. When you want to find out what the carets mean, move the cursor to each one. Depending on the meaning of the caret, `Superscript Begin`, `Superscript End`, `Subscript Begin`, or `Subscript End` appears at the bottom of the screen.

Using Sticky Spaces

Sticky spaces are spaces between words or groups of characters. But unlike regular spaces, which come between words or groups of characters that can be separated at the end of a line, sticky spaces come between words or group of characters that cannot be broken at the end of a line.

For example, suppose the name `Gerhard P. T. Hakelfinger` occurs in your text and you don't want the name split. Just use a sticky space between the parts of the name instead of a regular space. (Of course, word wraparound could cause the name to start on a line following a very short line!)

To insert a sticky space, press ⌘-SPACE. AppleWorks inserts a caret, which signifies the sticky space. When you put the cursor on the caret, `Sticky Space` displays at the bottom of the screen.

Chapter 8: Formatting a Word Processor Document

Controlling Paging and Page Numbers

This section provides information on controlling paging and page numbers. It tells you how to

- calculate page numbers
- specify a new page
- specify groups of information
- number pages
- print page numbers.

Calculating Page Numbers

When AppleWorks calculates page numbers, it breaks pages appropriately and assigns page numbers to the pages. AppleWorks follows several rules when it calculates page numbers:

- AppleWorks won't break paragraphs so that one line of the paragraph is split from the rest of the paragraph. The beginning of a paragraph on one page must have at least two lines, or that text goes to the top of the next page. Similarly, at least two lines of a paragraph must be at the top of the following page.
- AppleWorks won't overrule page breaks you specify.
- If you specify that a group of information shouldn't be broken, AppleWorks won't break it.

If you don't care what happens to the page breaks, go ahead and print the document. AppleWorks will calculate page numbers and page your document according to its rules. It will also mark the file with page breaks. The next time you display your document, you see page breaks as dashed lines across the display.

If you do care what happens to page breaks, follow these steps:

1. After you type the document and before you print it, press Ḟ-Ḵ (for calculate).

2. Choose the printer where you want to ultimately print.

Now you can look at page breaks by moving the cursor through the document.

If you make any changes to text after calculating page numbers, page breaks go away. Then you should calculate new ones.

Specifying a New Page

You may want to control page breaks yourself. If you do, use the new page feature:

1. Put the cursor on the line that should be at the top of a new page.
2. Press (⌘)-(O).
3. Type NP and press (RETURN).
4. Press (ESC).

AppleWorks Tip

The primary use of the new page feature is to allow you to make sure titles go at the top of a new page.

AppleWorks won't overrule your page breaks but it will break pages between your page breaks if the text between them is longer than one page.

If you specify a new page in the middle of a paragraph, AppleWorks puts the page break before the paragraph. To get a new page in the middle of a paragraph, you have to break the paragraph yourself by inserting a carriage return where you want the paragraph to break *before* you use the new page option.

Specifying Groups of Information

When you particularly want to keep a chunk of information together, so that AppleWorks won't break it up between pages, you can *group* it. Here are some examples of information you may want to group:

- The introductory sentence and the bulleted items that follow.
- The title and the first paragraph of information in a subsection of text.
- Items in a list.

Chapter 8: Formatting a Word Processor Document

Here's how to group information.

1. Put the cursor on the first line of the group.

2. Press ⌘-O.

3. Type GB and press (RETURN).

4. Put the cursor on the line following the last line of the group.

5. Press ⌘-O.

6. Type GE and press (RETURN).

Numbering Pages

You can control page numbering yourself by overriding AppleWorks' page numbers. When you want to control page numbers, you assign a page number to a specific page. That page and all pages that follow are numbered accordingly.

To assign a page number:

1. Put the cursor somewhere on the page you want to assign a number to.

2. Press ⌘-O.

3. Type PN and press (RETURN).

4. Type the number of the page up to 511. Then press (RETURN).

Printing Page Numbers

You can cause page numbers to print on a page, either the numbers AppleWorks calculates or those you assign. Page numbers can be printed in the header, the footer, and the text.

For example, you might want the page number to print within a footer or within a header, as Figure 8-8 illustrates.

Figure 8-8. *Page Numbers Within Headers and Footers*

Within a footer ———————————————————————— Page 35

Within a header ———————————————— Summary   15
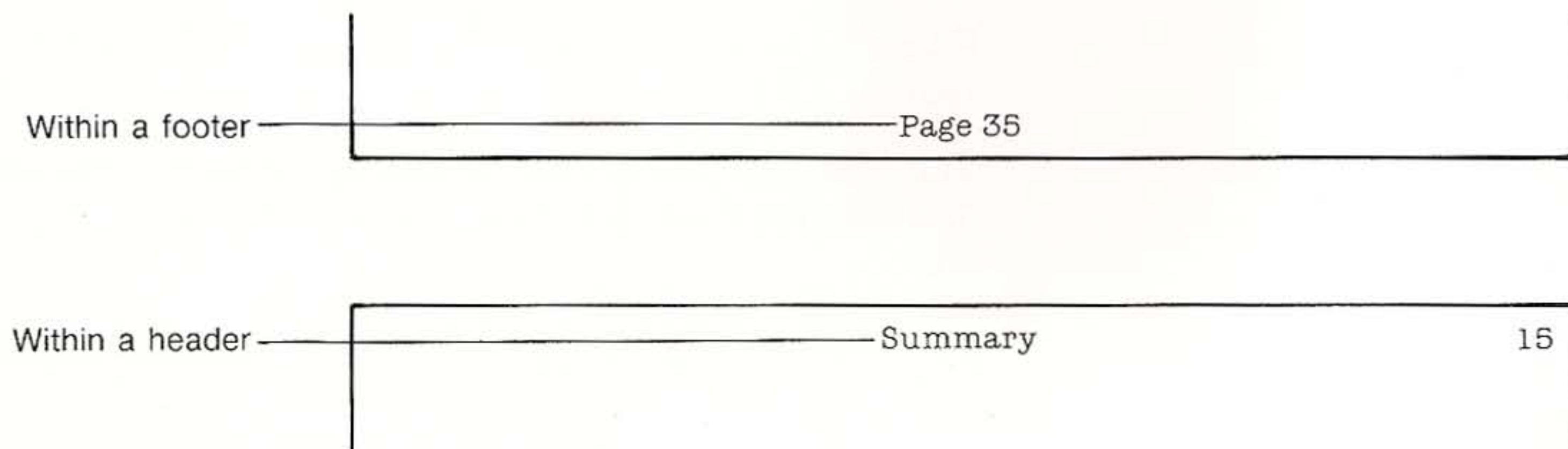
To cause page numbers to print:

1. Put the cursor wherever you want the page number to print. Most likely it will be in the line following

```
--------Page Header or
--------Page Footer.
```

2. Type `Page` if you want that word to precede the page number. Then press (SPACE) once.

3. Press (🍎)-(O).

4. Type PP and press (RETURN). AppleWorks inserts a caret in that space. When you put the cursor on the caret, `Print Page No.` displays at the bottom of the screen.

Typing Information From the Keyboard

You can ask the printer to stop during printing so that you can type information directly from the keyboard into the document. This feature is very useful when you want to personalize letters, for example, by putting the recipient's name in occasionally.

To enter information from the keyboard:

1. Put the cursor in the place in the document where the typed information will go.

2. Press (🍎)-(O).

3. Type EK and press (RETURN).

AppleWorks inserts a caret into the text where the value will go. When you put the cursor on the caret, `Enter Keyboard` displays at the bottom of the screen.

When you print the document, the printer stops at the specified spot and waits for you to type information. The printer starts printing again when you press (RETURN). For example, the printer will stop twice while it prints this line:

```
Please remember, ^, that this offer is
good only until ^.
```

The first time the printer stops, you type the person's name. The second time, you type the final day of your latest offer.

Chapter 8: Formatting a Word Processor Document

Understanding the Spreadsheet

Understanding the Spreadsheet

AppleWorks' Spreadsheet allows you to work with numbers in rows and columns. The Spreadsheet's calculation techniques let you speculate and forecast, changing numbers and immediately seeing the effect of the changes.

This chapter discusses the Spreadsheet's two main functions, illustrates its flow of activities, and discusses its file guidelines.

The Spreadsheet's Two Main Functions

The Spreadsheet's activities have two main functions, as Figure 9-1 illustrates. The first function, working with information in spreadsheets, allows you to create spreadsheets with numbers or formulas so you can stay on top of current situations and project the effect of future changes. The second function, reporting, lets you create hard copies of your information, formatted to your specifications.

When you create a spreadsheet, you can type several basic formulas and then use the Spreadsheet's copy feature to put the same or similar formulas in other areas of the spreadsheet. You can control the way numbers in separate areas of the spreadsheet are displayed and look at the spreadsheet from different viewpoints, for complete flexibility in number manipulation. It's easy, too, to make changes to spreadsheets at any time, for even more flexibility.

When you create reports with the Spreadsheet, you can specify exactly what information you want to print and format the information on the page exactly the way you want it. Then you can print it on a printer or on the clipboard for inclusion in a Word Processor document.

Figure 9-1. *Spreadsheet's Two Main Functions*
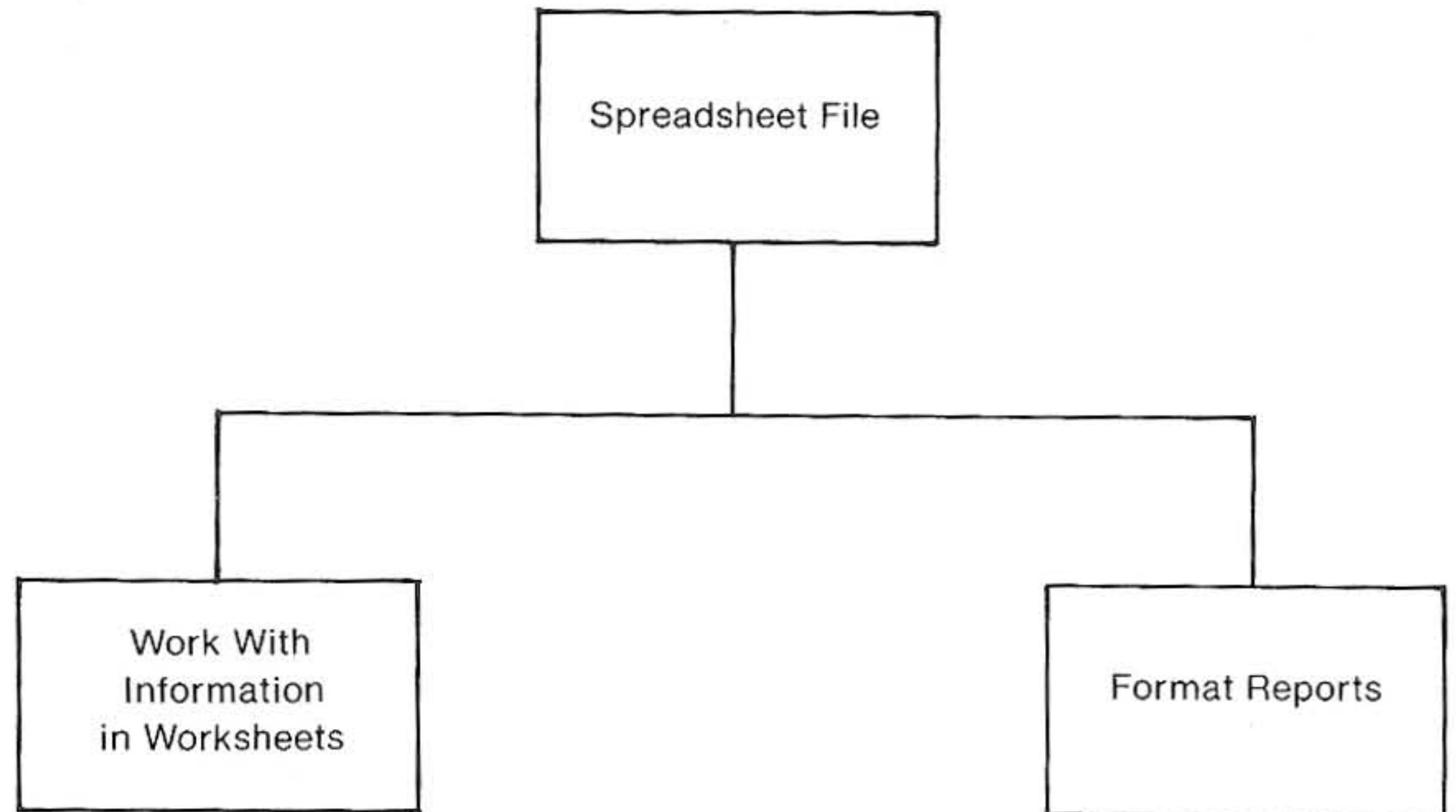
Activity Flow

Figure 9-2 shows the flowchart of activities when you are using Spreadsheet files. All the activities fall into Review/Add/Change.

Figure 9-2. *Spreadsheet Flowchart*
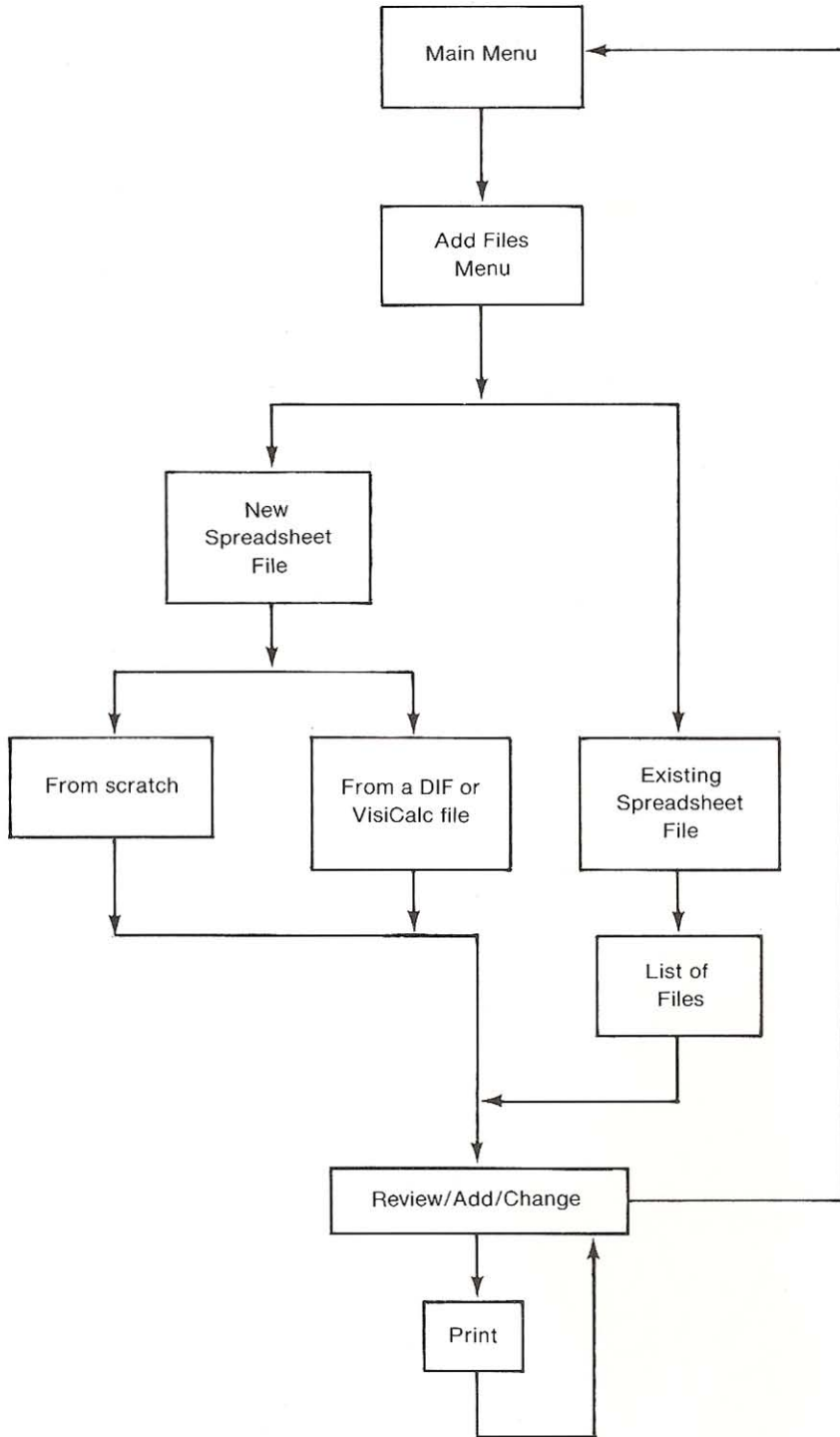
Spreadsheet files can contain 127 columns and 999 rows, for a maximum total of 126,873 empty **cells**.

For filled cells, the following guidelines apply:

When You Have	The Maximum Is
An Apple computer with 64K RAM	About 1000 filled cells
An Apple computer with 128K RAM	About 6000 filled cells

Rows are numbered from 1 through 999. Columns are denoted as follows:

A through Z
AA through AZ
BA through BZ
CA through CZ
DA through DW

Working With Information in Spreadsheets

Chapter 10: Working With Information in Spreadsheets

Working With Information in Spreadsheets

Working with information in spreadsheets involves creating the information using special techniques that make it easy, looking at the spreadsheet and displaying numbers in different ways, and rearranging information when necessary. These activities are discussed in this chapter.

Making a Spreadsheet

This section discusses the general concepts involved in planning a spreadsheet and tells how to make a spreadsheet from scratch, from a VisiCalc file, and from a DIF file.

Planning a New Spreadsheet

When you plan a spreadsheet, you decide

- what answers you want.

- what values you need to produce these answers.

- what formulas will produce the answers.

- how you want the spreadsheet to look.

These questions are discussed in general here. See specific sections for detailed information.

Several sample spreadsheets serve as a basis for this discussion. The first, which contains net personal worth information, is illustrated in Figure 10-1. In that spreadsheet, assets and liabilities are itemized and totaled to get the net personal worth.

Figure 10-1. *Net Personal Worth Spreadsheet*

```
File: Personal Worth          REVIEW/ADD/CHANGE            Escape: Main Menu
========A========B========C========D========E========F========G========H====
   1!
   2!Personal Financial Net Worth Statement                    1/1/84
   3!
   4!
   5!ASSETS                                      LIABILITIES
   6!
   7!Fluid Assets:                               Bills Due:
   8!Cash on Hand          500                   VISA                    876
   9!Checking Accounts     435                   Sears                   465
  10!Savings Account     2,050                   Medical Bills           330
  11!                  ---------                 Dental Bills            120
  12!                    2,985                   Homeowner's Ins.        150
  13!                                            Auto Ins.               600
  14!Long Term Assets:                           Life Ins.               465
  15!Certif. Deposit     5,000                                        -------
  16!U.S. Savings Bonds  1,000                                          3,005
  17!Life Insurance    175,000
  18!                  ---------                 Taxes We Owe:
  ---------------------------------------------------------------------------
A1

Type entry or use A commands                              A-? for Help
```

Figure 10-2 shows the Winter Grades spreadsheet. In it, grades are listed for each test. Averages are taken for each student and for each test.

Figure 10-2. *Winter Grades Spreadsheet*

```
File: Winter Grades           REVIEW/ADD/CHANGE            Escape: Main Menu
========A========B========C========D========E========F========G========H====
   1!
   2!          Winter Grades
   3!
   4!                         Score     Score     Score     Score
   5!          Students       Test 1    Test 2    Test 3    Test 4   Average
   6!          Avenir, George    98        95        88        94       94%
   7!          Balder, Marsha    88        87        92        85       88%
   8!          Cleveland, Mark   77        83        80        67       77%
   9!          Edwards, Bret     83        80        85        84       83%
  10!          Hegley, Elaine    85        88        87        88       87%
  11!          Jenred, Jack      77        80        79        84       80%
  12!          Lofter, Laura     99        98        99        95       98%
  13!          Matthrews, Orem   91        90        89        92       91%
  14!          Normans, Cuz      66        70        74        80       72%
  15!          Prince, Perry     77        60        66        75       69%
  16!          Serenski, Bob     81        83        80        85       82%
  17!          Winthrop, Nigel   98        95        99        98       97%
  18!
  ---------------------------------------------------------------------------
A1

Type entry or use A commands                              A-? for Help
```

Chapter 10: Working With Information in Spreadsheets

A loan schedule spreadsheet is illustrated in Figure 10-3. In it, principal, rate, and time are used to figure the loan payment per month.

Figure 10-3. *Loan Schedule Spreadsheet*

```
File: Loan Schedule          REVIEW/ADD/CHANGE              Escape: Main Menu
========A========B========C========D========E========F========G========H====
   1!
   2!
   3!        Loan Amt      75200            ==============================
   4!        Pmt/Yr           12            LOAN AMORTIZATION SCHEDULE
   5!        Total Yrs        30            ==============================
   6!        Interest      11.75 %
   7!                        .12   Decimal
   8!        Interest    1111.75 % (APR)
   9!        Payments     738.36
  10!                                    Loan Amortization
  11!                      Payment No.        Principal  Payment Interest
  12!
  13!                      1.........  75200.00    759.08   736.33
  14!                      2.........  75177.26    759.08   736.11
  15!                      3.........  75154.29    759.08   735.89
  16!                      4.........  75131.10    759.08   735.66
  17!                      5.........  75107.68    759.08   735.43
  18!                      6.........  75084.04    759.08   734.73
  ----------------------------------------------------------------------
A1

Type entry or use A commands                           A-? for Help
```

What Answers Do You Want?

The first step in planning a spreadsheet, and certainly the most important, is to decide what answers you want your spreadsheet to produce. Knowing the answers you want makes all the steps along the way a lot easier.

If you're doing a personal budget spreadsheet, like the one in Figure 10-1, you'll want totals for the year and your cash position after you subtract expenses from income. If you're keeping track of your students' grades, as in Figure 10-2, you'll want each student's average and the class average. If you're figuring your net personal worth, as in Figure 10-3, you'll want assets minus liabilities.

What Values Produce the Answers?

As you decide what answers you want your spreadsheet to produce, you also define the values you need that produce the answers.

Making a Spreadsheet

The Answers You Want	The Values That Produce Them
Your net worth	Itemization of all your assets and liabilities
Grades for your students and class averages	All test grades for all students
The monthly payment on a loan	Principal, interest rate, and number of months for the loan

What Formulas Make the Values Produce the Answers?

After you decide on the answers you want and the values that produce those answers, you define the formulas that produce the answers. For example,

Net assets - net liabilities = net personal worth

The total for all tests / the number of tests = the average for the tests

What Should Your Spreadsheet Look Like?

At this point, you can probably visualize the layout of your spreadsheet. For example, the net worth spreadsheet makes the best sense with assets and liabilities listed in two columns. Assets and liabilities are broken down into logical groups, and these groups are in turn itemized and subtotaled. Total asset and liability figures follow the itemization, and then comes the bottom line, the net worth figure.

On the other hand, the students' grades spreadsheet works best as a typical rows and columns grid. Each kind of grade is listed across the top and students' names are listed down the left. The grades for each student are averaged across, and the class average is taken for each test at the bottom of the spreadsheet.

Several values are provided at the top of the last sample spreadsheet, the loan schedule. Then all the principal, payment, and interest figures are calculated in one long column.

Where do you want information placed?

Visualizing your spreadsheet helps you decide the best way to place information on the spreadsheet. Of course, there are as many ways to do a spreadsheet as there are AppleWorks users, so you can do it the way that works best for you.

Chapter 10: Working With Information in Spreadsheets

Now translate your visualization of the information into an AppleWorks Spreadsheet. You do that with **standard values** for the spreadsheet, which you specify. Standard values determine how information is displayed, and they include:

- Standard formats for labels
- Standard formats for values
- Column widths
- How and when recalculations are made.

The spreadsheet standard formats for **labels**, or titles, determine whether a label such as *Assets* is left justified, right justified, or centered. AppleWorks' default is that you'll want all your labels left justified.

Values, or numbers, have standard formats, too. For example, the same value, 1234.56, can be displayed in different ways: 1,234.56 (**commas format**), $1,234.56 (**dollars format**), and 1234 (**fixed decimal** with 0 decimal places), among others. AppleWorks' default for values is called Appropriate. *Appropriate*, in general, means *displayed as you type it*.

Along with setting formats for values and labels, you set the widths of columns. You can use AppleWorks' default, which is that all columns are nine characters wide. You can change the width of all columns or only specific ones, if you want.

Calculation of values has a standard setting, too, both in when it's done and in what order. You should think about whether you want AppleWorks to calculate all your values automatically every time you change a value or if you want to give the signal for calculation. AppleWorks' default is that you'll want automatic calculation. If you want to give the signal, however, you change the frequency of calculation to manual.

You also should decide in what order calculation should occur. AppleWorks' default is down columns and across rows. You can change that to across rows and down columns. The Loan Schedule spreadsheet, for example, calculates across rows and then down columns because the calculation in one cell depends on that in the cell above and to the right.

The sample spreadsheets in Figures 10-1 through 10-3 give you an idea about formatting.

The standard format for values in the Personal Worth spreadsheet is commas format with two decimal places. This means commas between thousands and no dollar signs.

The standard format for values in the Winter Grades spreadsheet is fixed decimal format with no decimal places. The percentages down the right, however, are in percent format, with a percent sign following.

The standard format for values in the Loan Schedule spreadsheet is fixed decimal format with two decimal places.

To summarize, planning your spreadsheet involves

- planning the input values and the formulas you need to produce the answers

- planning the general layout of the spreadsheet

- determining how values and labels should be displayed as well as the width of columns and how calculation should happen.

Creating the Spreadsheet

Follow these steps to create a new spreadsheet:

1. Choose Add files to the Desktop from the Main Menu.

2. Choose Make a new file for the Spreadsheet from the ADD FILES menu.

3. Choose From scratch From a DIF (TM) file or From a VisiCalc (R) file from the SPREADSHEET menu.

From Scratch

Follow these steps to create your spreadsheet from scratch:

1. Type the name of the new file. Filenames can be up to 15 characters long. The first character must be a letter, and the name can contain uppercase or lowercase letters, numbers, periods, and spaces. Then press (RETURN).

AppleWorks displays a spreadsheet such as the one illustrated in Figure 10-4. The callouts refer to the numbered items in the text that follows.

Figure 10-4. *A New Spreadsheet*

```
File: Sales Forecast              REVIEW/ADD/CHANGE              Escape: Main Menu
========A========B========C========D========E========F========G========H====
   1|
   2|
   3|
   4|
   5|
   6|
   7|
   8|
   9|
  10|
  11|
  12|
  13|
  14|
  15|
  16|
  17|
  18|
-----------------------------------------------------------------------------
A1
Type entry or use A commands                            A-? for Help
```

1.   3   2   5   6
 1   4
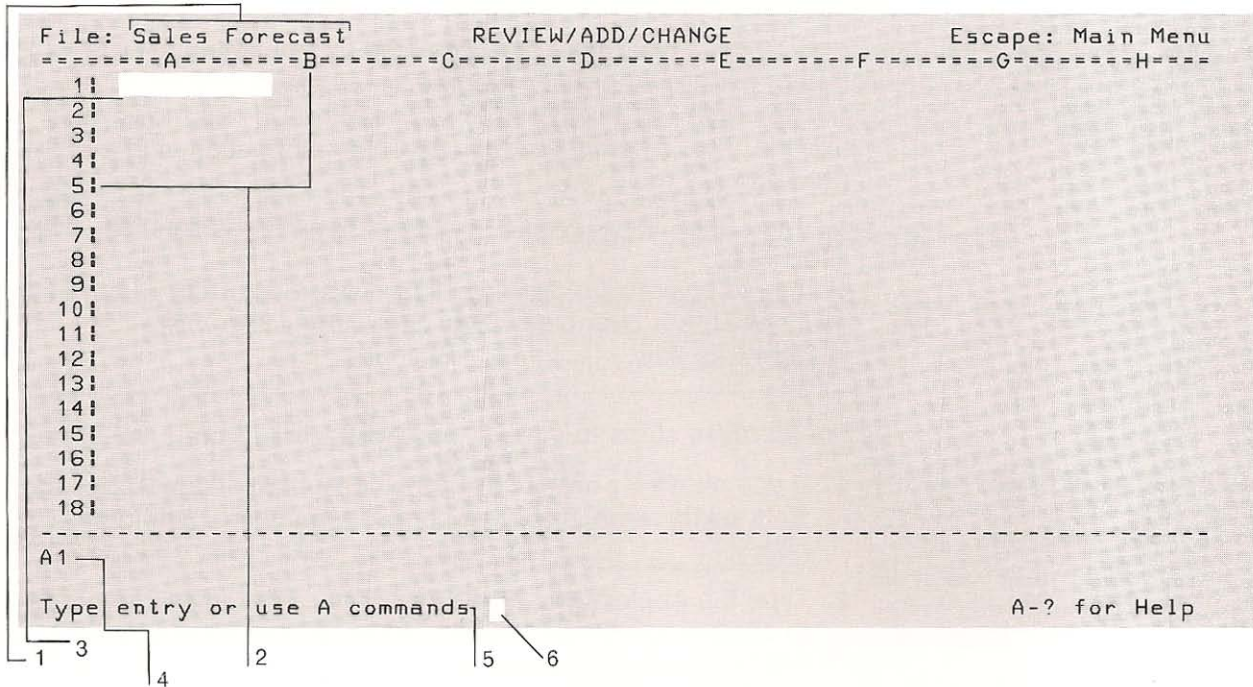
1. The name of your new file

2. The rows and columns, or **coordinates**, that divide your spreadsheet into **cells**. A cell is the intersection of a row and a column.

3. Your place within the spreadsheet. What you type now will go into this cell.

4. The **cell indicator** tells the cell the cursor is on and what's in it.

5. The Spreadsheet's prompt

6. The cursor that requests information in response to the prompt

Now you can start typing information into your new spreadsheet. You can

See "Using Spreadsheet Standard Values."

- set the standard formats for the values and labels in the spreadsheet

- set the column width

- set the order and frequency of recalculation

See "Typing and Editing Information."

- type the titles and the values.

Making a Spreadsheet

From a DIF File

You can use a DIF file—a file created by AppleWorks' Data Base, VisiCalc, and other programs—as the source of a Spreadsheet file. When you first create the DIF file, however, use the C, or *column-wise* option. Then information is in the right order.

▲ **Warning**

You must convert DIF files on DOS disks to ProDOS with the ProDOS User's Disk before you can use them to make AppleWorks files.

Follow these steps to make a Spreadsheet file from a DIF file:

1. If you chose `From a DIF file` AppleWorks asks for the file's **pathname**. Type the complete pathname and press `RETURN`.

2. Type the AppleWorks name for the file. Filenames can be up to 15 characters long. They must begin with a letter, and they can contain uppercase or lowercase letters, numbers, periods, and spaces. Then press `RETURN`.

From a VisiCalc File

You can use a VisiCalc file as the source of a Spreadsheet file.

▲ **Warning**

You must convert VisiCalc files on DOS disks to ProDOS with the ProDOS User's Disk before you can use them to make AppleWorks files.

Follow these steps to make a Spreadsheet file from a VisiCalc file:

1. If you chose `From a VisiCalc file` AppleWorks asks for the file's **pathname**. Type the complete pathname and press `RETURN`.

2. Type the AppleWorks name for the file. Filenames can be up to 15 characters long. They must begin with a letter, and they can contain uppercase or lowercase letters, numbers, periods, and spaces. Then press `RETURN`.

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Note: AppleWorks will load only those VisiCalc functions that are also included in AppleWorks. In addition, formulas longer than 75 characters will not be loaded. Finally, some formatting commands from VisiCalc may not be loaded.

Moving the Cursor Through the Spreadsheet

You can move the cursor cell by cell through a spreadsheet, or more quickly, through larger units of information. You can also move the cursor to a specific cell. Here's how to move the cursor:

What You Want	What You Use
Move the cursor from cell to cell across rows or up and down columns	→, ←, ↑, ↓ Holding the arrow key down moves the spreadsheet, so you can see other parts of it.
Move the cursor from cell to cell to the right or to the left	TAB and (ᴗ)-TAB, respectively
Move the cursor to the cell on the right or the left of the screen, and then in the same direction across one full screen of information	(ᴗ)-→ or (ᴗ)-←
Move the cursor to the cell on the top or the bottom of the screen, and then in the same direction up or down one full screen of information	(ᴗ)-↑ or (ᴗ)-↓
Use AppleWorks' Ruler to jump the cursor proportionally through vertical sections of the spreadsheet	(ᴗ)-1 through (ᴗ)-9

See "Using AppleWorks' Ruler" in Chapter 2 for information about how the Ruler works.

What You Want	What You Use
Move the cursor to a specific cell	Ⓒ-Ⓕ
	Choose Coordinates (You can type C.)
	Type the coordinates that mark the cell you want and press (RETURN).
Jump the cursor to the other half of the split screen	Ⓒ-Ⓙ after you split the screen by using Ⓒ-Ⓦ

Typing and Editing Information

This section tells how to type and edit information.

Typing Entries

It's easy to type information into Spreadsheet entries. Several guidelines apply:

What You Want	What You Use
To type information into cells	Both cursors. The **overstrike cursor**, which is the blinking rectangular cursor, replaces information under the cursor. The **insert cursor**, which is the blinking bar cursor, puts information to the right of the character the cursor is on. Information to the right moves to the right.
To switch back and forth between cursors	Ⓒ-Ⓔ
To delete one character to the left of the cursor	(DELETE)
To confirm an entry	(RETURN)
To confirm an entry *and* move the cursor in the direction of the arrow	(→), (←), (↓), (↑)

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Warning

It's important to remember that pressing ⊖, ⊖, ⊕, or ⊕ confirms your entry and moves the cursor to another entry. In the Data Base, however, pressing ⊖ or ⊖ moves the cursor within an entry.

Editing Entries

To edit information in a cell, use the ⌘-Ⓤ (use edit feature) command. To do so:

1. Put the cursor on the cell you want to edit.

2. Press ⌘-Ⓤ. AppleWorks displays the contents of the cell on the entry line, just under the cell indicator. That's where you edit the information in the cell.

3. Now choose from these options:

What You Want	What You Use
To correct information	Either cursor; switch back and forth between them with ⌘-Ⓔ.
To restore the former entry and back the cursor up to the first character of the entry	ESC
To move the cursor past characters without changing them	⊖ and ⊖
To erase the rest of an entry starting from where the cursor is	CONTROL-Ⓨ

4. Press RETURN after you finish editing the entry.

After you press RETURN, AppleWorks checks your formula to see if it's legal. It checks, for example, whether you used parentheses properly if you are nesting formulas. If there's a problem, your computer beeps at you and waits for you to correct the mistake.

Labels are entries with no numeric value. They are used mostly for column and row headings.

All entries that start with letters are automatically labels. Labels can also start with numbers or special characters, even spaces. For example, column headings from 1 through 10 are considered labels. When you begin labels with numbers or spaces, you have to identify them as labels.

To identify as a label an entry that doesn't start with a letter, first type **"**. That's the signal to AppleWorks that you are starting a label. The **"** does not become part of the label; it's just understood by AppleWorks as a label-signal.

If a label is too long to fit in one cell, AppleWorks automatically divides it among adjacent non-numeric, unprotected cells.

To get a *repeated label*, such as - - - - - - - - or = = = = = = = = =, simply hold down the key until the cell is full. Then press (RETURN). The cell indicator will say **(Label) Repeated--** or **(Label) Repeated-=**. When you lengthen a column, AppleWorks adds more of the same character.

Repeated cells cannot be edited with (ᴔ)-(U).

The cell indicator provides information about labels, as Table 10-1 illustrates. It tells that the entry is a label rather than a value and provides information about special cell layouts.

Table 10-1. *How Labels Go In Cells*

If the Cell Indicator Shows	And You Type This Information	You Get This Label
(Label)	Jan 1 84	Jan 1 84
(Label)	" Date:	Date:
(Label)	"1	1
(Label)	" --------	--------
(Label, Layout-R)	Feb	Feb

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Using Values

Values include numbers, pointers, functions, and formulas. This section provides details about each kind.

Numbers

Numbers are entries that are used in calculations. They designate a quantity of units such as dollars and donuts.

Spreadsheet numbers must start with the digits 0 through 9, a plus sign (+), a minus sign (-), or a decimal point (.).

The cell indicator provides information about numbers, as Table 10-2 shows. The cell indicator tells that the number is a value, rather than a label, and provides information about special cell layouts, if any.

Table 10-2. How Numbers Go In Cells

If the Cell Indicator Shows	And You Type This Information	You Get This Label
(Value)	1250	1250.00
(Value, Layout-D2)	136	$136.00
(Value, Layout-F1)	-4478.32	-4478.3

Pointers

Pointers point to other cells in the spreadsheet. They tell AppleWorks to put the value in the pointed-to cell into the current cell. AppleWorks takes the value exactly from the pointed-to cell, so that the current cell contains the same value as the pointed-to cell.

Pointers must begin with a plus sign (+) or a minus sign (-), which is how AppleWorks knows you're not typing a label. Following the plus or minus sign are the coordinates for the cell you're pointing to. Examples of pointers are +A5 and -Z280.

The cell indicator provides information about pointers, as Table 10-3 shows. It tells that the pointer is a value, rather than a label, and displays the pointer.

After entering a plus sign, minus sign, or decimal point, you can point to the cell by using the arrow keys. Then press (RETURN) or another plus or minus sign or decimal point. Then continue the formula in the cell or press (RETURN).

Table 10-3. How Pointers Go In Cells

If the Cell Indicator Shows	And You Type This Information	You Get This Label
(Value, Layout-D2)	+J30	$136.00 (if cell J30 contains 136)
(Value, Layout-F1)	+C47	-4478.3 (if cell C47 contains -4478.32)

Functions

Functions are codes that stand for a common or complex calculation. When you type a function into a cell, you are calling for a special formula that operates on cells you specify or values you supply. All functions start with the @ sign (the *at* sign) and an abbreviation that stands for the function, such as @SUM or @SQRT.

Suppose you type this function into cell C44:

@SUM(V13...V16)

@SUM is the code that stands for *Add up the values in the following cells:* and (V13...V16) stands for *Cells V13, V14, V15, and V16*. After the sum of cells V13 through V16 is calculated, it goes in cell C44.

Here are several other examples of functions. Suppose each one is typed into cell A2:

@SQRT(B44) means *Figure out the square root of the value in cell B44 and put it into cell A2.*

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@MAX(C33,125,A4*65) means *Find the largest value from the contents of cell C33, the number 125, and the result of multiplying cell A4 times 65. Then put that value into cell A2.*

@INT(M19) means *Put the integer part of the contents of cell M19 into cell A2.*

Functions always consist of the following:

- @
- The code that stands for the function

Functions may also consist of an argument. Table 10-4 shows the possible types of arguments for functions.

Table 10-4. *Arguments for Functions*

Argument	What It Means
Value	A single value, either a cell reference, a number, or an expression that evaluates to a number, such as (A19)
Range	A series of adjacent cells separated by *three* periods, such as (A36...A39) or (A48...D52)
List	A list of single values or ranges separated by commas, such as (D45,X19,135) or (A36...A39,A48...D48)

The arrow keys are very useful in pointing to cell coordinates that you want to be part of your formula. Just point to the cell and then continue the formula. For example, to create the formula @SUM(V13...V16), type @SUM and then use the arrow keys to point to cell V13. Type a period (.) to continue the formula, and then point to cell V16 and press (RETURN). Type a closing parenthesis and then press (RETURN).

Arithmetic Functions

Table 10-5 lists arithmetic functions. Following Table 10-5 are discussions of @NA, @ERROR, @CHOOSE, and @LOOKUP.

Table 10-5. *Arithmetic Functions*

Function	Result
@ABS(value)	Absolute value of the argument
@AVG(list)	Arithmetic mean of the values in the list
@CHOOSE(list)	The value in the list according to its place in the list (second, third, fourth, and so on) after an evaluation of the first value in the list
@COUNT(list)	Number of non-blank entries in the list
@ERROR(no argument)	ERROR
@INT(value)	Integer portion of the argument
@LOOKUP (value,list)	The value in a second table corresponding to the position of the value in the first that is equal to or less than the value in the argument
@MAX(list)	The largest value in the list
@MIN(list)	The smallest value in the list
@NA(no argument)	Not available
@SQRT(value)	Square root of the argument
@SUM(list)	The sum of all values in the list

@NA

Type @NA in cells where you know you need a value but it's not available yet. When AppleWorks calculates values that refer to cells that contain @NA, the result is NA. That helps you keep track of values you still need to type in.

@ERROR

@ERROR causes ERROR to be displayed at the location where it is entered and at all locations that refer to it.

@CHOOSE

@CHOOSE takes one of the values in its list of arguments using the first element in the list as the index to the following arguments. For example, suppose cell A1 contains @CHOOSE(B5,18,47,39). Cell B5 is evaluated to see if its value is 1, 2, or 3. If its value is 1, then 18 is put into cell A1. If its value is 2, then 47, and if 3, then 39.

If the first argument is 0 or less, or if its value is greater than the number of remaining arguments, then @CHOOSE is evaluated to NA.

@LOOKUP

@LOOKUP sets up two tables, the first either a row or a column you specify, and the second the column to the right or the row below the first. It then takes a value you supply, the search value, and searches sequentially for the largest value in the first table that is equal to or less than the search value. When it finds the correct value, it returns the value *in the adjacent cell in the second table.*

The values in the first table must be in ascending order. If the search value is smaller than the first entry in the first table, NA is returned. If the search value is larger than any value in the first table, the last value in the table is returned.

Figure 10-5 shows an example of a @LOOKUP function.

Figure 10-5. Lookup Table

First table	10	25	60	98
Second table	5	10	15	20

The value of @LOOKUP (65,A4...D4) is   15.

65 represents a search value

Using Values

Financial Function

@NPV(interest rate,range) figures future cash flows by figuring the net present value of a series of even or uneven payments (the range argument). The first argument is the discount rate, or cost of money used to discount the future cash flows, and the second is a range of locations that include the cash flows themselves.

The internal rate of return of an investment is equal to the discount rate that produces a net present value of 0. You can find this by trial and error.

Logical Function

Here are several examples of @IF:

@IF(B1>B2,13,X19)

@IF(C11<5,14,J20/J19)

@IF(A1=3,11,B4-5)

@IF takes three values. The first must be a logical value, that is, an expression that can be evaluated to true or false. The second and third can be any value.

@IF uses logical operators to evaluate the expression to be either true or false. Depending on whether it's true or false, the value of the second or the third argument is returned. Table 10-6 lists the logical operators you can use in the expression and their values.

Table 10-6. *Logical Operators*

Operator	Value
<	Less than. The expression is TRUE if the first value in the expression is less than the next. FALSE if it's not.
<=	Less than or equal to. The expression is TRUE if the first value is less than or equal to the next. FALSE if it's not.
>	Greater than. The expression is TRUE if first value is greater than the next. FALSE if it's not.
>=	Greater than or equal to. The expression is TRUE if the first value is greater than or equal to the next. FALSE if it's not.
=	Equals. The expression is TRUE if the first value equals the next. FALSE if it doesn't.
<>	Not equal to. The expression is TRUE if the first value does not equal the next. FALSE if it does.

Table 10-7 shows how the values of the logical expression are evaluated.

Table 10-7. *Evaluations for the Function IF*

If the Value of the First Argument Is	The Expression Evaluates To
TRUE	Value of second argumewnt
FALSE	Value of third argument
NA	NA
Not logical or ERROR	ERROR

Formulas

Formulas are mathematical statements that calculate numbers. They are stored in spreadsheet cells, and then during recalculation (automatic or manual), the value of the formula is calculated. Only the value is displayed.

Formulas can consist of two or more of the following:

- Numbers
- Arithmetic operators ($+ - * / \wedge$)
- Pointers, such as ($+$A6 or $+$B17)
- Functions

Figure 10-6 shows how a formula works.

Figure 10-6. *How a Formula Works*

```
File: Sales Forecast          REVIEW/ADD/CHANGE              Escape: Main Menu
========A========B========C========D========E========F========G========H====
   1|
   2|
   3|
   4|              4113          39
   5|
   6|
   7|
   8|
   9|                                              105.46
  10|
  11|
  12|
  13|
  14|
  15|
  16|
  17|
  18|
-----------------------------------------------------------------------------
F9: (Value, Layout-F2) +B4/C4

Type entry or use A commands                                    A-? for Help
```

Cell F9 contains the formula $+$B4/C4.

Cell B4 contains the value 4113.

After calculation, the cell F9 still contains the formula $+$B4/C4. But it displays the value 105.46.

Cell C4 contains the value 39.

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Formulas must begin with a plus sign (+), a minus sign (-), a decimal, the digits 0-9, a left parenthesis ((), or the *at* sign (@). The cell indicator provides information about formulas, as Table 10-8 shows. The cell indicator tells that the formula is a value and displays the formula.

Table 10-8. How Formulas Go In Cells

If the Cell Indicator Shows	And You Type This Information	You Get This Label
(Value)	+B6*C4	1250.00 (if cell B6 contains 5 and cell C4 contains 250)
(Value, Layout-D2)	+C4-114	$136.00
(Value, Layout-F1)	+C4-B7	-4478.3 (If cell B7 contains 4728.32)

Press (⌘)-(Z) to zoom in to the formula for every cell. Only the portion of the formula that fits within the cell width will show. If you press (⌘)-(P) to print the spreadsheet, while you are zoomed in, formulas print. Press (⌘)-(Z) to zoom out to the cells in their normal appearance.

You can use the arrow keys to point to cells used in formulas. That saves you from having to type in the cell coordinates. After you use the arrow keys to point to, or move the cursor to, the cell, press (RETURN).

Spreadsheet **standard values** specify how information in the spreadsheet is displayed. Spreadsheet standard values tell, for example, whether labels are left justified, right justified, or centered in cells. They also tell how many decimal places values should have, or whether they should have dollar or percent signs.

Before you start a spreadsheet or at any time while you are working with it, you can change the default standard values. You change spreadsheet standard values with the (ᴋ)-(V) (standard values) command, discussed later in this section. After you change the standard values, all the information is displayed according to your new specifications.

Spreadsheet standard values are available for **value formats**, **label formats**, **column widths**, **protection**, and **recalculate**.

See "Working With Cell Layouts" for information on how to override standard values.

You can override spreadsheet standard values for specific cells with the (ᴋ)-(L) command. Standard values affect the entire spreadsheet, whereas the layout command affects a specific cell or group of cells.

Figure 10-7 shows a display of a sample spreadsheet. The numbers refer to the explanations for the spreadsheet standard values that follow.

Figure 10-7. *Spreadsheet Standard Values*

```
File: Winter Grades           REVIEW/ADD/CHANGE              Escape: Main Menu
=========A=========B=========C=========D=========E=========F=========G=========H====
  1:
  2:        ┌─ Winter Grades
  3:
  4:                         Score     Score     Score     Score
  5:        ┌─Students       Test 1    Test 2    Test 3    Test 4    Average ┐
  6:         Avenir, George     98        95        88        94        94%
  7:         Balder, Marsha     88        87        92        85        88%
  8:         Cleveland, Mark    77        83        80        67        77%
  9:         Edwards, Bret      83        80        85        84        83%
 10:         Hegley, Elaine     85        88        87        88        87%
 11:         Jenred, Jack       77        80        79        84        80%
 12:         Lofter, Laura      99        98        99        95        98%
 13:         Matthrews, Orem    91        90        89        92        91%
 14:         Normans, Cuz       66        70        74        80        72%
 15:         Prince, Perry      77        60        66        75        69%
 16:         Serenski, Bob      81        83        80        85        82%
 17:         Winthrop, Nigel    98        95        99        98        97%
 18:
---------------------------------------------------------------------------------
A1

Type entry or use A commands                              A-? for Help
```

     1   2   3   4

1. Labels are left justified.

2. Numbers are appropriate format with decimal places as needed.

3. Columns are nine characters wide.

4. Labels that head columns are exceptions to the spreadsheet standard values.

See "Protection" and "Recalculate."   The two other spreadsheet standard values—recalculation order and frequency, and protection—are not evident by looking at a spreadsheet, but rather when you use the spreadsheet.

Remember that the standard values have nothing to do with what is stored in the cell, but everything to do with what is displayed. For example,

If You Type	And the Standard Is	It Displays	And Stores
1.2345	Fixed decimal, no decimal places	1	1.2345
1	Fixed decimal, three decimal places	1.000	1

Working With Spreadsheet Standard Values

Details About Spreadsheet Standard Values

Spreadsheet standard values are discussed in detail in this section. Instructions for changing them are in "Changing Spreadsheet Standard Values."

Value Formats

Five value formats are available as spreadsheet standards—fixed, dollars, commas, percent, and appropriate. These are the formats displayed by all the cells in the spreadsheet that do not have individual cell layouts. Table 10-9 describes them.

⌘-Ⓥ lets you change the spreadsheet standard values. For example, if you are doing a budget, you can set the value format to dollars with two decimal places using this commmand. Then all values typed or calculated in the spreadsheet will be shown in this format.

Table 10-9. *Standard Values for Values*

Format	Description	Example
Fixed	Contains a fixed number of decimal places, 0-7	163 -137.00
Dollars	Same as commas except with a dollar sign before each amount.	$113.58 $1,345.09 ($4.66) $1.6
Commas	Provides commas between thousands. Negative amounts are in parentheses. Contains a fixed number of decimal places, 0-7.	1,345.09 (4.66) 113
Percent	A percentage with a specified number of decimal places (0-7). This format multiplies amount in cell by 100.	1235.7% -4.25%
Appropriate (Default)	Appropriate means that AppleWorks does its best to display numbers exactly as you type them. Numbers are right justified in the column with a blank in the leftmost position of all columns. Trailing zeros after the decimal place are dropped.	

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If a number does not fit in the width you set up for the column, it is stored the way you type it but pound signs (#'s) are displayed. Thus, a cell looks like this: ######. Increase or decrease the column width if necessary.

Label Formats

Three label formats are available as spreadsheet standards—left justified, right justified, and centered. Table 10-10 describes them.

Table 10-10. *Standard Values for Labels*

Format	Description	Example
Left justified (Default)	Labels are left justified in cells.	| Jan |
Right justified	Labels are right justified in cells.	| Jan|
Centered	Labels are centered in cells.	| Jan |

Column Widths

Nine-character-wide columns are the spreadsheet standard for all new spreadsheets. You can change the spreadsheet standard to columns from 1 to 75 characters wide.

Protection

You can protect cells so that the entries can't be changed inadvertently by you or someone else using your spreadsheet. Then the cell contents can be changed only if AppleWorks recalculates it.

Protection is accomplished with the combination of the ⌘-Ⓥ command and the ⌘-Ⓛ command. The ⌘-Ⓥ command enforces or removes protection specified by the ⌘-Ⓛ command. AppleWorks' default setting is protection, so any cells you protect with the ⌘-Ⓛ command are automatically protected unless you change the standard value to no protection.

You can temporarily remove protection to make changes and then enforce it again by using ⌘-Ⓥ.

Recalculation

When you type a new value into your spreadsheet, AppleWorks recalculates all the other values to take the new value into account. Recalculate, however, has two different settings that affect it—the order setting and the frequency setting. Table 10-11 describes both.

Table 10-11. *Recalculation Order and Frequency*

The Order Setting Includes	Which Means
Calculation by rows	Values calculated according to formulas in cells across rows and then down columns
Calculation by columns (Default)	Values calculated according to formulas in cells from the top of a column to the bottom and then across rows.

The Frequency Setting Includes	Which Means
Automatic (Default)	AppleWorks automatically recalculates new values whenever you change a value.
Manual	AppleWorks recalculates new values only when you use the ⌘-Ⓚ (for calculation) command.

If you are typing a lot of values and formulas, you may want to keep typing and calculate all at once. To do so, change to manual recalculation.

Checking Standard Values in Effect

Spreadsheet standard values in effect for your spreadsheet are available at the end of the help screen. Press ⌘-⑦ to see them.

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Changing Spreadsheet Standard Values

Standard value changes affect the whole spreadsheet. Here's how to change spreadsheet standard values:

1. Press (ċ)-(V).

2. Choose Value format, Label format, Column width, Protection, or Recalculate depending on whether you want to change the spreadsheet standard values for values, labels, column width, protection, or recalculation.

If You Chose	Respond As Follows
Value format	Choose Fixed, Dollars, Commas, Percent, or Appropriate.
	Then, for all but Appropriate, type the number of decimal places and press (RETURN).
Label format	Choose Left justify, Right justify, or Center.
Column widths	Use (ċ)-(→) or (ċ)-(←) to change the column widths. Press (ESC) when you're through.
Protection	Choose No or Yes. Yes enforces protection, and No ignores protection.
Recalcula-tion	Choose Order or Frequency.
	For Order, choose Rows or Columns.
	For Frequency, choose Automatic or Manual.

Working With Cell Layouts

When you work with spreadsheet standard values, you specify how all cells in the spreadsheet should be displayed. But you can override these standard values for specific cells in the spreadsheet—the cells in one row or those in two columns, for example. These overriding specifications are called the **cell layout**. You specify cell layout with the (ċ)-(L) command (for layout), discussed in this section.

Cell layout specifications are for **value formats, label formats, column widths**, and **protection**.

Cell layouts are illustrated in the sample spreadsheet in Figure 10-8. The numbers refer to the numbers in the text.

Figure 10-8. *Cell Layouts*

```
File: Winter Grades         REVIEW/ADD/CHANGE              Escape: Main Menu
========A========B========C========D========E========F========G========H====
  1¦
  2¦          Winter Grades
  3¦
  4¦                            Score     Score     Score   ⌐ Score
  5¦        ⌐Students           Test 1    Test 2    Test 3  ⌊ Test 4   Average
  6¦         Avenir, George    ⌐ 98        95        88        94        94%⌐
  7¦         Balder, Marsha      88¦        87¦       92        85        88%
  8¦         Cleveland, Mark     77         83        80        67        77%
  9¦         Edwards, Bret       83         80        85        84        83%
 10¦         Hegley, Elaine      85         88        87        88        87%
 11¦         Jenred, Jack        77         80        79        84        80%
 12¦         Lofter, Laura       99         98        99        95        98%⌐
 13¦         Matthrews, Orem     91         90        89        92        91%
 14¦         Normans, Cuz        66         70        74        80        72%
 15¦         Prince, Perry       77         60        66        75        69%
 16¦         Serenski, Bob       81         83        80        85        82%
 17¦         Winthrop, Nigel     98         95        99        98        97%⌊
 18¦
-----------------------------------------------------------------------------
A1

Type entry or use A commands                                  A-? for Help
```

1. Standard values specify that columns are nine characters wide, labels are left justified, and values are appropriate decimal places.

2. These values are in percentage layout. Their cell formats take precedence over the standard value for values.

3. These labels are right justified. Their cell formats take precedence over the standard value for labels.

The cell layouts you provide for a group of cells affect only those cells with that specific kind of information in them already. For example, after you provide cell layout specifications for values in a group of cells, the values already in the group are redisplayed according to your specifications. But blank cells do not get the specification *unless* you specify them with the ⌂-Ⓛ *entry* or *block* option. So if you specify layouts using *Rows* or *Columns*, new values you type are *not* displayed according to the specification, but according to the spreadsheet standard value instead.

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This same principle applies when you supply a cell layout specification for labels in a group of cells. The specification applies only to cells with labels already in them and to blank cells if you use the ⌘-Ⓛ protection entry or block option.

The cell indicator displays the cell layout if it is different from the spreadsheet standard values. For example, if the spreadsheet standard is for labels to be left justified, and you specify that a cell be right justified, the cell indicator displays (Label, Layout-R).

Details About Cell Layouts

Cell layouts are discussed in detail in this section. Instructions for changing them are in "Changing Cell Layouts."

Value Formats

Six value formats are available as cell layouts—fixed, dollars, commas, percent, appropriate, and standard. These are the formats displayed by individual cells in the spreadsheet. Table 10-12 describes them.

Table 10-12. *Values for Values Layouts*

Format	Description	Example
Fixed	Contains a fixed number of decimal places, 0-7	163 -137.00
Dollars	Same as commas except with a dollar sign before each amount.	$1,345 ($4.66) $113.58 $1.6
Commas	Provides commas between thousands. Negative amounts are in parentheses. Contains a fixed number of decimal places, 0-7.	1,345.09 (4.66) 113.58
Percent	A percentage with a specified number of decimal places (0-7). This format multiplies amount in cell by 100.	1235.7% -4.25%

Format	Description	Example

Appropriate   Appropriate means that AppleWorks does its best to display numbers exactly as you type them. Numbers are right justified in the column with a blank in the leftmost position of all columns. Trailing zeros after the decimal place are dropped.

Standard   Standard restores the cells in the group you specify to the spreadsheet standard values.

If the number does not fit in the width you set up for the column, the number is stored the way you type it but pound signs (#'s) are displayed. Thus, a cell looks like this: **######**. Increase the column width if necessary.

Label Formats

Four label formats are available as cell layouts—left justified, right justified, centered, and standard. Table 10-13 describes them.

Table 10-13. *Values for Labels Layout*

Format	Description	Example
Left justified	Labels are left justified in cells	| Jan |
Right justified	Labels are right justified in cells	| Jan|
Centered	Labels are centered in cells	| Jan |
Standard	Standard restores the cells you specify to the spreadsheet standard	

Column Widths

You can change the width of one or more columns, if you want. Columns can be from 1 to 75 characters wide.

Protection

⌘-Ⓛ allows you to specify which cells should be protected and how:

- Only labels can be typed

- Only values can be typed

- No changes allowed

- All changes should be allowed.

Protection takes effect only on cells that already have entries or cell layouts. You can put protection on blank cells if you use Entry or Block. Protection doesn't work on whole rows or columns.

Table 10-14 shows the possibilities for different settings for ⌘-Ⓥ and ⌘-Ⓛ.

Table 10-14. *Possibilities for Cell Protection*

⌘-Ⓛ Options Allow:	When ⌘-Ⓥ equals Yes or No, cells are protected in certain ways: Yes	No
Labels only	Only labels can be typed	No protection
Values only	Only values can be typed	No protection
Nothing	Complete protection	No protection
Anything	No protection	No protection

Checking Cell Layouts

You can see special layouts for a cell by checking its cell indicator. For example, a cell with a right-justified label format says (Label, Layout-R).

Changing Cell Layouts

Here's how to change cell layouts:

1. Press (ᑕ́)-(L).

2. Choose Entry, Rows, Columns, or Block.

If You Chose	Then
Rows	Use the arrow keys to highlight the rows and press (RETURN).
Columns	Use the arrow keys to highlight the columns and press (RETURN).
Block	Use the arrow keys to highlight the block and press (RETURN).

3. Choose Value format, Label format, or Protection, depending on whether you want to change the cell layout for values, labels, or protection.

If you chose Columns in step 2, step 3 gives you an extra option, Column widths.

If You Chose	Respond as Follows
Value format	Choose Fixed, Dollars, Commas, Percent, Appropriate, or Standard. For all but Appropriate and Standard, type the number of decimal places and press (RETURN).
Label format	Choose Left justify, Right justify, Center, or Standard.
Column widths	Use (ᑕ́)-(→) or (ᑕ́)-(←) to change the column widths. Press (ESC) when you're through.
Protection	Choose No changes, Labels only, Values only, Nothing, or Anything.

Viewing Your Spreadsheet

Most often you view your spreadsheet in the Review/Add/Change display you see when you first get the file. You can view the spreadsheet in several different ways, however, ways that sometimes make it easier for you to see what you want to see. You can

- zoom in to look at formulas in cells

- split the spreadsheet in two, into either two side-by-side windows or a top and a bottom window. Then when you change a value in one part, it's easy to see the effect of the change in another part.

- fix the titles area in place on the display and then use the cursor to move the rest of the spreadsheet. That makes it easy for you to keep track of what numbers apply to what titles.

Zooming In to See Formulas

Press (⌂)-(Z) to zoom in to display the formula in every cell. You can see only the part of the formula that fits within the cell width, however. Zoom out to numbers in their normal appearance by pressing (⌂)-(Z) again.

You can print formulas by pressing (⌂)-(P) while you are zoomed in.

Setting and Removing a Fixed Titles Area

AppleWorks lets you set in place a fixed titles area at the top or at the left of the display, or both. Figure 10-9 shows a spreadsheet with a fixed top titles area. After you fix a titles area, you can use the cursor to view the rest of the spreadsheet.

Setting a titles area in place can make it easier for you to look at information, because you always know what titles the information goes with, regardless of where the information is on the spreadsheet.

Figure 10-9. *Spreadsheet With Fixed Top Titles Area*

```
File: Our Budget              REVIEW/ADD/CHANGE            Escape: Main Menu
========A========B========C========D========E========F========G========H====
   1!
   2!===========================================================================
   3!                                                                    Page 1
   4!                                       OUR BUDGET
   5!                                                                     Total
   6!        Description              Jan       Feb       Mar       3 mos
   7!----------------------------------------------------------------------------
   8!
   9!   Income:
  10!        Tom                    1,250     1,250     1,250     3,750
  11!        Joyce                  1,350     1,350     1,350     4,050
  12!                               --------  --------  --------  --------
  13!        Total Income           2,600     2,600     2,600     7,800
  14!----------------------------------------------------------------------------
  15!
  16!   Expenses
  17!        House
  18!             Mortgage           600       600       600     1,800
------------------------------------------------------------------------------
A1

Type entry or use A commands                                   A-? for Help
```

To set a fixed titles area in place:

1. Put the cursor

- in a cell just below the bottom row of the titles area

- in a cell to the right of the right column of the titles area

- in a cell that marks the outside corner of the non-fixed area if you are fixing titles areas at the top and on the left.

2. Press ⌘-Ⓣ (for titles).

3. Choose Top, Left side, or Both.

When you set a titles area, you'll notice a repetition of the row or column indicator; this holds the place of the titles area.

You can use all the cursor movement keystrokes to move the cursor in the unfixed area. You can also move the cursor "under" to change the titles.

Here's how to remove a fixed titles area:

1. Press ⌘-Ⓣ.

2. Choose None to remove the titles area. Press (ESCAPE) if you change your mind.

Chapter 10: Working With Information in Spreadsheets

Working With a Split Spreadsheet

Occasionally you may want to split the spreadsheet in two so you can see two parts of it at the same time. You can split the spreadsheet into two side-by-side windows or a top and a bottom window.

Splitting the spreadsheet into two windows allows you

- to type a new value into a cell and see the result in a distant cell

- to look at two distant parts of the spreadsheet at the same time.

Figures 10-10 and 10-11 show two split spreadsheets.

Figure 10-10. *Spreadsheet Split Top and Bottom*

```
File: Our Budget            REVIEW/ADD/CHANGE            Escape: Main Menu
========A=========B=========C=========D=========E=========F=========G=========H====
  1¦
  2¦=================================================================================
  3¦                                                                         Page 1
  4¦                                          OUR BUDGET
  5¦                                                                          Total
  6¦         Description              Jan         Feb         Mar            3 mos
  7¦_____
 46¦             Pocket Money          30          30          30              90
 47¦             IRAs                 333         333         333             999
 48¦             Entertainment         80          80          80             240
 49¦                                -------     -------     -------       --------
 50¦     Total Expenses             2,574       2,574       2,577           7,725
 51¦_____
 52¦
 53¦     Total Net Inflow              25          25          22              74
 54¦     Beginning Cash Level           0          25          51
 55¦     Ending Cash Level             25          51          74              74
 56¦
-----------------------------------------------------------------------------------
A56

Type entry or use A commands                                    A-? for Help
```

Figure 10-11. *Spreadsheet Split Left and Right*

```
File: Our Budget              REVIEW/ADD/CHANGE                Escape: Main Menu
========A========B========C========D========E===========H========I====
   1¦                                                1¦
   2¦===================================================  2¦===============
   3¦                                                3¦    Page 1
   4¦                                                4¦
   5¦                                                5¦    Total     PrCnt
   6¦           Description                  Jan     6¦    3 mos     of Inc
   7¦_____   7¦_____
   8¦                                                8¦
   9¦   Income:                                      9¦
  10¦           Tom                       1,250      10¦    3,750
  11¦           Joyce                     1,350      11¦    4,050
  12¦                                    --------    12¦    --------
  13¦           Total Income              2,600      13¦    7;800
  14¦_____   14¦_____
  15¦                                                15¦
  16¦   Expenses                                     16¦
  17¦       House                                    17¦
  18¦           Mortgage                    600      18¦    1,800         23%
--------------------------------------------------------------------
I 10

Type entry or use A commands                              A-? for Help
```

This section tells how

- to split the spreadsheet into two windows
- to move the cursor between the two windows
- to synchronize movement of the two windows
- to restore the spreadsheet to one window.

Splitting the Spreadsheet Into Two Windows

Here's how to split the spreadsheet into two windows:

1. If you are splitting the spreadsheet into two side-by-side windows, put the cursor in a cell in the column that will form the left boundary of the righthand display.

   If you are splitting the spreadsheet into a top and a bottom window, put the cursor in a cell in the row that will form the top boundary of the bottom display.

2. Press ⌂-W (for windows).

3. Choose Side by side or Top and bottom depending on whether you want side-by-side windows or top-and-bottom windows.

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AppleWorks splits the spreadsheet into the windows you requested. The cursor stays in the cell where it was in step 1.

Moving the Cursor to the Other Window

Here's how to move the cursor to the other part of the spreadsheet:

1. Press (⌘)-(J) (for jump).

AppleWorks moves the cursor to the corresponding cell in the other window.

Synchronizing the Two Windows

After you split the spreadsheet into two windows, the windows move independently of each other. That is, you can use the cursor movement keystrokes in the part of the spreadsheet where the cursor is and the other part of the spreadsheet doesn't move. You can, however, move both parts of the spreadsheet at the same time so that row for row or column for column the two windows always match.

To synchronize the windows:

1. Make sure you have two windows displayed. (If you haven't already done so, press (⌘)-(W).)

2. Press (⌘)-(W) a second time.

3. Choose Synchronized.

Now whatever cursor movement keystrokes you use in one part of the spreadsheet have the same effect in both parts.

Whenever you press (⌘)-(W) when you have the spreadsheet split into two windows, you get a variation of this menu bar:

Views? One Synchronized

If the two windows are synchronized, the second part of the response reads Unsynchronized, which lets you unsynchronize the two windows.

Restoring the Spreadsheet to One Window

To restore the spreadsheet to one window:

1. Press (⌘)-(W).

2. Choose One.

AppleWorks restores the spreadsheet to one window.

Blanking Areas of the Spreadsheet

AppleWorks allows you to blank out areas of the spreadsheet, including entries, rows, columns, and blocks. Here's how:

1. Move the cursor to a cell whose entry you want to blank. This cell becomes the pivotal point for blanking.

2. Press (⌘)-(B) (for blank).

3. Choose Entry, Rows, Columns, or Block.

4. If you indicated that you want to blank rows, columns, or a block, use the Spreadsheet's cursor movement keystrokes to highlight the area you want to blank. Then press (RETURN).

A blanked cell referred to by a formula is considered to contain a zero.

Cells can't be blanked when you have used the (⌘)-(L) command to specify they should have no changes and protection is set to yes. Cells that are protected for labels only or values only, however, are blanked and lose their protection.

Deleting Rows or Columns

To delete rows or columns from your spreadsheet:

1. Press (⌘)-(D).

2. Choose Rows or Columns.

3. Move the cursor to highlight the rows or columns you want to delete. Then press (RETURN).

When rows or columns are deleted, the part of the spreadsheet on the bottom or on the right is closed up. Closed up rows are renumbered and closed up columns are relettered. AppleWorks reworks formulas to take this renumbering and relettering into account so the formulas refer to cells they originally referred to.

▲ **Warning**

AppleWorks deletes the entire row or column you specify, not just the part displayed. Before you start, you will probably want to move the cursor through the whole area you are intending to delete, to make sure you know exactly what you're deleting.

If you delete rows or columns whose contents are used in formulas in other cells, AppleWorks displays ERROR in the cells where the formulas are stored when you recalculate. ERROR indicates the formula can't work because some or all of the values it needs were deleted or don't exist. Therefore, deleting rows or columns can have implications for your calculations.

Inserting Rows or Columns

Here's how to insert blank rows or columns into your spreadsheet, up to a maximum of nine:

1. Place the cursor on the row below or on the column to the right of which you want the inserted rows or columns to go.

2. Press ⌘-Ⓘ (for insert).

3. Choose Rows or Columns.

4. Type the number of blank rows or columns you want to insert and press (RETURN).

AppleWorks reletters the columns to the right of the inserted columns. And it renumbers the rows at the bottom of the inserted rows. It also reworks formulas that refer to these relettered columns and renumbered rows so the formulas refer to the cells they originally referred to. The cells in the rows or columns you insert have spreadsheet standards.

There are two limitations on inserting rows and columns:

● You can't insert rows or columns that would push existing information past the spreadsheet limits. For example, you can't insert ten rows anywhere unless rows 990 through 999 are empty.

● You can't insert rows or columns after the cursor is past existing information. For example, if the last row with information in it is 125, then you can't insert rows past row 125.

Moving Columns or Rows Within a Spreadsheet

AppleWorks allows you to move up to 250 rows or 125 columns from one place in a spreadsheet to another:

1. Place the cursor on a cell in the column or row of one of the columns or rows you want moved.

2. Press (ⓢ)-(M).

3. Choose Within Spreadsheet.

4. Choose Columns or Rows.

5. Move the cursor to highlight the columns or rows you want moved. Then press (RETURN).

6. Move the cursor to the place where you want the moved columns or rows to go. (The moved columns or rows are inserted to the left of the cursor for columns or above the cursor for rows.) Then press (RETURN).

A significant amount of movement happens during a move:

- First, AppleWorks closes up the space the columns or rows come from.

- Then it opens up space for the moved columns or rows and inserts them.

- All columns are relettered accordingly, and rows are renumbered.

- Formulas are adjusted to take care of references to moved columns or rows, so that all formulas still refer to the cells they originally referred to.

Copying Information

AppleWorks' copy feature makes it easy for you to create sophisticated spreadsheets with a minimum of effort. You can make an exact copy of labels, numbers, pointers, and formulas from one cell or group of cells into another quickly and with no typing errors. You can also copy pointers and formulas into other cells and make the copies depend on their new location. That means you can make many similar calculations depend on one original formula.

Before you copy, you should think about the answer to three questions:

- What cell or cells are you copying from?

- What cell or cells are you copying to?

- Are you copying the contents exactly, or do you want the copy to depend on the position of the copy-to cells?

What Are the Copy-From Cells?

You can copy from one cell or from a range of cells. The only guideline is that the cells must be adjacent, that is, all in the same row and next to each other, or all in the same column and one under the other.

What Are the Copy-To Cells?

You can copy to one cell or to a range of cells. The copy-to cells must be adjacent. You can copy rows to rows and columns to columns, but you can't copy rows to columns or columns to rows.

Figures 10-12 through 10-14 show the possible combinations of copy-from and copy-to cells.

Figure 10-12. *Copying One Cell*

Copy-from cell is A2.
Copy-to cell is B2.

1. Copying one cell to another cell

Copy-from cell is A6.
Copy-to cells are B6 through E6.

2. Copying one cell to a row of cells

Copy-from cell is A11.
Copy-to cells are A12 through A14.

3. Copying one cell to a column of cells

Copy-from cell is C14.
Copy-to cells are C15 through E17.

4. Copying one cell to a range of cells
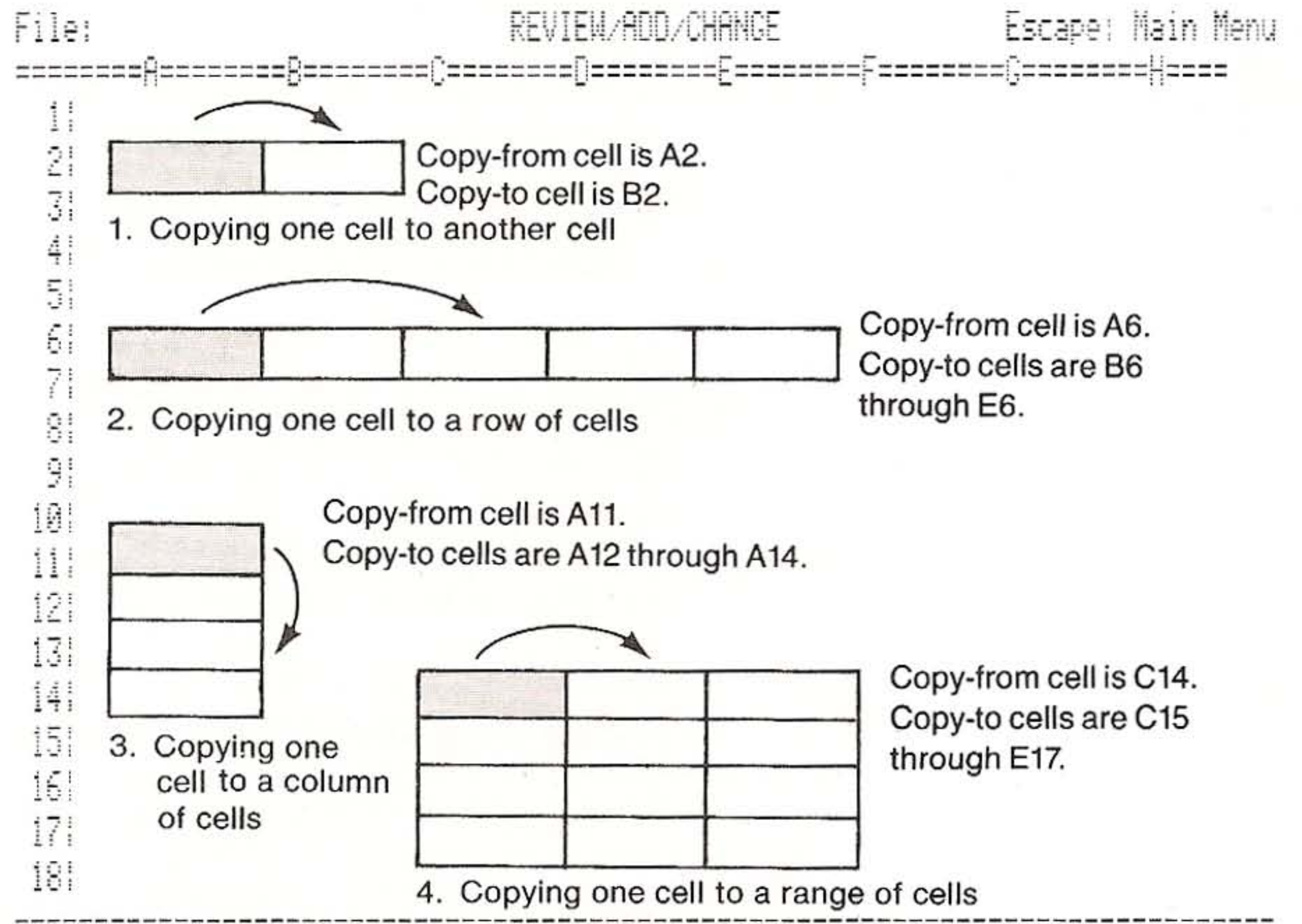
Figure 10-13. *Copying a Column*

Copy-from cells are A1 through A8.
Copy-to-cells are B1 through B8.

Copy-from cells are C11 through C18.

Copy-to cells are D11 through F18.

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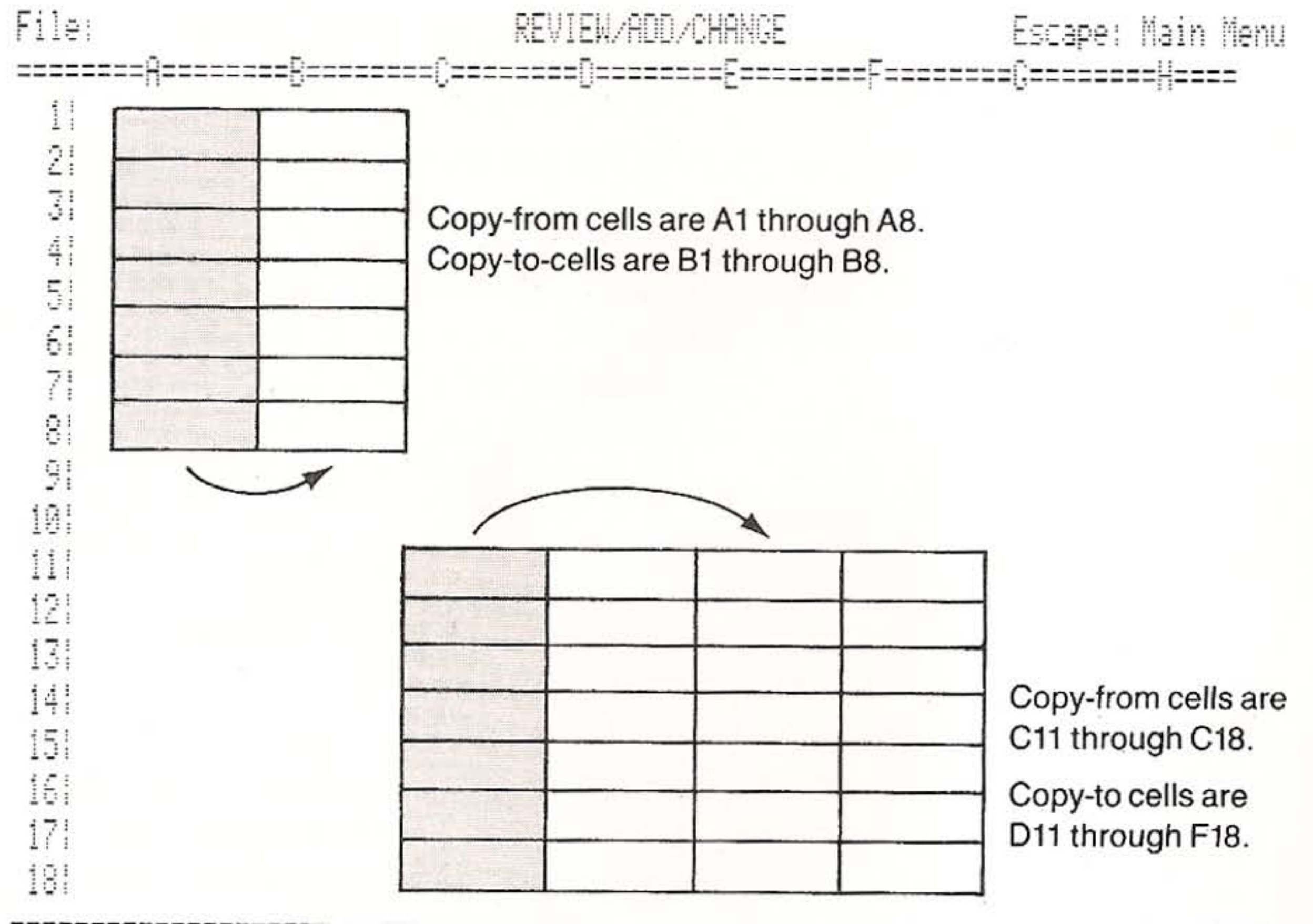
Figure 10-14. *Copying a Row*

```
 1|
 2|                                             Copy-from cells are A2 through D2.
 3|                                             Copy-to cells are A3 through D3.
 4|
 5|
 6|
 7|
 8|
 9|
10|                                             Copy-from cells are A10 through D10.
11|
12|
13|
14|                                        }    Copy-to cells are A11 through D17.
15|
16|
17|
18|
```
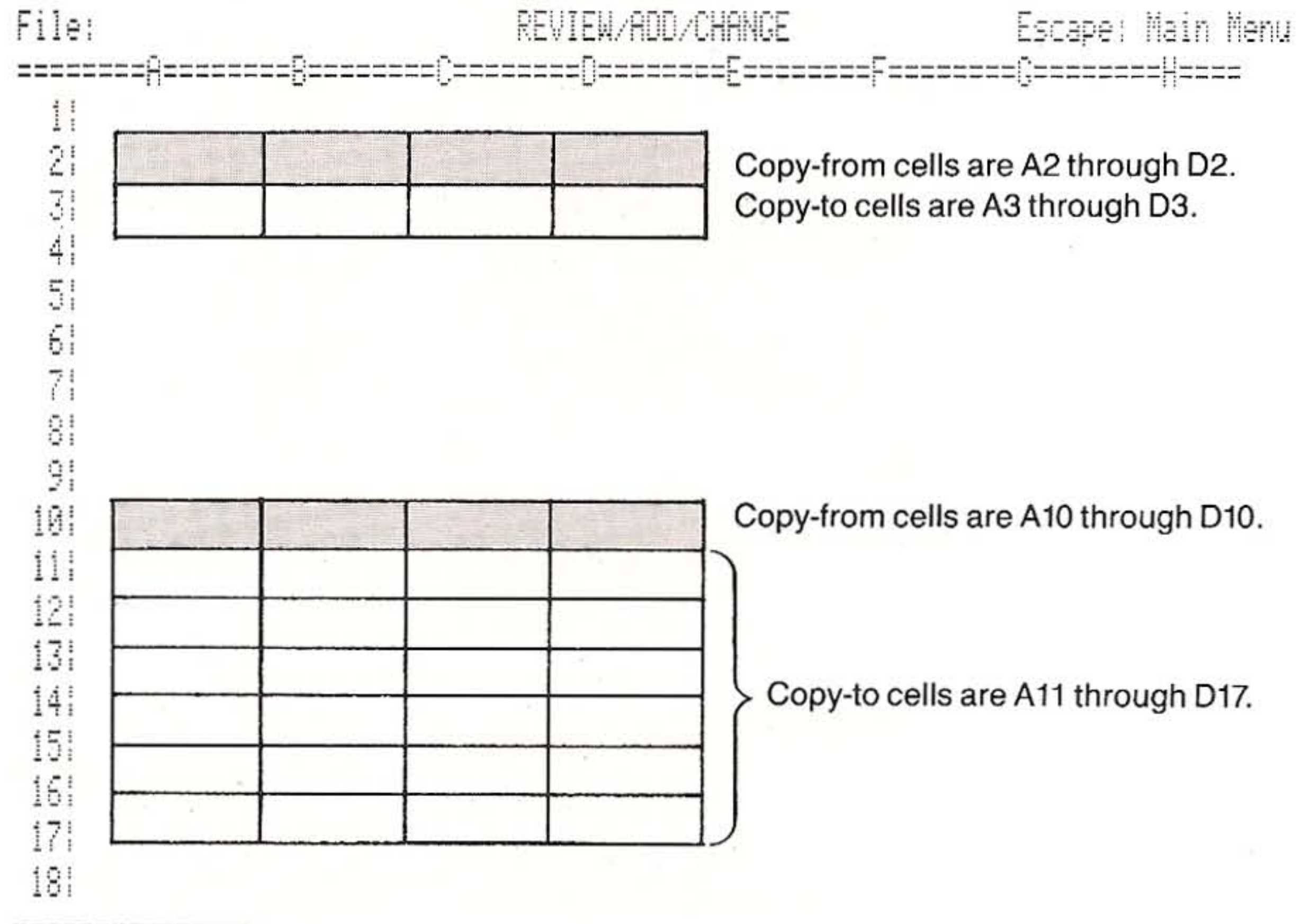
Copy the Contents Exactly?

If you copy the copy-from cells into the copy-to cells exactly, then labels, numbers, pointers, and formulas are copied exactly, with no changes. Figure 10-15 illustrates such a copy.

Figure 10-15. *An Exact Copy*

	A	B	C
1	+X1	+M30/N31	
2	+X1	+M30/N31	
3			
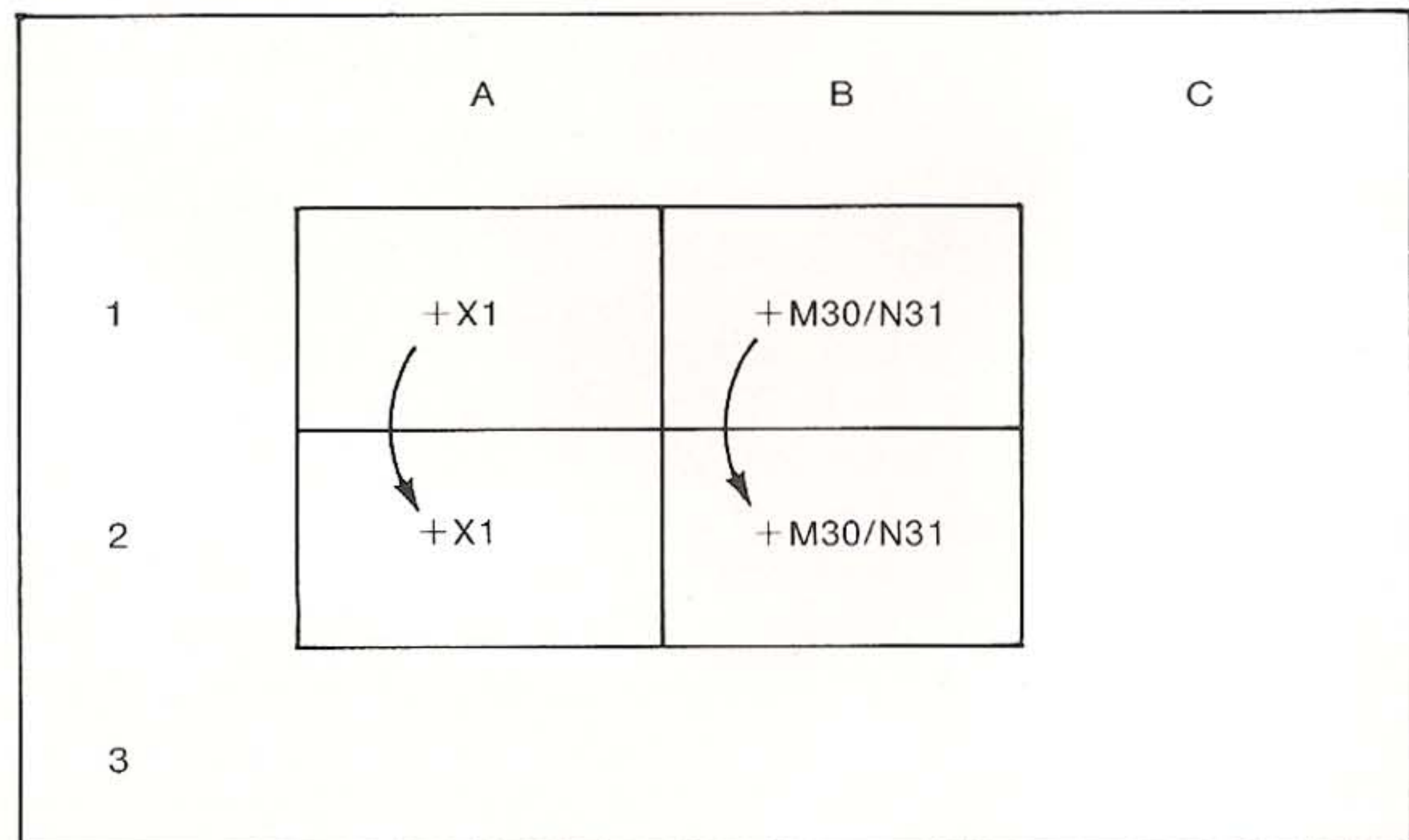
Copy the Contents Depending on Their New Position?

You can copy the contents of cells into other cells and make the new contents depend on the position of the copy-to cells. Then every time a copy-from cell references another cell, the cell reference is changed to depend on the position of the copy-to cell. This kind of copy is called a *relative* copy. Figure 10-16 illustrates such a copy.

Figure 10-16. *A Relative Copy*


```
              A              B              C

    1       +X1          +M30/N31


    2       +X2          +M31/N32


    3
```
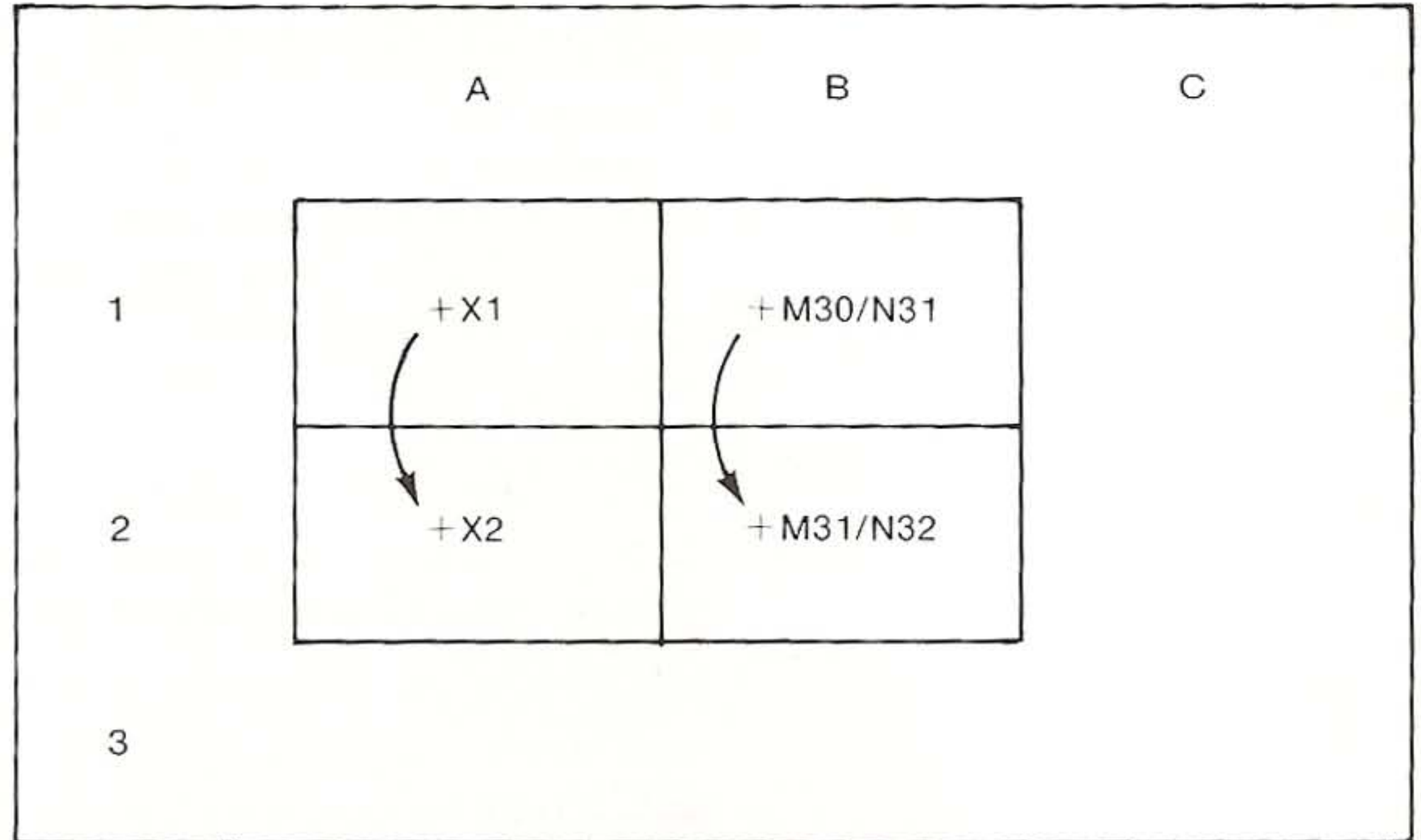
Steps for Copying

To copy the contents of cells to other cells:

1. Put the cursor on the cell you want to copy. If you're copying cells from a row or a column, put the cursor on the leftmost or rightmost cell in the row or the topmost or bottommost cell in the column.

2. Press ⌘-C.

3. Choose Within spreadsheet.

4. Use the arrow keys to highlight the copy-from cells. Then press RETURN.

5. Move the cursor to the cell you are copying to. If you're copying cells to a row or a column, put the cursor on the leftmost cell of the row or the topmost cell in the column.

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6. If you're making one copy, press (RETURN).

If you're making several copies, type a period. Then use the arrow keys to highlight the other copy-to cells. Then press (RETURN).

7. AppleWorks copies labels with no questions asked, but asks you if you want to make an exact copy of each reference to another cell. AppleWorks highlights the referenced cells in the entry line as you go. Choose No change or Relative for each cell referenced as AppleWorks highlights each one.

> **AppleWorks Tip**
>
> For quick copying, type N or R in step 7 above.

Calculating New Values

Your spreadsheet standard value may provide for automatic recalculation whenever you type in a new value, or it may provide for manual recalculation. Then AppleWorks recalculates new values only when you give the sign. (Automatic recalculation is AppleWorks' default when you want to recalculate.)

Here's how to give the sign:

1. Press (ᵰ)-(K).

See "Working With Spreadsheet Standard Values."

> **AppleWorks Tip**
>
> (ᵰ)-(V) (standard values command) lets you specify manual or automatic frequency of recalculation and rows or columns order of recalculation.

Actually, AppleWorks recalculates *all* formulas in the spreadsheet during recalculation. That means the ones it has already done as well as the ones you have just provided new values for. Because AppleWorks has to keep recalculating old values, automatic recalculation may slow you down a bit. (AppleWorks is fast, but having to recalculate old values just makes extra work.) Manual recalculation may be better for you if you don't always need recalculation as soon as you type a new value and your spreadsheet is large.

Sometimes AppleWorks can't make a calculation, either because a referenced cell has been deleted or because a formula doesn't make sense. If so, AppleWorks displays ERROR in cells where it can't calculate.

Arranging Information in the Spreadsheet

AppleWorks lets you arrange, or sort, rows in a spreadsheet by the values of entries in a certain column in the row. You can arrange rows in alphabetical order from A to Z or Z to A, or in numeric order from 9 to 0 or 0 to 9.

To arrange rows:

1. Move the cursor to the column that contains the information by which you want your rows arranged.

2. If you're arranging only specific rows, move the cursor to the top or bottom of the group of rows you want arranged.

3. Press (⌘)-(A).

4. Use the Spreadsheet's cursor movement keystrokes to highlight the rows you want to arrange. Then press (RETURN).

5. Choose the way you want the rows arranged.

Suppose you want to arrange rows using a column containing numbers, and you are sorting the numbers from 0 to 9, that is, from smallest to largest. Suppose, also, that some of the entries in the sorting column are labels, which you do not want to sort. Then you would sort only the rows with numbers in the column, skipping the rows with labels. Do this by arranging only certain rows.

AppleWorks does not distinguish between uppercase and lowercase letters when it arranges.

Chapter 10: Working With Information in Spreadsheets

Here is the order in which AppleWorks arranges values in a
column. Read down these columns and then across.

SPACE	)	;	]
!	*	<	^
"	+	=	_
#	,	>	`
$	-	?	{
%	.	@	|
&	/	A-Z and a-z	}
'	0-9	[	
(	:	\	

Finding a Cell or Specific Information

AppleWorks helps you find a cell whose coordinates you
specify. It also helps you find information contained in cells. In
addition, you can ask for the next occurrence of the last
information you had AppleWorks find. This part of the find
feature makes it easy for you to find more than one occurrence
of the same information. After you tell AppleWorks what you
want to find, AppleWorks moves the cursor to the first
occurrence of what you specify.

To find a cell or specific information:

1. Put the cursor anywhere in the spreadsheet where you want
   AppleWorks to begin searching.

2. Press [ó]-[F].

3. Choose Repeat last, Coordinates, or Text.

   If you choose Repeat last, AppleWorks searches for
   the last text you specified.

   If you chose Coordinates, AppleWorks asks you to
   provide the coordinates of the cell you want. Type the
   coordinates, such as A19 or B12, and press [RETURN].

   If you choose Text, AppleWorks asks you to provide the
   specific text you want to find. The text can be up to
   25 characters long. Press [RETURN] after you type the text.

AppleWorks does not differentiate between uppercase and lowercase letters when it searches for text. It also finds text that is part of a word or expression. For example,

If You Type	AppleWorks Finds
Income	Income
	NetIncome
	Net Incomes:
	INCOME
Gas	Ford-gas
	Gas & Electric
	Gasoline
	gasoline

AppleWorks searches for information across rows and then down the spreadsheet.

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Reporting With the Spreadsheet

Reporting With the Spreadsheet

The Spreadsheet's **printer options**, which are specifications about your report, communicate information to your printer about how reports should look. Each spreadsheet has printer options, which you can change for a specific report.

In addition to setting printer options for reports, you also can determine exactly what information to include and the width of your report.

Determining What Information to Include

When you plan a Spreadsheet report, you decide what information to include: all the information in the spreadsheet, certain rows or columns, or a block of information anywhere in the spreadsheet.

If you choose to print all the information, AppleWorks sets the boundaries for the report as the area of the spreadsheet that contains information. If you choose to print certain rows, columns, or a block of information, you set the boundaries yourself by highlighting the information to include.

You tell AppleWorks exactly what information to include *when you print*.

Determining the Width of Your Report

See Chapter 13 for information about AppleWorks and your printer.

Your report can't be any wider than the number of characters allowed per line according to the printer options for the spreadsheet and the information about your printer that you specify using Other Activities menu option 7, `Specify information about your printer(s)`.

The steps you take to check your report's width are the same steps you take when you print. Follow these steps to make sure your report isn't too wide:

1. Press ⌘-Ⓟ.

2. Specify how much you want to print by choosing `All`, `Rows`, `Columns`, or `Block`.

3. For `Rows`, `Columns`, or `Block`, use the cursor to highlight the area you want to print.

4. Check the information on the Print menu that tells you how wide your report will be. If it's too wide, press ⟨ESC⟩ to return to Review/Add/Change so you can replan your report. If it's not, continue printing steps.

Chapter 13 contains complete instructions for printing a Spreadsheet report.

Using Printer Options

Follow these steps to work with printer options:

1. To indicate that you want to work with printer options, press ⌘-Ⓞ from Review/Add/Change.

2. Work with printer options following instructions in this chapter.

3. To return to Review/Add/Change after you finish with the printer options, press ⟨ESC⟩.

After you indicate you want to work with printer options, AppleWorks presents the Printer Options display, which looks like the display illustrated in Figure 11-1.

Chapter 11: Reporting With the Spreadsheet

Figure 11-1. *Printer Options for Spreadsheet Reports*

```
File: Our Budget          PRINTER OPTIONS        Escape: Review/Add/Change
===========================================================================

------Left and right margins--------     ------Top and bottom margins-----
PW: Platen Width          8.0 inches     PL: Paper Length      11.0 inches
LM: Left Margin           0.0 inches     TM: Top Margin         0.0 inches
RM: Right Margin          0.0 inches     BM: Bottom Margin      0.0 inches
CI: Chars per Inch        10             LI: Lines per Inch     6

    Line width            8.0 inches         Printing length   11.0 inches
    Char per line (est) 80                   Lines per page     66

    ---------------------Formatting options-------------------
   SC:   Send Special Codes to printer                    No
   PH:   Print report Header at top of each page          No
         Single, Double or Triple Spacing (SS/DS/TS)      SS



   "Specify information about your printer(s)" (on Other Activities menu)
   gives you additional control over printers.
   ------------------------------------------------------------------
Type a two letter option code                            30K Avail.
```

Code that stands for the option   Other formatting options
Left and right margin options   Top and bottom margin options

Left and Right Margin Options

Table 11-1 describes left and right margin options.

Table 11-1. *Left and Right Margin Options for Spreadsheet Reports*

The Printer Option	Controls
Platen width (PW)	The distance in inches the printer's printhead travels across the paper. The left edge of the paper should correspond to where the printhead stops on the left. This number can be no greater than the platen width you specify in Other Activities menu option Specify information about your printer(s).
	Default = 8.0 inches
	The maximum you can use is 13.2 inches.

The Printer Option	Controls
`Left margin (LM)`	The width of the left margin in inches
	Numbers can be in tenths of inches, that is 1.5 inches, 1.6 inches, 2.0 inches.
	Default = 0 inches
	The maximum you can use is 9.0 inches.
`Right margin (RM)`	The width of the right margin in inches
	Numbers may be in tenths of inches.
	Default = 0 inches
	The maximum you can use is 9.0 inches.
`Characters per Inch`	The number of printed characters per inch
	Characters per inch can be from 4 through 24.
	Default = 10 characters per inch
	If you choose a characters per inch that your printer can't do, your report is printed in the same characters per inch as whatever you printed last.

Chapter 11: Reporting With the Spreadsheet

When you change any of the above values, AppleWorks instantly recalculates the line width and the estimated characters per line according to the following formulas:

	Platen Width	For example:		8.0 inches
-	Left Margin		-	1.5 inches
-	Right Margin		-	1.0 inches
=	Line Width		=	5.5 inches

	Line Width			5.5 inches
x	Characters per Inch		x	12 Characters per Inch
=	Characters per Line		=	66 Characters per Line

Follow these steps to change the value of the left and right margin options:

1. After getting the Printer Options display, type the code that stands for the option and press (RETURN).

2. Type the new value for the option and press (RETURN). You don't have to type .0 if the new value is a whole number. For example, if the new right margin is 1 inch, type 1.

Top and Bottom Margin Options

Table 11-2 describes top and bottom margin options.

Table 11-2. *Top and Bottom Margin Options for Spreadsheet Reports*

The Printer Option	Controls
Paper Length (PL)	The vertical measurement of the paper you are using, in inches Default = 11 inches The maximum you can use is 25.4 inches.

The Printer Option	Controls
`Top Margin (TM)`	The length in inches from the top of the paper to the first line of printing
	Default = 0.0 inches. This default accommodates AppleWorks users who have sheet-feed printers (printers with no tractor). If you have one of these printers, you should leave the default at 0 and position the paper exactly where you want the first line to be. If you have a tractor-feed printer, you will probably want to change this value.
	The maximum you can use is 9.0 inches.
`Bottom Margin (BM)`	The length in inches from the last line of printing to the bottom of the paper
	Default = 0.0 inches
	The maximum you can use is 9.0 inches.
`Lines per Inch (LI)`	How many lines will be printed per vertical inch on the page
	Default = 6
	You can use 6 or 8.

When you change any of the above values, AppleWorks instantly recalculates the printing length and the lines per page according to the following formulas.

	Paper Length	For example:		11.0 inches
-	Top Margin		-	2.0 inches
-	Bottom Margin		-	1.5 inches
=	Printing Length		=	7.5 inches

	Printing Length		7.5 inches
x	Lines per Inch		6 Lines per Inch
=	Lines per Page	=	45 Lines per Page

Follow these steps to change the value of the top and bottom margin options:

1. After getting the PRINTER OPTIONS display, type the code that stands for the option and press (RETURN).

2. Type the new value for the option and press (RETURN). You don't have to type .0 if the new value is a whole number. For example, if the new top margin is 1 inch, type 1.

Other Formatting Options

Table 11-3 describes other formatting options.

Table 11-3. Other Formatting Options for Spreadsheet Reports

The Printer Option	Controls
Send Special Codes to Printer (SC)	This option lets you define a printing feature not provided for in Spreadsheet reports, such as proportional spacing or boldface. To find out what special codes your printer can use, check in the manual that came with it.

This printer option can have the value *yes* or *no*. Default = *no*. If you change the option to *yes*, AppleWorks asks for the control characters. Type the control characters and type ^ when you finish. |

▲ Warning

Any key you type becomes a special code except ^*. So if you press* (RETURN) *or* (ESC), *they are assumed to be special codes.*

If you make a mistake, type ^ *and then type SC again. Retype the code(s) and type* ^

The Printer Option	Controls
	If there are codes in effect, AppleWorks displays them and asks if they're OK. Choose Yes or No. If you change this option to *yes*, you should include control characters for characters per inch.
`Print Report Header at top of each page (PH)`	The report header consists of the filename and the date. If you don't print a report header, only information from the spreadsheet is printed. The value for this option can be *yes* or *no*. Default = no

To change the value of the above options:

1. After you get the Printer Options display, type the code that stands for the option and press (RETURN).

AppleWorks automatically changes the value to its opposite.

Chapter 11: Reporting With the Spreadsheet

Determining Spacing in Reports

You can specify whether you want your report to be single, double, or triple spaced. AppleWorks' default is single spacing.

Here's how to change the spacing:

1. After you get the Printer Options display, type the code that stands for the spacing you want, SS for single spacing, DS for double spacing, or TS for triple spacing. Then press (RETURN).

Using Cut and Paste

Using Cut and Paste

Cut and paste is an activity where you transfer information from one place to another. Perhaps you use scissors to cut several paragraphs from one letter and paste or tape them into another. Or perhaps you paste a list of names and addresses or financial information into a report while you're writing it.

AppleWorks does these activities for you electronically. The cut and paste feature gives you complete flexibility in mixing and matching information types. It also lets you format professional-looking documents in a minimum of time.

This chapter tells generally how cut and paste works. It also provides specific instructions for using cut and paste in the Data Base, Word Processor, and Spreadsheet.

How Does Cut and Paste Work?

When you use cut and paste, you use the **clipboard**, an AppleWorks term that refers to a part of the computer's memory that holds information for cut and paste. The clipboard can hold up to 250 lines of information.

You transfer (*cut*) information from a AppleWorks file to the clipboard. And you transfer (*paste*) the information from the clipboard to another AppleWorks file, of the same or a different type.

When you transfer information, you can

- move it from a file to the clipboard or from the clipboard to a file. Then it's gone from the file it was in or from the clipboard.

- copy it from a file to the clipboard or from the clipboard to a file. Then it remains in the file it was in or on the clipboard.

- print Data Base or Spreadsheet information to the clipboard and then move or copy it into a Word Processor file. If you move it, it's gone from the clipboard. If you copy it, a copy stays on the clipboard.

Figure 12-1 shows how you can move, copy, or print information between the different kinds of files.

Figure 12-1. *Cutting and Pasting*

| Data Base File | → print report → | Clipboard | → copy or move → | Word Processor File |
| Data Base File | → copy or move → | | → copy or move → | Data Base File |

| Spreadsheet File | → print report → | Clipboard | → copy or move → | Word Processor File |
| Spreadsheet File | → copy or move → | | → copy or move → | Spreadsheet File |

| Word Processor File | → copy or move → | Clipboard | → copy or move → | Word Processor File |
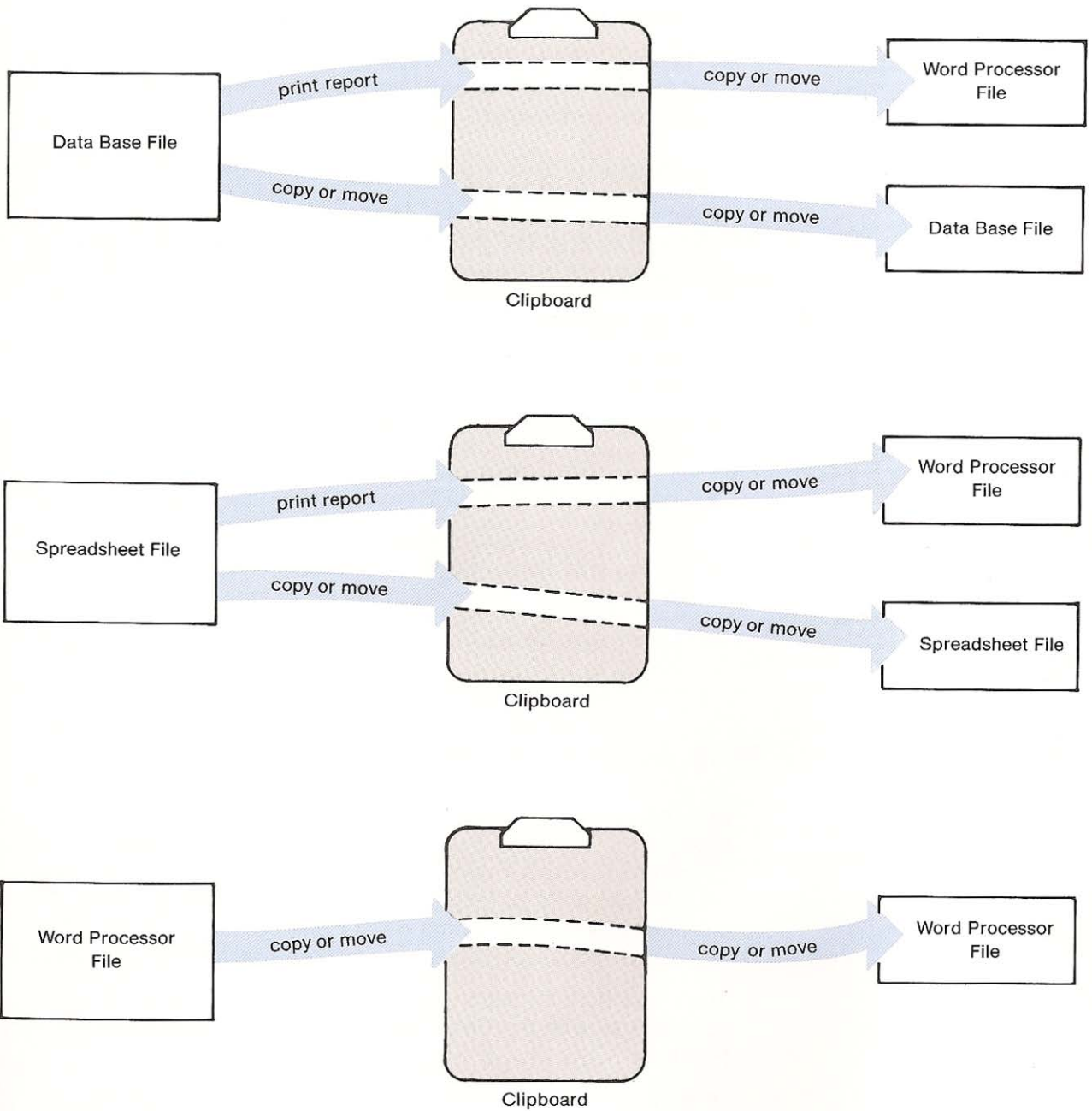
1. You can move or copy Data Base records, Word Processor lines, or Spreadsheet rows to the clipboard and then to another file of the same type.

2. You can format a Data Base or Spreadsheet report and print it to the clipboard, then move or copy it into a Word Processor document.

AppleWorks Tip

To move the files from the Data Base to the Spreadsheet or vice versa, print DIF files. Then read the DIF file from either application.

Working with files on the Desktop does not disturb the contents of the clipboard. Only these activities change the contents of the clipboard:

● Moving information to the clipboad erases what was there previously.

● Copying information to the clipboard erases what was there previously.

● Moving information from the clipboard erases the information you moved from the clipboard.

● Quitting AppleWorks causes the contents of the clipboard to be lost.

Cut and Paste With Data Base Information

Cut and paste allows you to transfer a total of 250 Data Base records within a Data Base file, between two Data Base files, or to a Word Processor document. You can transfer only complete records, not parts of records, within a file or between two Data Base files. When you format a Data Base report and transfer it to a Word Processor document, you can use parts of records.

The following information describes the cut and paste activities you can use with the Data Base and tells how to do them. It tells how

● to move or copy complete Data Base records to another Data Base file on the Desktop

● to print a Data Base report to the clipboard and then move or copy it to a Word Processor document.

Chapter 12: Using Cut and Paste

Moving or Copying Data Base Records

Here's how to move or copy records within a Data Base file, or from one Data Base file to another:

1. Get the file you want to move the records from, and make sure you're in Review/Add/Change multiple-record layout.

2. Put the cursor in an entry on the top or bottom record of the group you want to move or copy.

3. Press ⌘-Ⓜ to move or ⌘-Ⓒ to copy.

4. Choose `To clipboard (cut)`.

5. Move the cursor to highlight the records you want to move or copy. Then press (RETURN). The records move or are copied to the clipboard.

6. Press ⌘-Ⓠ to get the Desktop Index. Choose the Data Base file you want to move or copy the records to. (You can add the file to the Desktop now if it's not there already.)

7. Make sure you're in Review/Add/Change multiple-record layout in the new file.

8. Move the cursor to the record above which you want to move the records.

9. Press ⌘-Ⓜ to move or ⌘-Ⓒ to copy.

10. Choose `From clipboard (paste)`. At this point, AppleWorks moves or copies the records from the clipboard.

The files you transfer records between should match each other in numbers of categories. Leftover categories will be dropped.

AppleWorks Tip

- If you want to move only specific records, choose them with ⌨-Ⓕ or by formulating record selection rules (⌨-Ⓡ). Then use ⌨-Ⓜ or ⌨-Ⓒ to move or copy them.

  Moving or copying records from one Data Base file to another allows you to merge two files. AppleWorks won't let you move every record from a file, however. (A Data Base file has to have at least one record!)

  You can merge all the records in one file with another file, however. Here's how:

  First, create a blank record in the first file. Second, move all the records except the blank one. Then throw away the original file. Ingenious! When you merge files, however, pay attention to the maximum records per file limitation (2250).

- You can move or copy information within the same document, too. Just leave out step 6 above.

- Move uses less Desktop space than copy. If you have a 64K Apple computer, you'll probably want to use ⌨-Ⓜ.

Printing a Report to the Clipboard for a Word Processor Document

When you want to add Data Base information to your Word Processor documents, you format a Data Base report, print it to the clipboard, and then copy or move it into your Word Processor document. Here's how:

1. Create the report format for the Data Base information you want to transfer to your Word Processor document.

2. Press ⌨-Ⓟ to indicate you want to print the report.

3. Choose the clipboard as the printing destination.

4. Type the report date if your report has a header, and press (RETURN). Otherwise, just press (RETURN).

   AppleWorks displays a message that tells you the report has been put on the clipboard.

Chapter 12: Using Cut and Paste

5. Press (⌘)-(Q) to get the Desktop Index. Then choose the Word Processor document you want. (You can add the file to the Desktop now if it's not there already.)

6. Move the cursor to the place where you want to insert the Data Base report.

7. Press (⌘)-(M) if you want to move the information into the document, or (⌘)-(C) if you want to copy it.

8. Choose `From clipboard (Paste)` in response to `Move?` or `Copy?`.

AppleWorks instantly transfers the formatted report into the specified place in the Word Processor document.

If you moved the report into the document, it no longer exists on the clipboard. If you copied it into the document, it still exists on the clipboard.

AppleWorks Tip

When you create the Data Base report format, pay particular attention to the number of characters per line in the report. If your Data Base report lines are wider than the number of characters per line in your Word Processor document, they will wrap around on the display. If the line length is long enough when you print, however, the lines will unwrap. The maximum is 225 characters per line.

You can find the number of characters per line on Data Base reports by moving the cursor all the way to the right on the `REPORT FORMAT` display.

You can edit your Data Base report after you get it into the Word Processor document, just like the rest of the document.

Cut and Paste With Word Processor Documents

Occasionally information you include in one Word Processor document would be more appropriate in another or in both. AppleWorks' cut and paste feature makes it easy to move or copy up to 250 lines from one Word Processor document to another.

Here's how:

1. Get the document you want to move or copy the information from.

2. Put the cursor at the first or last character of the information you want to move.

3. Press ⌨-Ⓜ to move or ⌨-Ⓒ to copy.

4. Choose To clipboard (cut).

5. Move the cursor to highlight the information you want to move. Then press (RETURN). Now the information is moved or copied to the clipboard.

6. Press ⌨-Ⓠ to get the Desktop Index. Choose the document you want to move or copy the information to. (You can add the file to the Desktop now, if it's not already there.)

7. Move the cursor to the place where you want to move the information.

8. Press ⌨-Ⓜ to move or ⌨-Ⓒ to copy.

9. Choose From clipboard (paste). At this point, AppleWorks moves or copies the information from the clipboard into the document.

AppleWorks Tip

You can move or copy information within the same document, too. Just leave out step 6 above.

Cut and Paste With Spreadsheet Information

Cut and paste allows you to transfer 250 rows within a file, between Spreadsheet files, or to a Word Processor document. You can transfer parts of a file or a report containing the whole file.

The following information describes the cut and paste activities you can use with the Spreadsheet and tells how to do them. It tells how

- to move or copy Spreadsheet information to another Spreadsheet file on the Desktop or elsewhere in the same document

- to print a Spreadsheet report to the clipboard and then move or copy it to a Word Processor document

Chapter 12: Using Cut and Paste

Moving or Copying Spreadsheet Information to Another Spreadsheet File

Here's how to move or copy information within a single Spreadsheet file, or from one Spreadsheet file to another:

1. Get the file you want to move or copy the rows from.

2. Move the cursor to a cell on the top or bottom row of the group of rows you want to move or copy.

3. Press ⌘-Ⓜ to move or ⌘-Ⓒ to copy.

4. Choose To clipboard (cut).

5. Move the cursor to highlight the rows you want to move. Then press (RETURN). The rows are moved or copied to the clipboard.

6. Press ⌘-Ⓠ to get the Desktop Index. Choose the file you want to move the records to. (Add the file to the Desktop now, if it's not already there.)

7. Move the cursor to the place where you want to move or copy the information.

8. Press ⌘-Ⓜ to move or ⌘-Ⓒ to copy.

9. Choose From clipboard (paste). At this point, AppleWorks moves or copies the information from the clipboard.

Printing a Report to the Clipboard for a Word Processor Document

When you want to add Spreadsheet information to your Word Processor documents, you format a Spreadsheet report, print it to the clipboard, and then copy or move it into your Word Processor document. Here's how:

1. Get the Spreadsheet file you want to make a report from.

2. Press ⌘-Ⓟ to indicate you want to print the report.

3. Choose All, Rows, Columns, or Block.

4. Highlight the area you want to print and press (RETURN).

5. Choose the clipboard as the printing destination.

6. Type a date for the report header if your report has one.

AppleWorks displays a message that tells you the report has been put on the clipboard.

7. Press ⌘-Q to get the Desktop Index. (Add the file to the Desktop now, if it's not already there.)

8. Move the cursor to the place where you want to insert the Spreadsheet report.

9. Press ⌘-M if you want to move the information into the document, or ⌘-C if you want to copy it.

10. Choose `From clipboard (Paste)`.

AppleWorks instantly transfers the formatted report, which includes data but not formulas, into the specified place in the Word Processor document.

AppleWorks Tip

You can move or copy information within the same document, too. Just leave out step 7, above.

When you create the Spreadsheet report format, pay particular attention to the number of characters per line in the report. Your Spreadsheet report lines can be 225 characters wide maximum.

You can edit your Spreadsheet report after you get it into the Word Processor document, just like the rest of the document.

Printers and Printing

Printers and Printing

AppleWorks lets you **print** in several different ways. Besides printing to a printer, you can also print to a disk, to the screen, or to the clipboard. The first section of this chapter, "Methods of Printing", explains these various possibilities.

The second section of the chapter, "About Printers," tells you how to set up your printer with AppleWorks. The third section explains how to print formatted reports and documents.

Methods of Printing

AppleWorks can print formatted reports, files, and parts of files onto flexible disks or a ProFile. It also, of course, prints reports and documents on printers.

The different ways you can use AppleWorks to print, listed below, are shown in Figure 13-1.

- The Data Base, the Word Processor, and the Spreadsheet print to a printer.

- All three software applications print formatted files on a disk; these disk files can later be sent to a printer.

- All three software applications print text (ASCII) files.

- The Data Base and the Spreadsheet print formatted reports on the clipboard for use in Word Processor documents.

- The Data Base and the Spreadsheet print DIF files.

- The Data Base prints formatted reports on the screen.

- You can always print a copy of the display on a printer.

Figure 13-1. *Different Ways AppleWorks Prints*
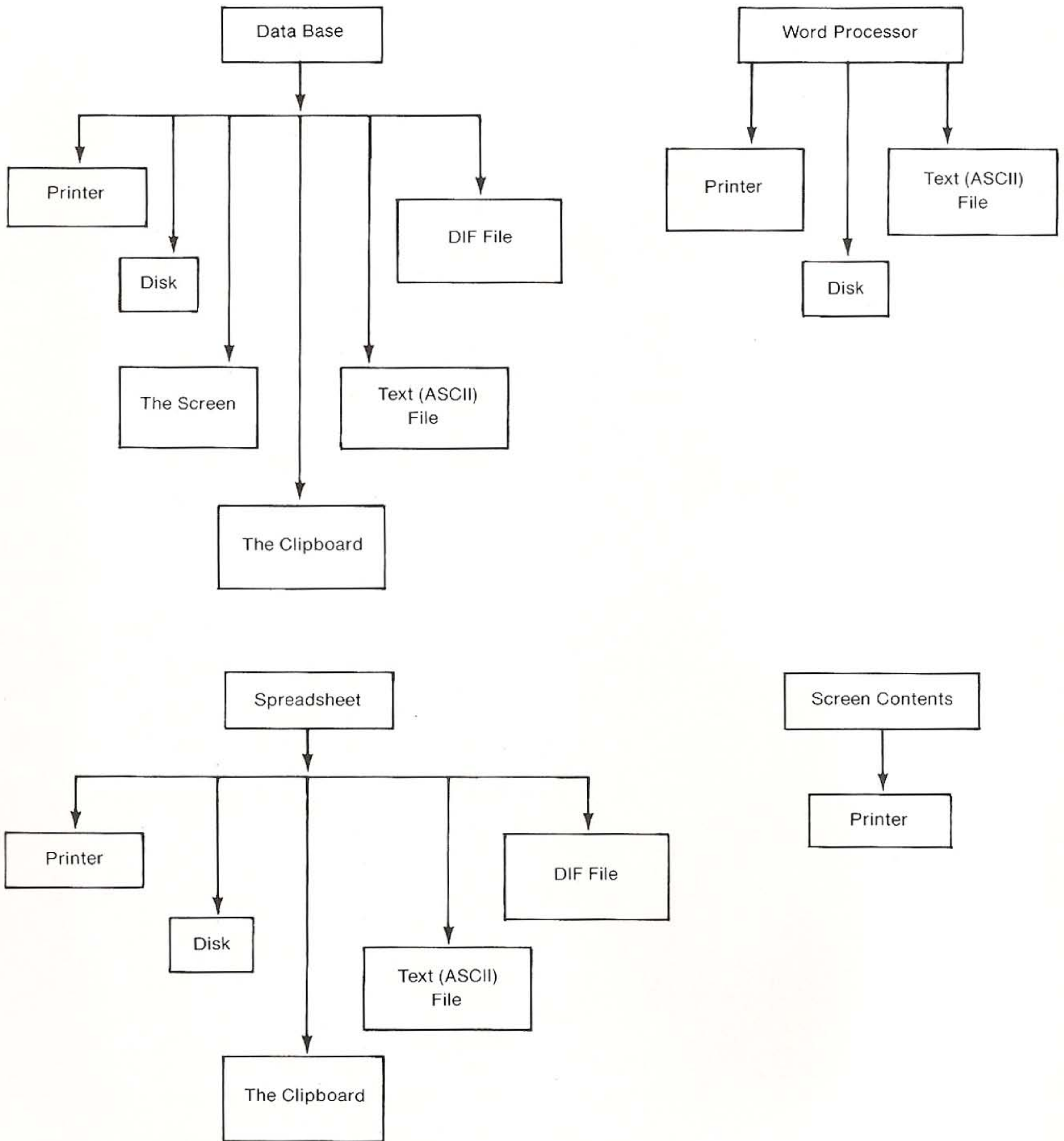
Printing to a Printer

When you print a Data Base report, a Word Processor document, or a Spreadsheet report to a printer, you first format the report or document using the features available in the application you're using. You also set the printer options to communicate the right information to the printer—margins, spacing, and so forth. When you print, you specify the printer you want to print to.

Printing to Disk

Sometimes you want to delay printing a report or document. Perhaps you want to use a telecommunications program to send the file to someone who will then print it. Or perhaps you are creating a file in one place and the printer you'll use is in another location.

Instead of making a hard copy on a printer, you can print to a file on a disk. When the report or document is printed as a file on the disk, it gets all the correct formatting and printer codes just as if it were being printed on the printer, but the file's structure changes so it is no longer an AppleWorks file.

To make use of the printing to disk capability, you must add a printer, following instructions in "Adding a Printer," and **assign it to disk** when you add it. The printer you add should be the same kind you are going to print with ultimately, so the document or report will have the proper printing codes. Then, when you print to disk, you choose the same printer and supply a pathname for the file you are printing. (When you print the report on a disk, the report becomes a file, so you must assign it a filename.)

You must still save your Desktop file as an AppleWorks file on disk after you follow the procedures for printing to disk.

Printing to a Text (ASCII) File

You can print your Data Base report, your Word Processor document, or your Spreadsheet report into a text (ASCII) file on disk. Then you can use the text file as input to other programs.

Text files **do not contain** special printing codes and printer options. But

- Word Processor documents you print to a text file contain the same carriage returns as the document.

- Data Base reports you print to a text file have carriage returns following each entry in the report.

- Spreadsheet reports printed to a text file have carriage returns following each cell.

Text files that you print from the Spreadsheet can be used as a source for Data Base files.

When you print a text file, the report becomes a file, so you must assign it a filename. You must still save your Desktop file as an AppleWorks file on disk after you print to a text file.

Printing to the Clipboard

After you format a Data Base or Spreadsheet report, you can print it to the clipboard. Then you can move or copy it into a Word Processor document.

Printing to a DIF File

DIF files save data in a format to be used by other programs. You can print (or **save**) Data Base and Spreadsheet reports as DIF files on disk for input to other programs. DIF files you print from the Spreadsheet can be used as a source for Data Base files, and vice versa.

When you print to a DIF file, the report becomes a file, so you must assign it a filename. You must still save your Desktop file as an AppleWorks file on disk after you print it to a DIF file.

Printing to the Screen

You can check your Data Base reports before you print them by printing the reports to the screen first.

Printing a Hard Copy of the Display

Any time you need a hard copy of the screen display, press (ḉ)-(H). The copy is printed on the printer designated for it.

Chapter 13: Printers and Printing

About Printers

You can use almost any printer with AppleWorks. However, you need to provide the program with specific information about your printer.

Each printer works a little differently. The owner's manual for your printer provides the information that you need in order to set up your printer to work with AppleWorks.

AppleWorks is already set up to use certain printers. You can specify the information for other printers. AppleWorks allows you to have up to three printers on your own list of printers.

One of the situations in the following list probably applies to you:

1. **You have an Apple Dot Matrix Printer (DMP) and no other printer.** The Apple DMP is the **default printer**, that is, the printer AppleWorks chooses if you don't specify another. If you have an Apple DMP and no other, you need read no further in this chapter. You're set to print.

2. **You don't have an Apple DMP, but you have another printer on AppleWorks' list:**

   - Apple Daisy Wheel Printer (DWP)
   - Apple Silentype®
   - Apple Imagewriter
   - Epson MX Series
   - Epson MX Graftrax+
   - Epson RX Series
   - Epson FX Series
   - Qume Sprint 5
   - Qume Sprint 11

   If you have one of these printers, you'll have to remove the Apple DMP as AppleWorks' default printer and add the printer you have. And you'll specify your printer as the one where screen contents should print. See the following sections in this chapter: "Adding a Printer," "Removing a Printer," and "Changing the Display Printer."

3. **You have both an Apple DMP and one of the other printers on the list.** You'll need to tell AppleWorks about the other printer and make sure the printer specified for printing screen contents is the correct one. See the following sections in this chapter: "Adding a Printer" and "Changing the Display Printer."

4. **Your printer isn't on AppleWorks' list.** You can probably still use it with AppleWorks. See Appendix B, "Preparing AppleWorks for a Custom Printer".

Table 13-1 shows the features that are available for each printer listed in the Add a Printer menu.

Table 13-1. Specifications for Printers on AppleWorks' List

Printer	Bold	Superscript	Subscript	Underlining	6,8 Lines per inch	Proportional	Characters per inch
Apple Dot Matrix	Y	Y	Y	Y	Y	Y	4,5,6,7,8,9,10,12,15,17
Apple Imagewriter	Y	Y	Y	Y	Y	Y	4,5,6,7,8,9,10,12,15,17
Apple Daisy Wheel	Y	Y	Y	Y	Y	Y	4-13,15,17,20,24
Apple Silentype	N	N	N	N	N	N	10
Epson MX series	Y	N	N	Y	Y	N	5,8,10,17
Epson MX/Graftrax+	Y	Y	Y	Y	Y	N	5,8,10,17
Epson RX series	Y	Y	Y	Y	Y	N	5,6,8,10,12,17
Epson FX series	N	Y	Y	Y	Y	Y	5,6,8,10,12,17
Qume Sprint 5	N	Y	Y	Y	Y	Y	4-13,15,17,20,24
Qume Sprint 11	Y	Y	Y	Y	Y	Y	4-13,15,17,20,24

Chapter 13: Printers and Printing

Adding a Printer

You can add up to three printers to the list of printers you're using. Follow these steps to add a printer:

1. Choose `Other Activities` from the list of Main Menu options.

2. Choose `Specify information about your printer(s)`.

   AppleWorks presents the Printer Information display, which is illustrated in Figure 13-2. The display in Figure 13-2 is for a new AppleWorks system: it has an Apple DMP as its default printer. No other printers are specified.

Figure 13-2. *Printer Information Display*

```
Disk: Drive 1              PRINTER INFORMATION         Escape: Other Activities
--------------------------------------------------------------------------------
  ----------------------------
  !      Main Menu            !------------------------------------------------
  !  !                        !
  !  !    Other Activities    !----------------------------------------------!--
  !  !  ------------------------------!                                        !
  !  !  ! Printer Information         !----------------------------------!----
  !  !  !                                                                      !
  !  !  !   ┌ Change standard values                                          !
  !  !  !   │ 1.   Open-Apple-H printer   Apple DMP (Slot 1)                   !
  !  !  !   │                                 └──────┐                         !
  !  !  !   │ Add or remove a printer                │                         !
  !__!  !   │ 2.   Add a printer (maximum of 3)      │                         !
  !  !  !   │ 3.   Remove a printer                  │                         !
  !  !  !   │                                        │                         !
  !  !  !   │ Change printer specifications          │                         !
  !__!  !   └ 4.   Apple DMP (Slot 1)                │                         !
     !  !                                            │                         !
     !__!                                            │                         !
--------------------------------------------------------------------------------
Type number, or use arrows, then press Return               30K Avail.
```
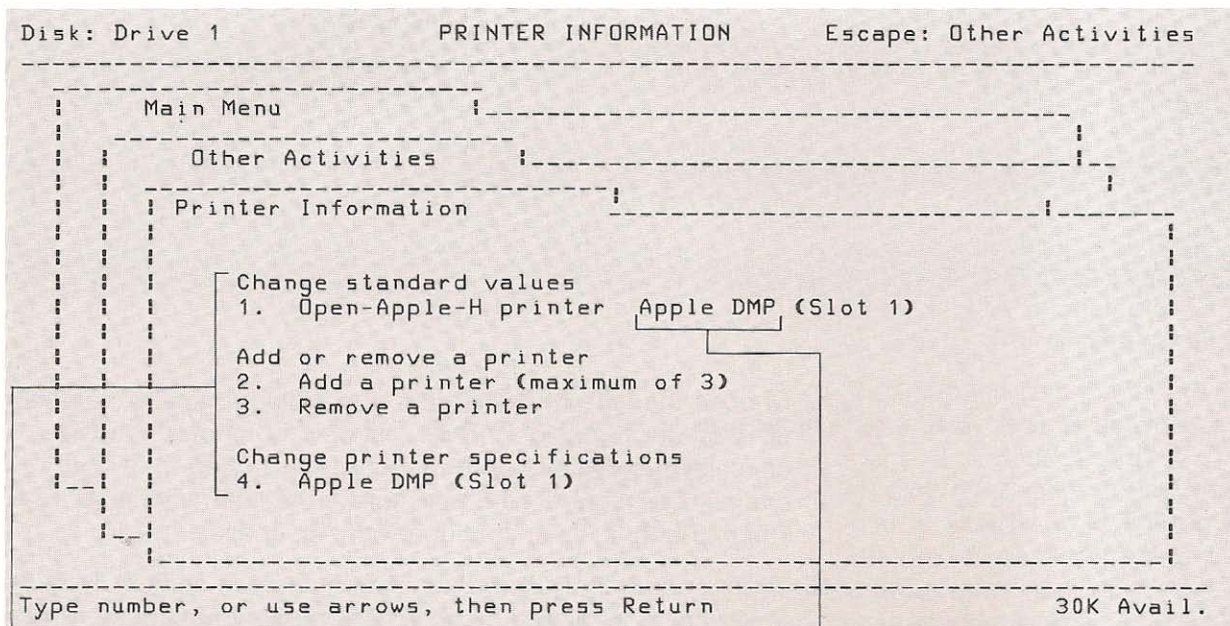
The numbered items represent your options.   Default printer.

3. Choose Add a printer (maximum of 3).

AppleWorks presents the Add a Printer display, which is illustrated in Figure 13-3.

Figure 13-3. Add a Printer Display

```
Disk: Drive 1                  ADD A PRINTER        Escape: Printer Information
----------------------------------------------------------------------------
   --------------------------------
   !      Main Menu             !--------------------------------------------
   !   -------------------------                                            !
   !   !    Other Activities       !----------------------------------------!
   !   !  ----------------------                                          !
   !   !  !    Printer Information  !---------------------------------------!
   !   !  !  ---------------------                                       !
   !   !  !  !    Add a Printer         !-----------------------------------
   !   !  !  !    Identify your printer, or a compatible series             !
   !   !  !  !                                                              !
   !   !  !  !     1.   Apple Dot Matrix      9.   Qume Sprint 5            !
   !   !  !  !     2.   Apple Imagewriter    10.   Qume Sprint 11           !
   !   !  !  !     3.   Apple Daisy Wheel                                   !
   !   !  !  !     4.   Apple Silentype      11.   Custom printer           !
   !   !  !  !                                                             !
   !   !  !  !     5.   Epson MX series                                    !
   !___! !  !     6.   Epson MX/Graftrax+                                  !
   !   !  !        7.   Epson RX series                                    !
   !___! !        8.   Epson FX series                                    !
   !___!_____!
----------------------------------------------------------------------------
Type number, or use arrows, then press Return                      30K Avail.
```

Printers you can add

4. Choose the type of printer you are adding. If you are setting up a printer to assign to disk, choose the printer you will ultimately use when you print your report (step 6). If you choose Custom Printer, follow the instructions in steps 5 and 6. Then continue with Appendix B.

5. Type a name for your printer. The name can contain 15 or fewer characters, and it can be any name you choose. Press (RETURN) after you type the printer's name.

6. Choose the means of access for your printer.

If you have one printer connected to your Apple IIc, choose option 1 (slot 1 is equivalent to port 1). If you have two printers connected, slot 2 (port 2) is the alternate connector.

Chapter 13: Printers and Printing

7. If necessary, change specifications listed in Table 13-2. (If you don't change any specifications, your printer will print normally.) To change one of the first three specifications, type the number of the option and choose `Yes` by typing `Y` in response to `Change the value?`. AppleWorks automatically changes the value to its opposite.

To change specification 4, type 4. Then type the new value for platen width. Then press (RETURN).

Table 13-2. *Generic Specifications*

Specification	Explanation
1. Needs line feed after each (RETURN).	Some printers automatically generate a line feed after every carriage return; these printers do not need a line feed from the program. Other printers require that the program generate the line feed. If your printer isn't spacing after each line, or if it is double spacing when it shouldn't, try changing this value.
2. Accepts top-of-page commands.	Top-of-page commands are *form feed* commands. After a page of a report is printed, AppleWorks needs to instruct your printer to go to the top of the next page. Most printers can accept a special instruction called a top-of-page or form feed command that automatically causes this to happen. Other printers, including the Apple Silentype, do not have this capability and must print a number of blank lines to get to the next page.

Specification	Explanation
3. Stop at end of each page.	If you are printing on letterhead stationery or if you have a printer like the Silentype that uses nonperforated paper, you will want printing to stop at the end of each page so you can change paper or tear off the printed sheet.
4. Platen width.	The distance your printer's printhead travels, from left to right. The platen width you specify here must be ·as wide or wider than the one you specify for individual AppleWorks reports.

8. To return to the Printer Information display, press (ESC).

Removing a Printer

Here's how to remove a printer from the list of printers you are using:

1. Choose Other Activities from the list of Main Menu options.

2. Choose Specify information about your printer(s).

3. Choose Remove a printer.

4. Choose the printer you are removing.

The printer is automatically removed and you return to the Printer Information display.

Changing Printer Specifications

This is how to change specifications about your printer:

1. Choose Other Activities from the list of Main Menu options.

2. Choose Specify information about your printer(s).

3. Choose the printer you want to change specifications for.

4. Change the specifications:

   To change 1, 2, or 3, type the number of the specification and then choose Yes.

   To change 4, type 4 and press (RETURN). Type the new value and press (RETURN).

5. To return to the Printer Information display, press (ESC).

Changing the Display Printer

You may want to change the printer where the display prints (when you use the (⌘)-(H) command):

1. Choose Other Activities from the list of Main Menu options.

2. Choose Specify information about your printer(s).

3. Type 1 and press (RETURN).

4. Choose the printer where you want to print the display. You return to the Printer Information display.

Printing Formatted Reports and Documents

This section contains information you need to print Data Base reports, Word Processor documents, and Spreadsheet reports.

Printing a Data Base Report

After you format a Data Base report and set its printer options, you can print it. This is how to print the Data Base report:

1. Make sure you are at the Report Format display.

2. Press ⑤-Ⓟ.

3. Choose the device where you want to print the report.

4. If your report has a header, AppleWorks asks you either to type a new report date and press (RETURN), or to accept the default report date by pressing (RETURN). The default report date is the last date you typed for printing a report.

5. If you chose a printer, AppleWorks asks the number of copies you want. Type the number and press (RETURN).

Pathnames are discussed in this manual in Chapter 1 and in detail in the *System Utilities Guide* (Apple IIc) and the *ProDOS User's Manual* (Apple IIe).

6. If you indicate that you want to print to a text (ASCII) file or a DIF file, or that you want to print to disk, AppleWorks asks you for the pathname for the file you are printing. Type the pathname and press (RETURN).

During printing, you can press (ESC) to stop printing and return to Review/Add/Change. Or you can press (SPACE) once to stop printing and once again to restart it.

Printing a Word Processor Document

This section tells how to print a Word Processor document. It also discusses special printer options that cause the printer to pause during printing.

Requesting Printing

This is how to request printing:

1. Press ⑤-Ⓟ.

2. Choose Beginning if you want to print the document from the beginning, This page if you want to print from the beginning of the page the cursor is on, or Cursor position if you want to print from the cursor position.

3. Choose the printer you want to use.

During printing, you can press (ESC) to stop printing and return to Review/Add/Change. Or you can press (SPACE) once to stop printing and once again to restart it.

AppleWorks Tip

To print a segment of a document, print from the cursor position to a place you've marked with the printer option Pause Here (PH). When the printer pauses, press (ESC).

This is a good way to print the name and address segment of a letter onto an envelope.

Pausing After Each Page

If you want to put in a new piece of paper for each page you print, cause the printer to pause after printing each page:

1. Put the cursor at the place in the document where you want the printer to start pausing for each new page. If you want to pause after each page throughout the document, put the cursor at the beginning of the document.

2. Press (ᵈ)-(O).

3. Type PE and press (RETURN).

4. Press (ESC).

Finish the document and then print it.

Pausing in a Specific Place

To ask for a pause in a specific place:

1. Put the cursor in the place in the document where you want the printer to pause.

2. Press (ᵈ)-(O).

3. Type PH and press (RETURN).

4. Press (ESC).

Finish the document and then print it.

Printing a Spreadsheet Report

After you determine how much of the spreadsheet you are going to print and set printer options for a Spreadsheet report, you can print it:

1. Make sure you are at Review/Add/Change.

2. If you're not printing the whole spreadsheet, put the cursor in a cell that marks a corner of the area you are going to print.

3. Press (Ć)-(P).

4. Choose All, Rows, Columns, or Block. *All* refers to all information, not all cells. However, AppleWorks will only print as much information on each row as can fit on your printer.

5. If you chose Rows, Columns, or Block, move the cursor to highlight the area you want to print. Then press (RETURN).

6. Check the width of your report to make sure it's not too wide for your printer's **platen**. If it is, press (ESC) and go back and replan your report, or try more characters per inch in printer options ((Ć)-(O)). Otherwise, choose the device where you want to print the report.

7. If you chose a printer, AppleWorks asks the number of copies you want. Type the number and press (RETURN).

8. If your report has a header, AppleWorks asks you either to type a new report date and press (RETURN), or to accept the default report date by pressing (RETURN). The default report date is the last date you typed for printing a report.

Pathnames are discussed in this manual in Chapter 1 and in detail in the *System Utilities Guide* (Apple IIc) and *ProDOS User's Manual* (Apple IIe).

9. If you indicate you want to print to a text (ASCII) file or a DIF file, or you choose the printer that you have assigned to print to disk, AppleWorks asks you for the pathname for the file you are printing. Type the pathname and press (RETURN).

During printing, you can press (ESC) to stop printing and return to Review/Add/Change. Or you can press (SPACE) once to stop printing and then once again to restart it.

Chapter 13: Printers and Printing

Appendixes

Using AppleWorks With a ProFile

If you have a ProFile storage device, you will find it very useful to install the AppleWorks program on it. Then you can run AppleWorks much more quickly. The steps you follow to begin using a ProFile with AppleWorks are simple:

- Make a subdirectory for AppleWorks files

- Copy startup and program files into the subdirectory

- Copy ProDOS and BASIC.SYSTEM into your ProFile's root directory.

This appendix tells how. It also tells how to start up AppleWorks from a ProFile.

First make a subdirectory on the ProFile for the AppleWorks files. To do this:

1. Place the *ProDOS User's Disk* in drive 1 and start up your Apple IIe.

2. Then type F to choose the ProDOS Filer.

3. Type F again to select `File Commands`.

4. Then type M to make a directory.

5. When you see the prompt for the pathname, type

```
/profile/appleworks
```

By the Way: If your ProFile has a volume name other than *profile*, you'll need to use its name as the first part of your pathname in step 5. To find out the volume name, select `Volume Commands` and `List Volumes` from the ProDOS Filer. The volume name is displayed next to the number of the slot that holds the ProFile interface card.

6. Press (ESC) after you see the message

Subdirectory made

You now have a subdirectory called *appleworks* on your ProFile.

The next step is to copy the files from the AppleWorks disks onto the ProFile. To do this:

1. Choose C to copy the files from your AppleWorks disks.

2. Put the AppleWorks *Startup* disk in drive 1 and type

/appleworks/=

to copy all of the files *from* this disk. Then press (RETURN).

3. Now type

/profile/appleworks/=

to copy these files *to* the ProFile. Press (RETURN).

4. When all of the files are copied, remove the *Startup* disk and replace it with the *Program* disk. Using this disk, repeat steps 2 and 3.

You now have all the AppleWorks startup and program files on your ProFile. You'll need to transfer two other files to the root directory of your ProFile: BASIC.SYSTEM from the *ProDOS User's Disk* and PRODOS from the AppleWorks subdirectory. To do this:

1. Select the *Copy Files* option, if you're not already there.

2. Type

   `/profile/appleworks/prodos`

   to copy PRODOS from the AppleWorks subdirectory.

3. Type

   `/profile/prodos`

   to copy PRODOS to the ProFile root directory.

4. Remove the *Program* disk from drive 1 and replace it with the *ProDOS User's Disk*.

5. Type

   `/users.disk/basic.system`

   to copy BASIC.SYSTEM from the disk.

6. Type

   `/profile/basic.system`

   to copy BASIC.SYSTEM to the ProFile root directory.

You can now run the AppleWorks program directly from the ProFile.

Here's how to start up AppleWorks from your ProFile:

1. Turn on the ProFile and wait for the red *ready* light on the front to stop blinking. With the *ProDOS User's Disk* in Drive 1, turn on your Apple IIe or, if the computer is already on, press (CONTROL)-(RESET).

2. Type B to enter BASIC. Then type PR#4 (or, instead of 5, the number of the slot where you have the ProFile interface card).

3. Then, to run the program, type

   ```
   -appleworks/aplworks.system
   ```

You'll then see the opening display for AppleWorks.

Preparing AppleWorks for a Custom Printer

If your printer is not listed on the `Add a Printer` menu, you should communicate information to AppleWorks about your printer. You tell AppleWorks how to:

- set different characters per inch

- set different lines per inch

- start and end boldface, subscripts, and superscripts

- underline.

You have a fifth printer specification, serial interface settings. Communicating information to AppleWorks about them is included in this appendix, too.

Selecting a Custom Printer

To add your custom printer to the the list of printers available for AppleWorks, follow the normal procedure for adding a printer described in Chapter 13, "Printers and Printing." Here is a summary of these steps:

1. Choose option 5, `Other Activity Menu`, from the list of Main Menu options.

2. Choose option 7, `Specify information about your printer(s)`.

3. Choose `Add a printer (maximum of 3)`.

4. Choose `Custom Printer` from the list of printers available for AppleWorks. You can have only *one* custom printer. If you try to add another, you receive a warning message.

5. Type the name of the printer.

6. Choose the means of access for your printer, that is, the type of connection you have.

7. Change printer specifications 1 through 4, if necessary.

8. Choose option 5, `Printer codes`, to prepare AppleWorks for your printer.

Configuring Your Custom Printer

When you select the option `Printer codes` from the `Printer Information` menu, the menu shown in Figure B-1 appears.

Figure B-1. *Printer Codes Menu*

```
Disk: Drive 1                    PRINTER CODES              Escape: Change A Printer
--------------------------------------------------------------------------------

      ---------------------------------
   :      Main Menu              :_____
   :                                                                            :
   :    ---------------------------------                                       
   :  :       Other Activity Menu  :_____:__
   :  :                                                                          :
   :  :    --------------------------                                            :
   :  :  :    Printer Information  :_____:__
   :  :  :                                                                       :
   :  :  :   ------------------------                                            :
   :  :  :  :   Printer codes       :_____:
   :  :  :  :                                                                     :
   :  :  :  :                                                                     :
   :  :  :  :   1.   Characters per inch                                          :
   :  :  :  :                                                                     :
   :  :  :  :   2.   Lines per inch                                               :
   :  :  :  :                                                                     :
   :  :  :  :   3.   Boldface, Subscript and Superscript                          :
   :  :  :  :                                                                     :
   :  :  :  :   4.   Underlining                                                  :
   :__:  :  :                                                                     :
   ----+--+--+-------- 5.   Serial Interface settings                            :
      :__:  :                                                                     :
          :__:                                                                   :
             :__:_____:
--------------------------------------------------------------------------------
Type number, or use arrows, then press Return                        30K Avail.
```

└─An option for Apple IIc only
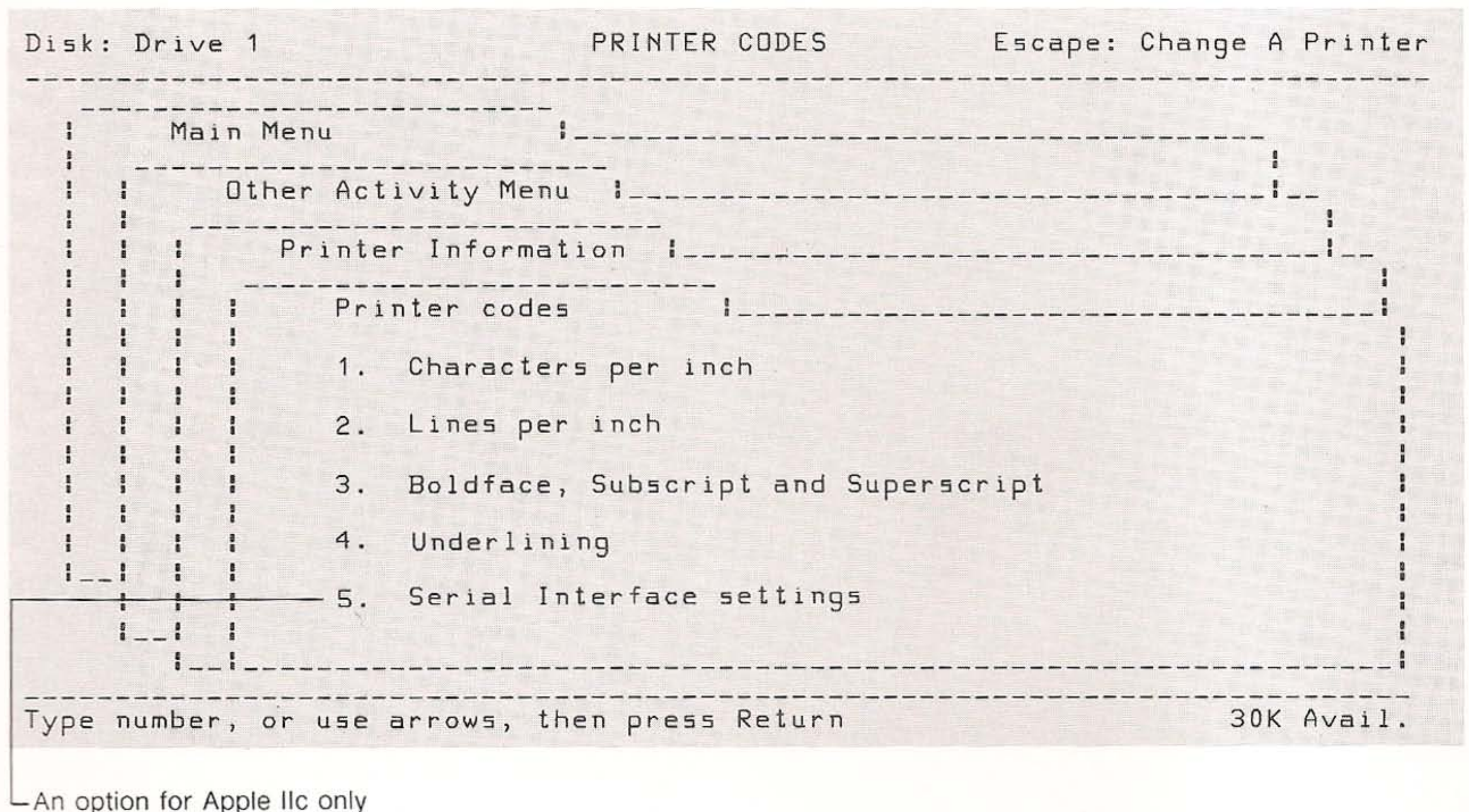
To select one of the options, type the number and press (RETURN) or use the arrow keys and press (RETURN).

Appendix B: Preparing AppleWorks for a Custom Printer

Characters Per Inch

When you select Characters per inch from the
Printer codes menu, you type the keystrokes, or control
codes, necessary for your printer to print with a different
number of characters per inch.

1. Type the characters per inch, such as 15. You can print
   with from 4 to 24 characters per inch. If you previously
   typed codes for a specific characters per inch, that number
   is displayed on the screen with the message Is this
   OK?. Answer No to specify other codes, or Yes to accept
   the displayed codes.

2. Type the keystrokes, or control codes, required by your
   printer to print in the characters per inch you specified. You
   can find the codes you need in the manual that came with
   your printer.

Warning

You can leave this menu only by typing a caret (^). If you press
(ESC) to leave the menu, it is displayed as a code. If you make a
mistake while you are using this screen, type ^ and the number
of the characters per inch you are defining. Then answer No to
the question Is this OK?.

3. Type ^ after you finish typing the codes.

4. Define more characters-per-inch codes or press (ESC) to
   return to the Printer codes menu.

The following rules apply to using different characters per inch:

- If you do not specify any characters per inch, AppleWorks
  displays and prints your text as if your printer were set to
  10 characters per inch.

- Decimal values, like 16.5, are not allowed. Define the next
  lower whole number value. For example, if your printer can
  print 16.5 characters per inch, type the codes so they are
  displayed under 16 characters per inch.

- If you define a characters per inch that your printer can't do,
  your reports and documents are printed in the same
  characters per inch as whatever you printed last.

Lines Per Inch

After you select Lines per inch from the Printer codes menu, you type the codes that cause your printer to print in different lines per inch.

1. Choose from the menu the number of lines per inch for which you wish to enter codes. You can type codes to print either 6 or 8 lines per inch.

2. Type the codes required by your printer to print the number of lines per inch you chose. You can find the codes you need in the manual that came with your printer.

▲ **Warning**
You can leave this menu only by typing a caret (^). If you press (ESC) to leave the menu, it is displayed as a code. If you make a mistake while you are using this screen, type ^ and the number of lines per inch you are defining. Then answer No to the question Is this OK?.

3. Type ^ after you finish typing the codes.

4. Define the second lines-per-inch code or press (ESC) to return to the Printer Codes Menu.

Boldface, Subscript, and Superscript

When you select Boldface, Subscript and Superscript from the Printer codes menu, you type the codes necessary for your printer to print in boldface, subscripts, or superscripts.

You type these codes only if you plan to use these printer options in the Word Processor. If you do not plan to use them, skip this section and continue with "Underlining."

When you choose this option, the menu shown in Figure B-2 appears.

Figure B-2. *Enhancements Menu*

```
Disk: Drive 1                    ENHANCEMENTS              Escape: Printer codes
-------------------------------------------------------------------------------
       -----------------------------
     !       Main Menu           !-----------------------------------------!
     !    ---------------------------                                       !
     !  !      Other Activity Menu  !--------------------------------------!__
     !  !   --------------------------                                        !
     !  !  !    Printer Information !------------------------------------!__   !
     !  !  !  ---------------------------                                   !
     !  !  !  !    Enhancements       !--------------------------------------!__
     !  !  !  !                                                                !
     !  !  !  !     1.   Boldface Begin                                        !
     !  !  !  !     2.   Boldface End                                          !
     !  !  !  !     3.   Subscript Begin                                       !
     !  !  !  !     4.   SubScript End                                         !
     !  !  !  !     5.   Superscript Begin                                     !
     !  !  !  !     6.   Superscript End                                       !
     !  !  !  !                                                                !
     !__!  !  !                                                                !
        !  !                                                                   !
        !__!  !                                                                !
           !__!-----------------------------------------------------------------!
-------------------------------------------------------------------------------
Type number, or use arrows, then press Return                      30K Avail.
```

There are various ways to define subscripts and superscripts. Your printer may have an automatic subscript or superscript command, or you can type a sequence of characters that will give the same results. For example, to begin superscripts, you can type keystrokes under the `Superscript Begin` option that will cause your printer to do a reverse fractional line feed. To stop superscripts, you can type keystrokes under the `Superscript End` option that will cause your printer to do a forward fractional line feed.

1. Choose the option you want to define codes for from the menu.

2. Type the codes required by your printer to print with the option you chose.

▲ **Warning**
You can leave this menu only by typing a caret (^). If you press (ESC) *to leave the menu, it is displayed as a code. If you make a mistake, type* ^ *and then the number of the option you are defining. Then answer* No *to the question* Is this OK?.

---

3. Type ^ to return to the Enhancements Menu so you can define another enhancement.

4. Press (ESC) to return to the Printer Codes Menu.

Underlining

When you select option 4, Underlining, from the Printer codes menu, you choose how your printer will underline. Do this only if you plan to enter underline commands in Word Processor documents.

IIe If you are not going to use underlining in Word Processor documents, press (ESC) to return to the Add a Printer Menu.

IIc If you are not going to use underlining in Word Processor documents, go on to "Specifying Serial Interface Settings."

When you choose option 4, the menu shown in Figure B-3 appears.

Figure B-3. Underlining

```
Disk: Drive 1                   UNDERLINING              Escape: Printer codes
-----------------------------------------------------------------------------
    ---------------------------------
 !      Main Menu            !-------------------------------------------
 !    ---------------------------------                                 !
 !  !      Other Activity Menu  !--------------------------------------!__
 !  !  ---------------------------------                                  !
 !  !  !    Printer Information  !---------------------------------!__
 !  !  !  ---------------------------------                               !
 !  !  !  !    Underlining          !--------------------------------!__
 !  !  !  !  ---------------------------------                            !
 !  !  !  !    1.   Don't attempt underlining                            !
 !  !  !  !                                                              !
 !  !  !  !    2.   Printer has start/stop underline commands           !
 !  !  !  !                                                              !
 !  !  !  !    3.   Print character, backspace, underline               !
 !  !  !  !                                                              !
 !  !  !  !    4.   Print line, carriage return, print underline        !
 !__!  !  !                                                    .        !
    !  !  !                                                             !
    !__!  !                                                             !
       !__!------------------------------------------------------------!
-----------------------------------------------------------------------------
Type number, or use arrows, then press Return                    30K Avail.
```
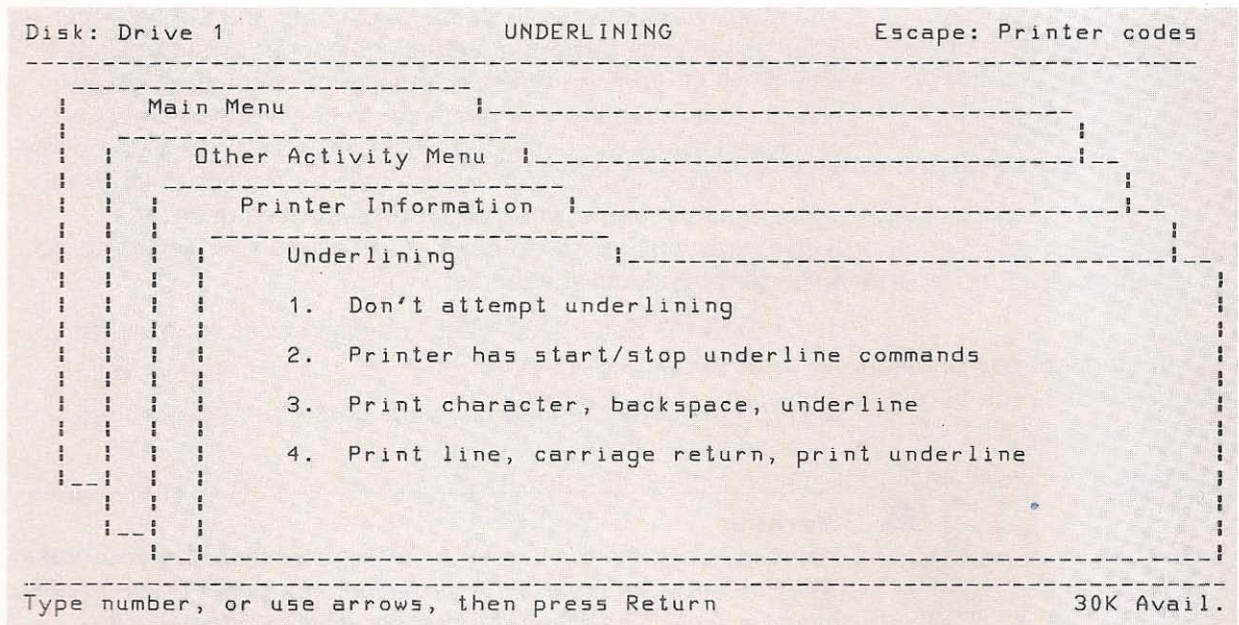
Choose the method you want your printer to underline with. If you made a choice earlier and you are changing these specifications, your previous choice is highlighted.

Appendix B: Preparing AppleWorks for a Custom Printer

The different methods of underlining are explained below:

1. **Printer has start/stop underline commands.** If your printer has underlining commands, choose this option. After you choose this option, the menu shown in Figure B-4 appears.

Figure B-4. *Underlining Codes*

```
Disk: Drive 1                  UNDERLINING           Escape: Printer codes
----------------------------------------------------------------------------
  ------------------------------
  !       Main Menu            !-------------------------------------------
  !     -------------------------------                                    !
  !  !        Other Activity Menu   !------------------------------------!--
  !  !     --------------------------                                       !
  !  !  !       Printer Information  !------------------------------------!--
  !  !  !     ---------------------------                                   !
  !  !  !  !      Underlining         !------------------------------------!--
  !  !  !  !                                                                !
  !  !  !  !       1.   Underline Begin                                     !
  !  !  !  !                                                                !
  !  !  !  !       2.   Underline End                                       !
  !  !  !  !                                                                !
  !  !  !  !                                                                !
  !  !  !  !                                                                !
  !  !  !  !                                                                !
  !__!  !  !                                                                !
     !  !  !                                                                !
     !__!  !                                                                !
        !__!------------------------------------------------------------!
----------------------------------------------------------------------------
Type number, or use arrows, then press Return              30K Avail.
```

- First, type the codes for beginning or ending underlining. Type the exact keystrokes required by your printer to print with the option you chose.

⚠️ **Warning**
You can leave this menu only by typing a caret (^). If you press (ESC) *to leave the menu, it is displayed as a code. If you make a mistake, type* ^ *and then 2. Then answer* No *to the question* Is this OK?.

- Type ^ to return to the Underlining Menu.
- Press (ESC) to return to the Printer Codes Menu.

2. `Print character, backspace, underline.` If your printer does not have commands to underline but has the capability to backspace, choose this option. With this method of underlining, your printer prints the first character of the word you wish to underline, backspaces, prints an underline character, and then prints the next character in the word, repeating these steps over and over until underlining stops.

3. `Print line, carriage return, print underline.` If your printer does not have codes to underline, and it cannot backspace, choose this option. With this method of underlining, your printer first prints the entire line that contains underlining, then returns the printhead to the left margin without moving the paper up a line, and then prints the underline in the proper place.

If you do not know which method to choose, try them all, working from method 2 down, until you find one that works. If none of them works, it may be too difficult for AppleWorks to understand how your printer underlines. In that case, choose `Don't attempt underlining.`
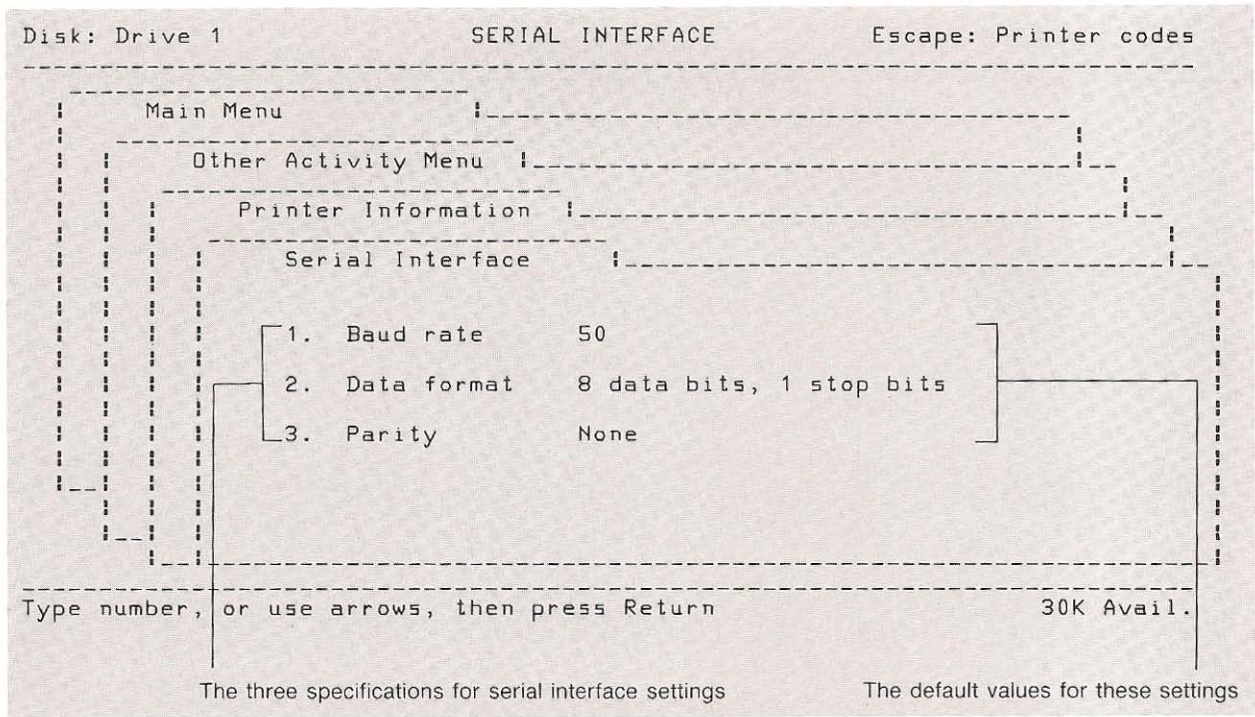
> You may want to change the switches on your Superserial or Parallel Interface Card so that lines feeds are not added.

Specifying Serial Interface Settings (Apple IIc only)

To begin specifying serial interface settings, choose option 5 from the `Printer Codes` menu. Then AppleWorks displays the `Serial Interface` menu, which is illustrated in Figure B-5.

Appendix B: Preparing AppleWorks for a Custom Printer

```
Disk: Drive 1              SERIAL INTERFACE          Escape: Printer codes
-----------------------------------------------------------------------
   :        Main Menu          :----------------------------------------
   :     --------------------------:                                    :
   :   :      Other Activity Menu  :--------------------------------:___
   :   :   ------------------------------:                            :
   :   :   :      Printer Information    :--------------------------:___
   :   :   :   --------------------------------:                      :
   :   :   :   :      Serial Interface         :----------------------:__
   :   :   :   :                                                        :
   :   :   :   :  ┌─1.   Baud rate       50                          ┐  :
   :   :   :   :  │ 2.   Data format     8 data bits, 1 stop bits    │  :
   :   :   :   :  └─3.   Parity          None                        ┘  :
   :   :   :   :                                                        :
   :__:   :   :                                                        :
     :__:   :                                                        :
       :__:   :_____:
-----------------------------------------------------------------------
Type number, or use arrows, then press Return              30K Avail.
```

The three specifications for serial interface settings   The default values for these settings

When you specify serial interface settings for your custom printer, you define the following:

- The **Baud rate**, which determines how fast the Apple IIc can talk with your printer

- The **data format**, which tells how data will be sent from the Apple IIc to the printer

- A value for **parity**, which allows the printer to check for accuracy of data transmission.

You can look in your printer manual or ask your dealer for the correct setting for each option.

Choose each option by using the arrow keys to highlight the option and pressing (RETURN) or by typing the option's number and pressing (RETURN). Then follow directions in the following sections for each setting.

After you have specified a value for each, you have finished communicating information to AppleWorks about your custom printer. Press (ESCAPE) to return to the Printer Information menu.
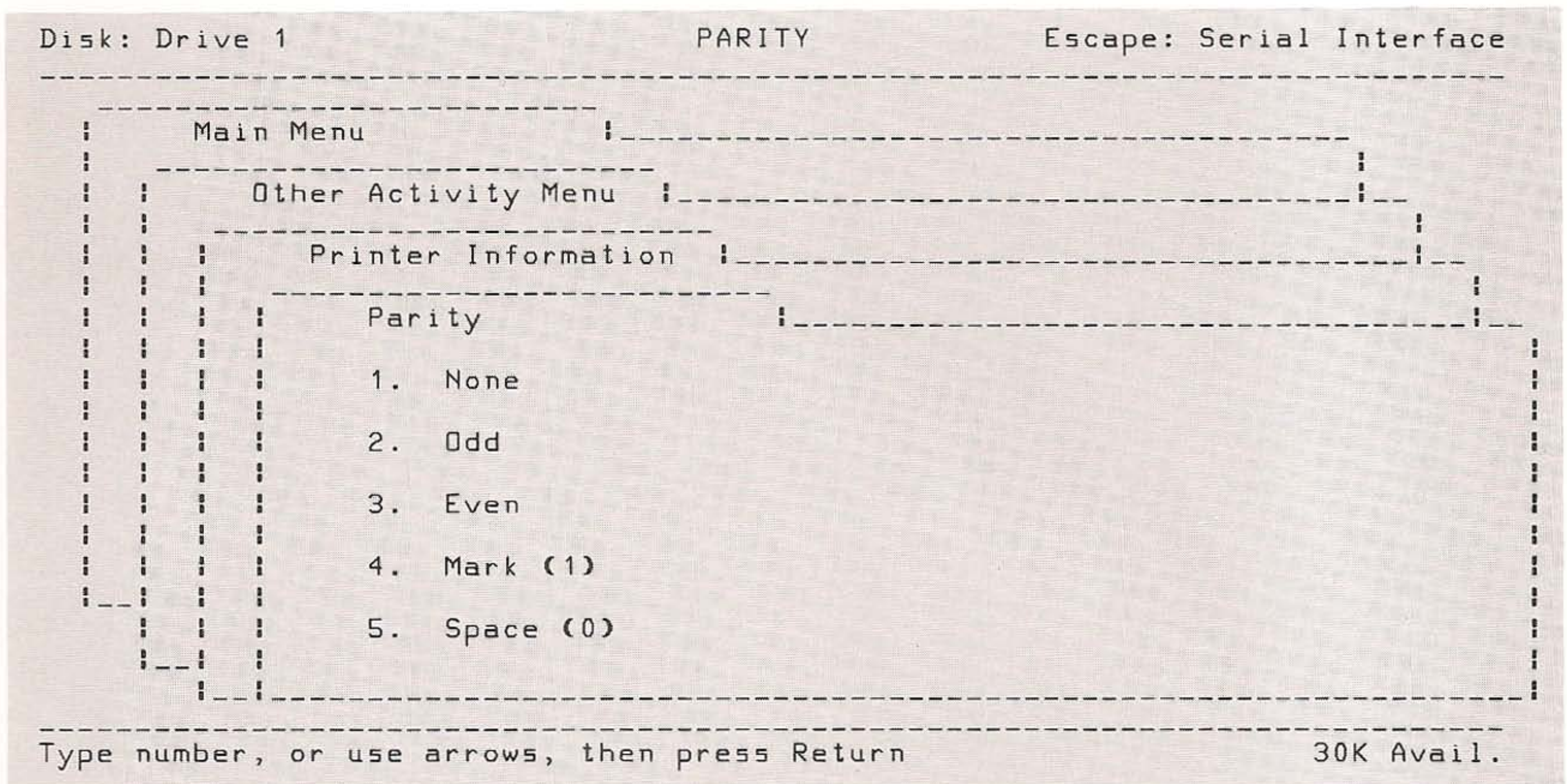
Configuring Your Custom Printer   289

Specifying the Baud Rate

After you indicate that you want to specify a Baud rate, AppleWorks presents the Baud rate menu illustrated in Figure B-6.

Figure B-6. *Baud Rate Menu*

```
Disk: Drive 1                    BAUD RATE          Escape: Serial Interface
------------------------------------------------------------------------------
   -------------------------------------
   :      Main Menu               :------------------------------------------
   :     ---------------------------------                                   :
   :  :      Other Activity Menu  :---------------------------------------:__
   :  :    ---------------------------------                                :
   :  :  :    Printer Information  :-------------------------------------:__
   :  :  :   ---------------------------------                             :
   :  :  :  :    Baud rate              :------------------------------:__
   :  :  :  :                                                              :
   :  :  :  :   1.   50          6.   300       11.   3600                 :
   :  :  :  :   2.   75          7.   600       12.   4800                 :
   :  :  :  :   3.   110         8.   1200      13.   7200                 :
   :  :  :  :   4.   135         9.   1800      14.   9600                 :
   :  :  :  :   5.   150        10.   2400      15.   19200                :
   :  :  :  :                                                              :
   :  :  :  :                                                              :
   :__:  :  :                                                              :
      :  :  :                                                              :
      :__:  :                                                              :
         :  :                                                              :
         :__:--------------------------------------------------------------:
------------------------------------------------------------------------------
Type number, or use arrows, then press Return                      30K Avail.
```

If the Baud rate is set too fast, your printer will lose characters while it is printing, or it will not print at all. If it is set too low, you do not use your printer to its maximum efficiency.

Select the correct Baud rate by typing its number and pressing (RETURN) or by using the arrow keys to highlight it and then pressing (RETURN).

Specifying the Data Format

After you indicate that you want to specify a data format, AppleWorks presents the Data format menu illustrated in Figure B-7.

Appendix B: Preparing AppleWorks for a Custom Printer

Figure B-7. Data Format Menu

```
Disk: Drive 1                    DATA FORMAT            Escape: Serial Interface
------------------------------------------------------------------------------
   .-------------------------------.
   ¦    Main Menu                  ¦.-----------------------------------------.
   ¦  .---------------------------.¦                                          ¦
   ¦  ¦    Other Activity Menu    ¦.-----------------------------------------.¦..
   ¦  ¦ .-------------------------.¦                                         ¦  ¦
   ¦  ¦ ¦   Printer Information   ¦.----------------------------------------.¦..
   ¦  ¦ ¦ .----------------------.¦                                        ¦   ¦
   ¦  ¦ ¦ ¦   Data format        ¦.---------------------------------------.¦..
   ¦  ¦ ¦ ¦                       ¦                                        ¦   ¦
   ¦  ¦ ¦ ¦       Data bits   Stop bits                                    ¦
   ¦  ¦ ¦ ¦    1.     8          1                                         ¦
   ¦  ¦ ¦ ¦    2.     7          1                                         ¦
   ¦  ¦ ¦ ¦    3.     6          1                                         ¦
   ¦  ¦ ¦ ¦    4.     5          1                                         ¦
   ¦  ¦ ¦ ¦    5.     8          2                                         ¦
   ¦  ¦ ¦ ¦    6.     7          2                                         ¦
   ¦__¦ ¦ ¦    7.     6          2                                         ¦
     ¦ ¦ ¦    8.     5          2                                          ¦
     ¦_¦ ¦                                                                 ¦
       ¦_¦.---------------------------------------------------------------.
------------------------------------------------------------------------------
Type number, or use arrows, then press Return                    30K Avail.
```
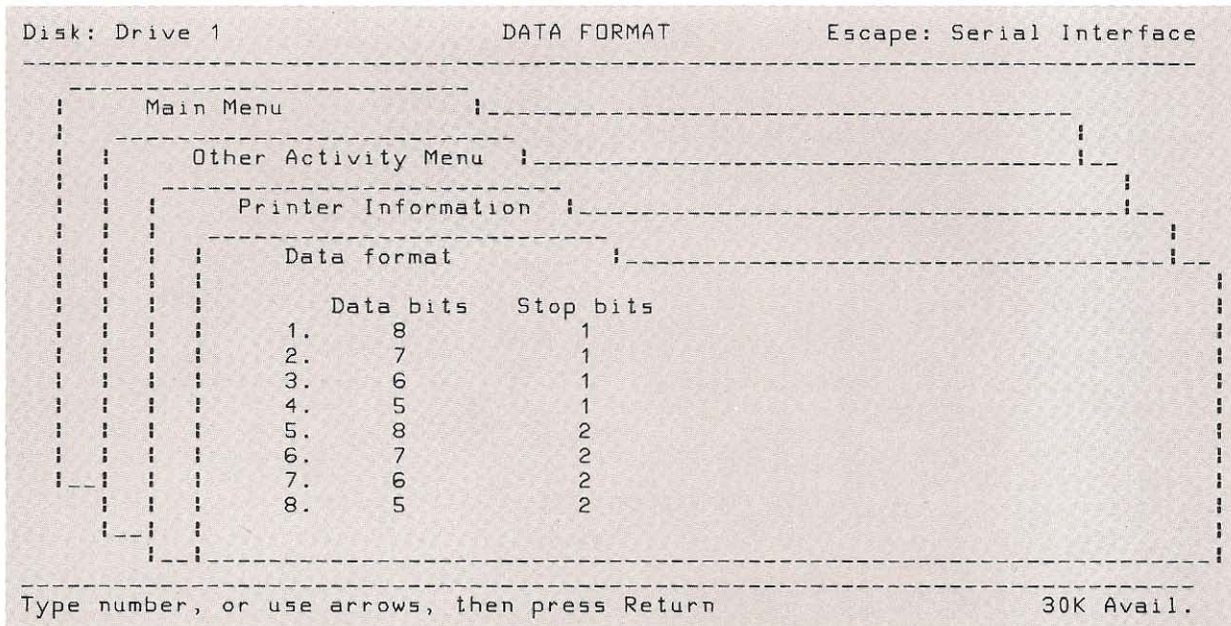
If you select the wrong data format, your printer will not work properly.

Select the correct data format by typing its number and pressing (RETURN) or by using the arrow keys to highlight it and then pressing (RETURN).

Specifying Parity

After you indicate that you want to specify a value for parity, AppleWorks presents the Parity menu, which is illustrated in Figure B-8.

Figure B-8. *Parity Menu*

```
Disk: Drive 1                        PARITY              Escape: Serial Interface
------------------------------------------------------------------------------
      ---------------------------------
      !       Main Menu                !------------------------------------------
      !   ---------------------------------                                      !
      !   !       Other Activity Menu  !--------------------------------------!--
      !   !   ---------------------------------                               !
      !   !   !   Printer Information  !----------------------------------!--
      !   !   !   -----------------------------                           !
      !   !   !   !   Parity           !---------------------------!--
      !   !   !   !                                                      !
      !   !   !   !   1.   None                                          !
      !   !   !   !                                                      !
      !   !   !   !   2.   Odd                                           !
      !   !   !   !                                                      !
      !   !   !   !   3.   Even                                          !
      !   !   !   !                                                      !
      !   !   !   !   4.   Mark (1)                                      !
      !   !   !   !                                                      !
      !__!   !   !   5.   Space (0)                                      !
          !   !   !                                                      !
          !   !                                                          !
      !__!   !                                                           !
          !__!----------------------------------------------------------!
------------------------------------------------------------------------------
Type number, or use arrows, then press Return                     30K Avail.
```

If you select the wrong value for parity, your printer will print what is sometimes known as "garbage."

Select the correct parity value by typing its number and pressing (RETURN) or by using the arrow keys to highlight it and then pressing (RETURN).

Entering Other Codes

AppleWorks uses a specific set of printer options. However, if your printer has an option not available in AppleWorks, setting printer codes may turn these options on. For example, some printers have different levels of print density. To get these different print densities, you could enter the proper codes under Subscript or Superscripts. This way, any time you told Appleworks to print with subscripts in the Word Processor, your printer would print with the feature you turned on with the codes you entered under Subscripts or Superscripts.

Do not enter codes that have actual different meanings under Characters per inch. AppleWorks will not be able to accurately display on the screen what your text will look like when printed.

Characteristics of Printers

When configuring your own custom printer, remember that each printer has its own rules for the way various printer features are implemented. For example, some printers do not allow you to change text to boldface and do underlining within the same line. These printers only allow one feature to be active at a time on a single line. AppleWorks is unable to keep track of all these printer-specific rules. For this reason, if a particular feature does not appear to be working correctly, check the manual for your printer to be sure you are not attempting to have the printer do something it is incapable of doing.

Sending AppleWorks Files Over Phone Lines

It's easy to send your AppleWorks files over telephone lines or directly to another computer by using Apple Access II or another telecommunications program.

This appendix provides guidelines and explains the general procedure for sending files. See the *Apple Access II User's Manual* or the manual that came with your telecommunications program for more specific information.

Three Types of Files

AppleWorks files can be sent over phone lines as three different types of files:

- AppleWorks files, created by the Word Processor, the Data Base, or the Spreadsheet

- ASCII files, created by the Word Processor, the Data Base, or the Spreadsheet

- DIF files, created by the Data Base or the Spreadsheet.

Choosing the Type of File to Send

Choosing the type of file to send over the phone lines is the hardest part; sending it is easy.

To choose the type of file to send, ask yourself two questions. Then read and follow directions in the applicable section of this appendix.

Here are the questions:

1. What software is on the receiving end? (Does the person you are sending a file to use AppleWorks? Does the person you are sending a file to use Apple Access II?)

2. What is the receiver going to do with the file?

Table C-1 shows the type of file to send under various circumstances.

Table C-1. *Choosing a File Type*

Software On Receiving End	Type of File to Send
AppleWorks, Access II	Always send as AppleWorks files.
AppleWorks, Other Telecommunications Program	Send Word Processor files as ASCII files.
	Send Data Base or Spreadsheet files as DIF files.
No AppleWorks, Other Telecommunications Program	Send Word Processor files as ASCII files.
	If the program requires DIF files, send Data Base and Spreadsheet files as DIF files.
	If the receiver is going to print the Data Base or Spreadsheet file or work with it on an editor that can accept ASCII text, send as ASCII files.

Sending AppleWorks Files

You can send AppleWorks files over the lines to anyone who has Appleworks on the receiving end. To do this:

1. Work on or create the file you want to send (Word Processor, Spreadsheet or Data Base) in Review/Add/Change.

2. Save the file on your data disk.

3. Start up Apple Access II. Follow the instructions on the display to send your AppleWorks file.

Sending ASCII Files

When the receiver doesn't have AppleWorks or Apple Access II, you may want to send your files as ASCII files. An Appleworks file can be sent as an ASCII file to any telecommunications program that supports ASCII files.

Here's how to convert an AppleWorks file into an ASCII file:

1. Get or create the file you want to send (Word Processor, Spreadsheet or Data Base) in Review/Add/Change.

2. Press ⌘-P.

3. If you're sending a Word Processor file, tell AppleWorks where you want to print from.

If you're sending a Data Base file, create a report format so that the data is formatted the way you want to send it. Then press ⌘-P again.

If you're sending a Spreadsheet file, choose All, Rows, Columns, or Block. Then highlight the area you want to send and press RETURN.

4. Choose a text (ASCII) file on disk in response to Where do you want to print the file/report?

5. Assign it a pathname.

6. Start up Apple Access II, and send the file as you would any ASCII file, using the pathname assigned.

See Chapter 13, "Printers and Printing," if you want more information on how to create an ASCII file on disk.

Sending DIF Files

When the receiver doesn't have AppleWorks or Apple Access II, you may want to send your files as DIF files. DIF files are a VisiCalc standard. You can create them with the AppleWorks' Spreadsheet and Data Base. The procedure you follow is the same as that for creating ASCII files.

DIF files are mainly used by spreadsheet programs. Because they do not carry spreadsheet formulas, they are useful to people who want to create a graph or a new spreadsheet from your spreadsheet values, or to plug your values into an existing spreadsheet.

See Chapter 13, "Printers and Printing," if you want more information on how to create a DIF file on disk.

Helpful Hints:

- If the receiver has a printer supported by AppleWorks and wants to print your files, you can make sure your file contains the proper printer codes. Use Other Activities Menu option 7, `Specify information about your printer`, to add the appropriate printer and check its specifications. Change any if you need to. The file you send will then contain the proper printer codes.

- With a telecommunications program it should not matter what type of file you are sending. The receiver, however, must know what type of file you are sending.

- Some telecommunications programs offer error checking. Apple Access II, for example, can use Christiansen protocols to check the validity of the files transmitted. However, both ends must be synchronized, and use the same protocols.

Apple IIe 80-Column Text Card: A peripheral card made and sold by Apple Computer, Inc. The card plugs into the Apple IIe's auxiliary slot and enables the computer to display 80-column text as well as 40-column text.

Apple IIe Extended 80-Column Text Card: A peripheral card made and sold by Apple Computer, Inc. The card plugs into the Apple IIe's auxiliary slot and extends its memory capacity by 64K bytes. It also enables the computer to display 80-column text as well as 40-column text.

application program: A program such as AppleWorks that uses the computer for one or more specific purposes or tasks, such as word processing or data base management.

appropriate format: Spreadsheet information displayed just as you type it whenever possible.

argument: The value on which a Spreadsheet function operates. For example, in the function @SUM(A1...C1), the argument is the contents of cells A1 through C1. The function @SUM operates on these contents.

ASCII: An acronym for the American Standard Code for Information Interchange. Refers to a type of data format. See **text (ASCII) file**.

ASCII file: See **text (ASCII) file**.

auxiliary slot: The special expansion slot inside the Apple IIe used for the Apple 80-Column Text Card or Extended 80-Column Text Card.

back up: To make a duplicate (spare) copy of a disk or file.

blot: Nonprinting carriage return character that looks like a little checkerboard. Blots are embedded in Word Processor documents.

caret: A nonprinting character (^) that indicates the beginning or end of a special printing command. Carets are embedded in Word Processor documents.

Field — **category:** One kind of information in a Data Base file. All Data Base records in a file contain the same categories. A business contacts file could contain these categories: Name, Company, Street Address, City, State, Zip, and Telephone Number.

cell: The place in a spreadsheet where an individual piece of information is displayed.

cell indicator: The sign that tells the contents of a cell in a spreadsheet.

cell layout: The specification that tells how information in a spreadsheet cell or group of cells is displayed.

character: A letter, digit, punctuation mark, or other written symbol used in printing or displaying information.

clipboard: The area of the computer's random-access memory (RAM) used to hold information during AppleWorks' cut and paste operations.

column indicator: The sign at the bottom of a Word Processor display that tells which display column the cursor is on.

commas format: The specification that causes numbers in a spreadsheet to be displayed with commas between thousands.

connector: A physical device, such as a plug, socket, or jack, used to connect one hardware component of a system to another.

coordinates: The location of a cell in a spreadsheet, for example, A16, DC241.

copy-from cell: The cell whose contents are copied with the Spreadsheet's copy feature; the source cell.

copy-to cell: The cell to which information is copied with the Spreadsheet's copy feature; the destination cell.

current location: The place where AppleWorks looks first for files. The current location is not saved from one AppleWorks session to the next.

cursor: A blinking character displayed on the screen that tells where your next action will take effect or where the next character typed will appear. AppleWorks' cursor can be the insert, blinking bar cursor or the overstrike, blinking rectangular cursor.

custom printer: A printer not on AppleWorks' standard list of printers. You must provide all specifications to AppleWorks about your printer if you have a custom printer.

cut and paste: The process you use in AppleWorks to transfer information from one file to another.

Data Base: The part of AppleWorks that organizes, stores, retrieves, modifies, and reports information in lists.

default: A value, action, or setting that is automatically used by AppleWorks when you don't give other explicit information.

default printer: The printer AppleWorks thinks you'll want to use. When you first use a new AppleWorks system, the default printer is the Apple Dot Matrix printer (DMP).

Desktop: The area of the Apple computer's random-access memory (RAM) reserved for AppleWorks files that you are working on. The Desktop can hold up to 12 files.

Desktop Index: The list of files on AppleWorks' Desktop. Pressing ⌂-Q gets the Desktop Index.

destination: The copy-to cells in the Spreadsheet.

DIF file: A DIF, or Data Interchange Format, file; a file created by VisiCalc and many other programs that allow for easy data interchange. AppleWorks' Spreadsheet and Data Base can both read and print DIF files.

directory file: A file that contains the names and locations of other files on the disk.

disk: An information storage medium consisting of a flat circular magnetic surface on which information is recorded in the form of small magnetized spots.

disk controller card: A peripheral card that connects one or two disk drives to the Apple IIe and controls their operation.

disk drive: A peripheral device that writes and reads information on the surface of a disk.

Disk II™ drive: A disk drive made and sold by Apple Computer, Inc. for use with the Apple II series computers; uses 5-1/4 inch flexible disks.

Disk Operating System: An operating system for the Apple II series computers that allows the computer to control and communicate with one or more disk drives. See **DOS**.

display: Information exhibited visually, especially on the screen of a display device such as a monitor or television.

document: A collection of information in the form of text, created and used by AppleWorks' Word Processor.

dollars format: The cell format that causes Spreadsheet numbers to be displayed with dollar signs.

DOS: An acronym for Disk Operating System. DOS 3.3 is a version of DOS.

edit: To change or modify; for example, to insert, remove, replace, or move text in a document.

embedded: Contained within. For example, printer options are embedded in Word Processor text.

entry: An individual piece of information in a Data Base category; the information in a cell in a spreadsheet.

entry line: The line where you type or edit information that goes in a spreadsheet cell.

file: A collection of information stored as a named unit on a peripheral storage medium, such as a disk.

filename: The name that identifies a file. AppleWorks' filenames can contain up to 15 characters, including uppercase and lowercase letters, numbers, spaces, and periods.

fixed decimal format: The cell format that causes Spreadsheet numbers to be displayed with a fixed number of decimal places.

flexible disk: A disk made of flexible plastic used for storing computer programs or data. Often called a *floppy* disk.

formula: A kind of Spreadsheet value; mathematical representation combining pointers and functions that define a desired calculation. For example, $+A1/B3$ and $-C3-6.5$ are formulas.

function: A kind of Spreadshseet value; a representation that stands for a calculation; begins with @. Examples of functions are @SUM(B3...B5) and @SQRT(B44).

group total: A subtotal in a Data Base report.

hard copy: Information printed on paper.

header: The top of each page in a Word Processor document in which you've used the Page Header command. See **report header**.

insert: To use the insert cursor to type information.

insert cursor: The blinking bar cursor that lets you insert characters before the character the cursor is on. The information you type goes where the cursor is, and information to the right of the cursor moves further to the right.

interface card: A peripheral card that implements a particular interface allowing communication between the computer and a peripheral device, such as a printer or modem.

K: A symbol equivalent to the number 1024; commonly used to indicate a thousand. In AppleWorks, used to mean a thousand characters of information, as in *The floppy disk can hold files that total up to 143K characters*.

label: Information in a spreadsheet that identifies numerical information; a title.

label format: The specification that tells how labels are displayed in spreadsheet cells.

labels-style report: The Data Base report style that prints record entries vertically down the page, like labels.

left-justify: To print entries in Data Base labels-style reports without large blank spaces between some words. Also, to format labels in the Spreadsheet against the left side of the cell.

line indicator: The sign at the bottom of a Word Processor display that tells which line the cursor is on.

List of Files: An AppleWorks display that lists the files on the current disk.

load: To transfer information from a peripheral storage medium (such as a disk) into main memory for use; for example, to transfer the AppleWorks program into memory for execution.

Main Menu: The list of AppleWorks' main options, from which you may choose one.

menu: A list of choices presented by a program, usually on the display screen, from which you can select.

multiple-record layout: The Data Base record layout that displays records horizontally.

No Change copy: Copying the exact coordinates from one Spreadsheet cell to another.

open-Apple command: A command you use by pressing (⌘) while you press another key to call a particular AppleWorks feature. For example, (⌘)-(Q) requests a list of files on the Desktop so you can change to another file.

Other Activities menu: The second level of AppleWorks options, reached from the Main Menu, from which you may choose one.

overstrike cursor: The blinking rectangular cursor that lets you replace (type over) the character under the cursor.

page: A screenful of information. Also, the conventional meaning of paper.

paging: Moving the cursor through a file by displaying information screenful by screenful.

pathname: The full name by which ProDOS identifies a file. A series of filenames, preceded and separated by slashes, that indicates the entire path from volume directory to file that AppleWorks must follow to find that file. A pathname always begins with a slash and a volume name and ends with the name of a file.

platen width: The distance the printhead on your printer can travel from left to right.

pointer: A kind of Spreadsheet value; begins with a plus sign or a minus sign and points to the contents of another cell.

port: A connector that works somewhat like an electrical outlet. It's specifically designed for a class of peripheral devices (like printers) that allows information to pass back and forth between the computer and the device.

prefix: A pathname set to indicate a specific directory file; the combination of volume directory name and subdirectory names that locates a file. It does not include the name of the file.

printer options: Specifications for printing Data Base and Spreadsheet reports and Word Processor documents.

ProDOS: An Apple II operating system used by AppleWorks and designed to support mass storage devices like the ProFile as well as drives for flexible disks. ProDOS stands for Professional Disk Operating System.

ProDOS prefix: See **prefix**.

ProFile: A rigid disk made by Apple Computer, Inc., for mass data storage.

program disk: A disk that contains a program that puts the resources of the computer to use for some specific purpose or task, such as word processing, data base management, graphics, or telecommunications. In this case, the disk that holds the AppleWorks program.

prompt: AppleWorks' request for an answer. For example, in `Print from? Beginning This page Cursor position`, `Print from?:` is the prompt.

protection: Prohibiting specific kinds of changes to spreadsheet cells.

RAM: See **random-access memory**.

random-access memory: Memory in which the contents of individual locations can be read or written to in an arbitrary or random order. Its contents are lost when the computer is turned off or power is otherwise lost.

record: All the information about one person or item in a Data Base file; a Data Base file contains many records.

record layout: The way Data Base records are displayed.

record selection rule: The Data Base rule you form that lets you display or print only certain records from the file.

relative copy: Copying coordinates in a a Spreadsheet pointer, formula, or function depending on the position of the copy-to cell or cells.

report format: The specifications that define the layout of a Data Base report; maximum of eight per Data Base file.

report header: The Data Base or Spreadsheet report title and date information.

report style: How Data Base information is printed; tables-style or labels-style.

Review/Add/Change: The Data Base, Word Processor, and Spreadsheet feature that lets you browse through information in a file, change it, add to it, or delete it.

Ruler: The (⌘)-(1) through (9) key combinations that let you move the cursor through a file by eighths.

save: To transfer information from random-access memory to a disk for later use.

scroll: To change the contents of all or part of the display screen by shifting information out at one end (usually the top) to make room for new information appearing at the other end (usually the bottom), producing an effect like that of moving a scroll of paper past a fixed viewing window.

single-record layout: The Data Base record layout that lets you display records vertically, one record at a time.

slot: A narrow socket inside the Apple IIe computer where you can install peripheral device cards.

source: The copy-from cells in the Spreadsheet.

Space Available: The sign at the bottom of the screen that indicates how many more thousands (K) of characters the Desktop can hold.

spreadsheet: A grid of rows and columns in which text, numbers, and formulas can be stored, allowing complex or repetitive calculations to be defined in a simple, easily understood way.

Spreadsheet: The part of AppleWorks that lets you work with and print numeric information in rows and columns format.

standard location: The place where AppleWorks looks for files unless you have specified a different, current location.

standard values: Values you specify for Data Base entries that are entered into all records unless you change them; values you specify for how Spreadsheet information is displayed.

start up: To get the computer system running. Sometimes called "boot."

startup disk: A disk containing software recorded in the proper form to be loaded into the Apple computer's memory to get the computer running when power is turned on; or, if power is already on, when you press (CONTROL)-(Ú)-(RESET).

strike over: To use the overstrike cursor to replace information under the cursor; type over.

subdirectory: A file that contains the names and locations of other files on the disk and that is not the volume directory.

tables-style reports: Data Base reports with record entries printed horizontally across the page, in rows and columns.

text (ASCII) file: A file containing information expressed in ASCII form; created by Apple Writer, some data base management systems, and all three AppleWorks applications. Can be used as a source for AppleWorks Data Base and Word Processor files.

value format: The specifications that tell how Spreadsheet values are displayed.

values: Numerical information in the Spreadsheet, including numbers, pointers, formulas, and functions.

volume: A general term referring to a storage device. The volume most commonly used with the Apple II is the disk. A volume has a name and a volume directory with the same name. Its information is organized into subdirectories and files.

volume directory: The main directory of a volume, which tells what the volume contains. The volume directory is identified by the name of that volume preceded by a slash.

volume name: The local name of the main directory of the volume. You can use your utilities disk to determine a volume name if you need to know it.

window: The portion of a collection of information (such as a document, picture, or worksheet) that is visible on the display screen.

Word Processor: The part of AppleWorks that creates, modifies, and prints information in letters, memos, reports.

word wraparound: In the Word Processor, the automatic continuation of text from the end of one line to the beginning of the next line on the display screen.

write: To transfer information from the computer to a destination external to the computer, such as a disk drive, printer, or modem.

write-enable notch: The square cutout in one edge of a disk's jacket that permits information to be written on the disk. If there is no write-enable notch, or if it is covered with a write-protect tab, information can be read from the disk but not written on it.

write-protect: To protect the information on a disk by covering the write-enable notch (the small cut to the right of the label on some disks) with a write-protect tab, preventing any new information from being written onto the disk.

write-protect tab: A small adhesive sticker used to write-protect a disk by covering the write-enable notch.

zooming in: Looking at Data Base records in single-record layout; looking at Word Processor documents with embedded printer options displayed; looking at the formulas used in a spreadsheet.

zooming out: Looking at Data Base records in multiple-record layout; looking at Word Processor documents without embedded printer options displayed; looking at the results of the formula in a spreadsheet.

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ABBREVIATIONS

DB   Data Base
SS   Spreadsheet
WP   Word Processor

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Tell Apple

About Your Computer

Apple uses comments and suggestions from Apple owners like you to improve existing products and develop new and better products. Now that you've used your Apple, we want to know your thoughts and suggestions about your experience. Please use this form to tell Apple what you think.

Your Dealer Can Help: Apple can't respond to your individual questions. If you have a question, would like help, or need service, please contact your Apple dealer.

Your Name: _____

Your Title: _____

Company: _____

Address: _____

City/State/ZIP: _____

Part I: Tell Apple About You

1. How much experience have you had using computers?

   ☐ None ☐ Little ☐ Moderate ☐ Extensive

2. Where do you use your Apple computer?

   ☐ Home ☐ Work ☐ Home and Work

Part II: Tell Apple About Your System

1. Which Apple computer do you have? ☐ Apple IIc

   ☐ Apple II ☐ Apple II Plus ☐ Apple IIe

2. Memory Size _____

   Serial No. _____
   (on underside of the Apple)

3. Which devices are attached to your system?

   ☐ Disk Drive ☐ Mouse ☐ Printer ☐ Plotter
   ☐ Mass Storage ☐ Joystick ☐ Hand Controller
   ☐ Other _____

1. Which type of display device are you using? (Please check two boxes.)

   ☐ Video Monitor ☐ Television ☐ Color
   ☐ Black & White ☐ Monochrome

3. Did you own an Apple before purchasing this one?

   ☐ Yes ☐ No

4. How many people in your family use your Apple?

   ☐ Adults ☐ Children

6. What application programs do you use or plan to use?

   ☐ Word Processing ☐ Data Management
   ☐ Spreadsheet ☐ Education ☐ Games
   ☐ Communication ☐ Graphics
   ☐ Other _____

7. Please list products (program, operating system, and language) in use. Please include version number.

Exact Name of Software	Version Number (if applicable)	Product Number

8. Please give us any suggestions or comments and tell

5. Do you plan to write computer programs? ☐ Yes
☐ No If yes, which computer language(s) will you use?

Part III: The Manuals

Please take a few minutes to tell Apple what you thought of the manuals and the product training disks.

1. Did you read the *AppleWorks Tutorial* from cover to cover? ☐ Yes ☐ No If no, which topics did you skip?

2. Was the information presented appropriately for your level of computer expertise?
☐ Too Elementary ☐ Just Right ☐ Too Complex

3. Did you use the *Apple Presents Appleworks* disk all the way through? ☐ Yes ☐ No If no, which topics did you skip?

4. How often do you use the:
Appleworks Reference Manual
Quick Reference Card
Indexes

5. What did you like best about the manuals?

6. What did you like least about the manuals?

7. Which topics, if any, were confusing to you?

8. Which topics, if any, were not explained thoroughly enough?

9. Please describe specific problems you encountered in the manuals. (Page numbers would be helpful. Feel free to attach additional sheets.)

Part IV: The Program

1. Which features of AppleWorks do you like most?

2. Which features of the program do you feel are missing or could be improved?

3. Are there specific parts of the program that need clarification or correction?

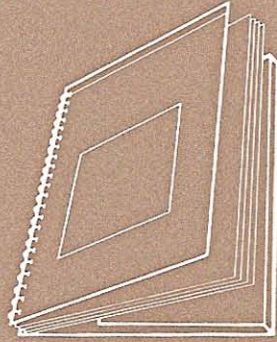Thank you for your time and effort.

FOLD HERE

Apple Computer, Inc.

P.O. Box 1143

Cupertino, CA 95015

Tuck end flap
inside back cover
when using manual.

AppleWorks Reference Manual

The Apple II