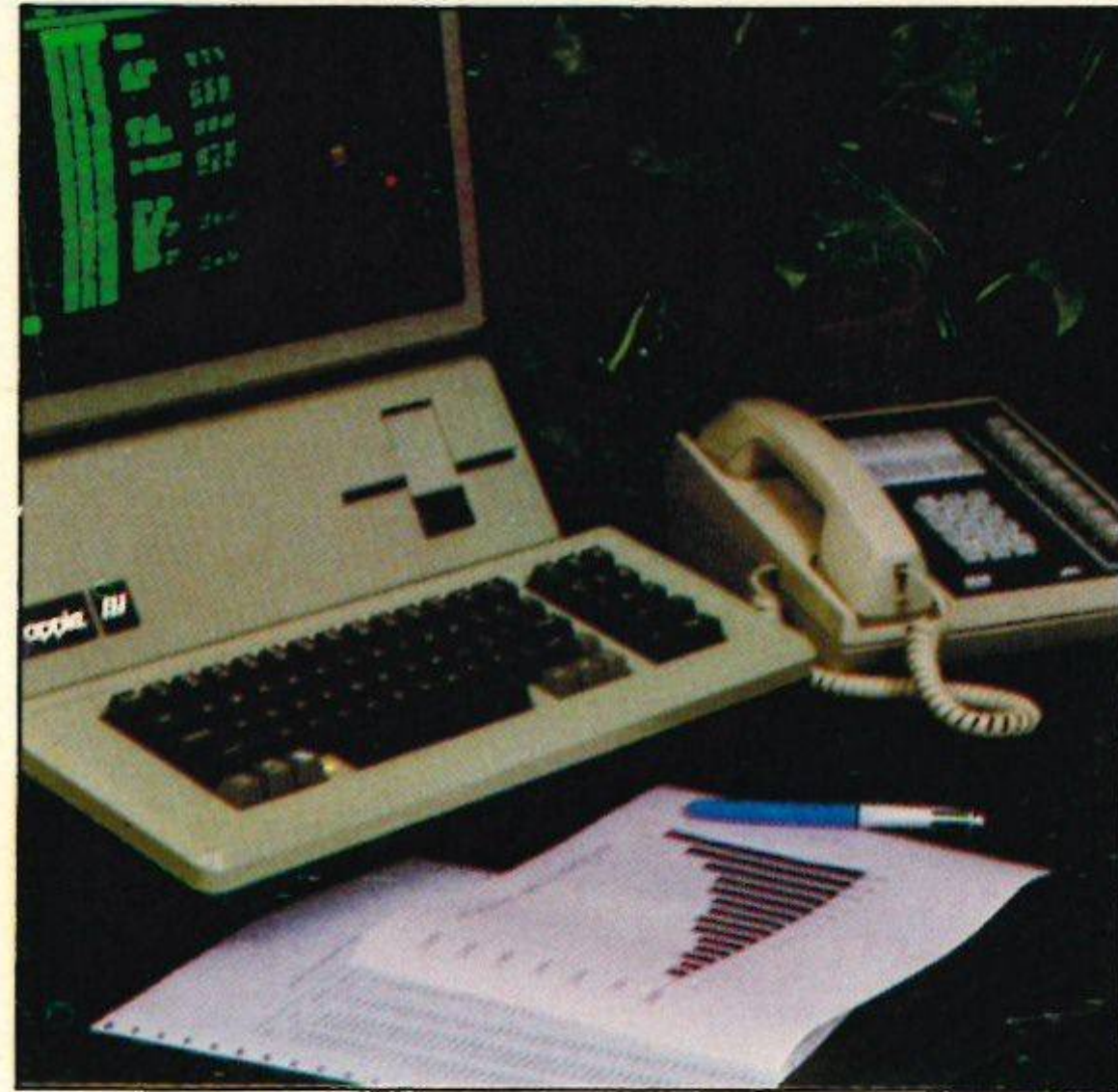


/// E-Z Pieces

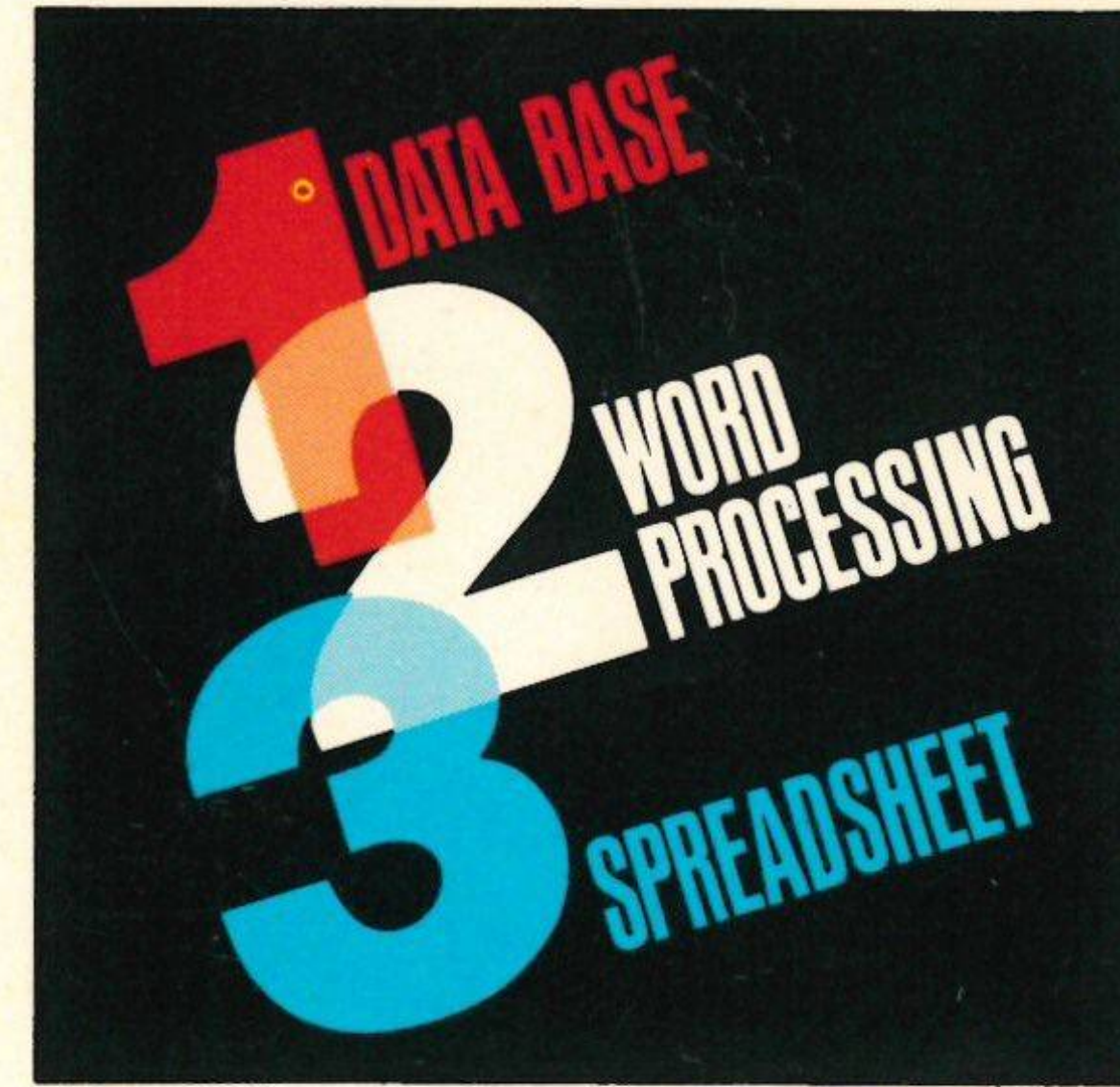
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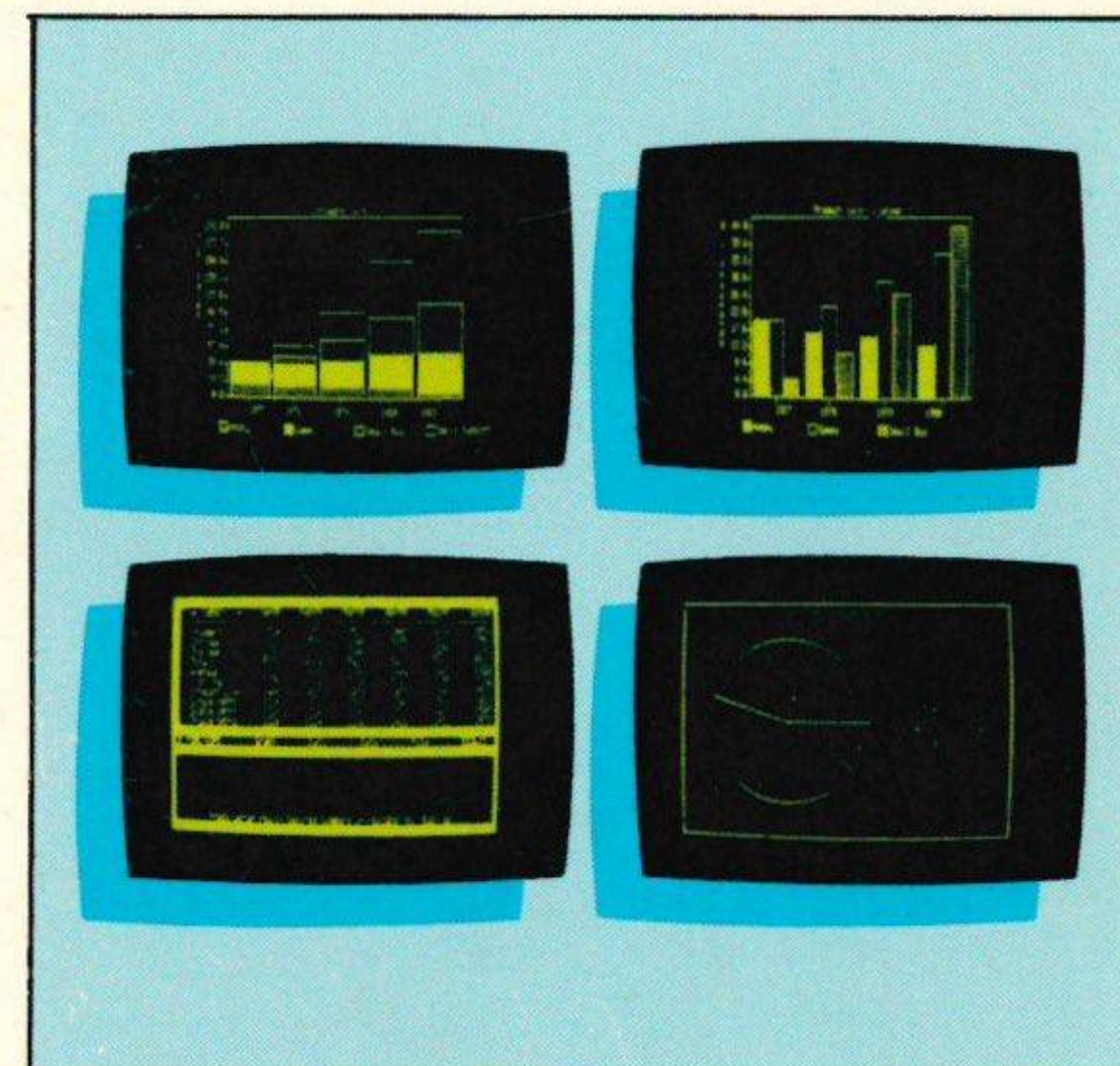
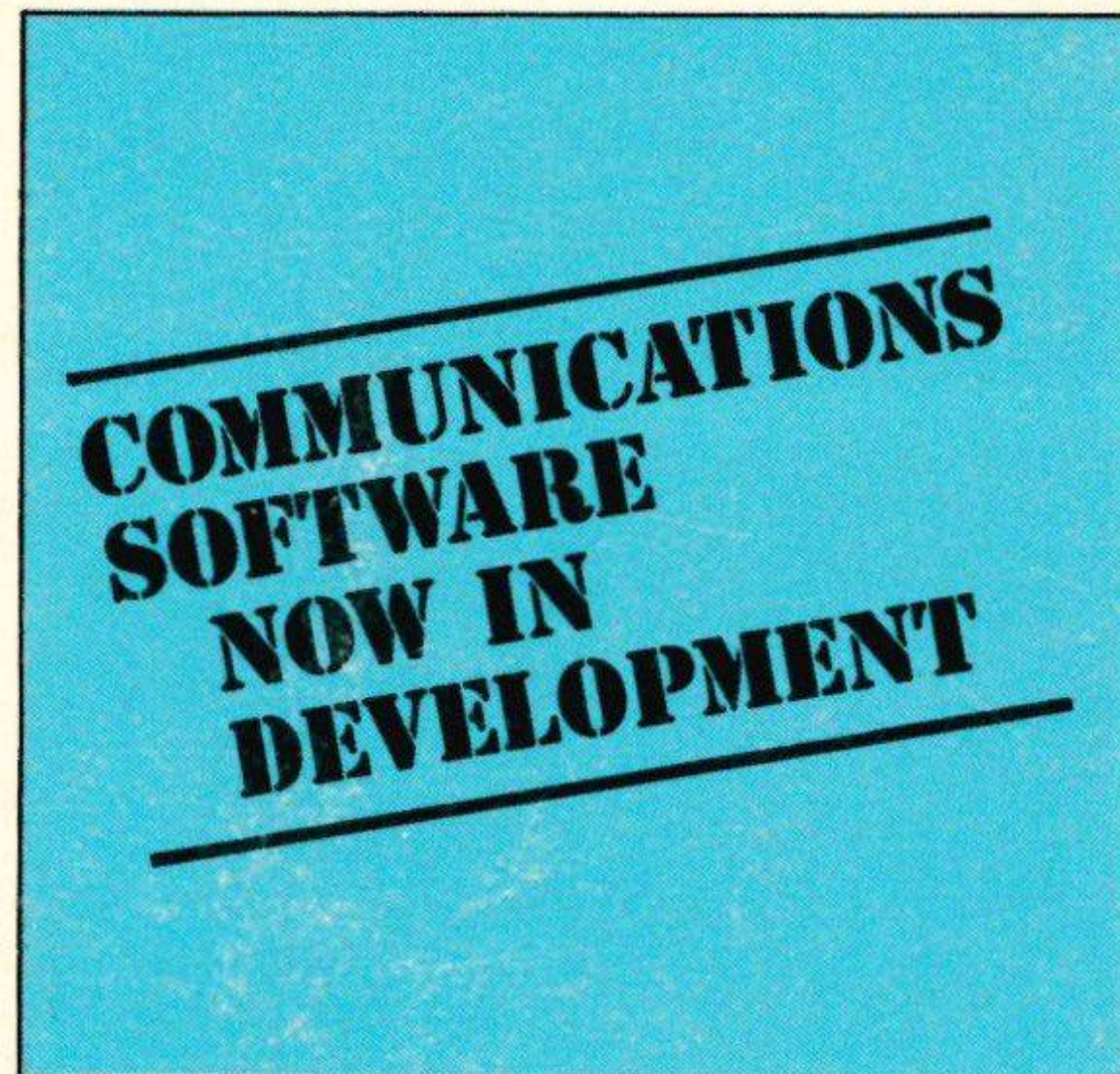
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/// E-Z Pieces

Developed by Rupert Lissner

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About This Manual

This manual contains reference information that describes all the features of ///E-Z Pieces™. It contains the following chapters and appendices.

- Chapter 1, *Understanding ///E-Z Pieces*, presents a general overview of ///E-Z Pieces and discusses ///E-Z Pieces files.
- Chapter 2, *Working With ///E-Z Pieces*, tells how to interact with ///E-Z Pieces and includes instructions for using menu options.
- Chapter 3, *Understanding the Data Base*, discusses the ///E-Z Pieces Data Base's main functions, activity flow, and file guidelines.
- Chapter 4, *Working With Data Base Information*, explains how to create Data 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 ///E-Z Pieces 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*, tells how to arrange a document the way you want it.
- Chapter 9, *Understanding the Spreadsheet*, summarizes the ///E-Z Pieces Spreadsheet's two main functions, illustrates its flow of activities, and lists file guidelines.
- Chapter 10, *Working With Information in Worksheets*, presents steps for using the Spreadsheet to create sophisticated worksheets 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 ///E-Z Pieces' cut and paste feature to combine information of different types.
- Chapter 13, *Printers and Printing*, presents how to communicate information to ///E-Z Pieces about your printer and tells how to print reports and documents.
- Appendix A tells how to use ///E-Z Pieces with a ProFile™.
- Appendix B tells how to send ///E-Z Pieces information 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

Before beginning to use ///E-Z Pieces, you should first make backup copies of all the disks you received with the package.

Then begin with Chapter 1 of this manual, to learn how to get started. For those users who are experienced at using one or all of the three types of software systems contained in ///E-Z Pieces, you should read at least through Chapter 2. These first two chapters, along with the "help screens", contain information that will allow you to begin using the system right away.

The remainder of the manual may then be used as a reference document to answer questions that may arise as you become more proficient at using ///E-Z Pieces.

For those less experienced users, each chapter of this manual contains useful instructional material on the use of Data Base, Word Processing, and Spreadsheet systems in general, as well as how to use each of the ///E-Z Pieces. However, as with any computer software, the best way to learn how to use it is to just dive right in, make some mistakes, and learn how not to make them again. Again, the remainder of this manual may be used as a reference document when questions or problems arise.

Most important for both types of users is to experiment as you use ///E-Z Pieces, and find out for yourself how it can increase your personal productivity, (and have fun while you're doing it!)

For More Information

These sources of information will help all ///E-Z Pieces users:

- The index at the back of the manual
- The glossary of terms at the back of the manual.
- The HELP information available whenever "OA—? for Help" appears in the bottom-right corner of a ///E-Z Pieces display.

Keytop Notation: "OA—" stands for "OPEN-APPLE"—"?". In this manual two keycaps separated by a hyphen means to press one of the keys while you hold down the other key; then release both. If there isn't a hyphen between the keys, press first one, release it, and then press the other.

Be sure to read the sections of your Apple /// Owner's manual that explain how to set up your computer and how to use the system utilities to make backup copies of your disks before you begin with ///E-Z Pieces.

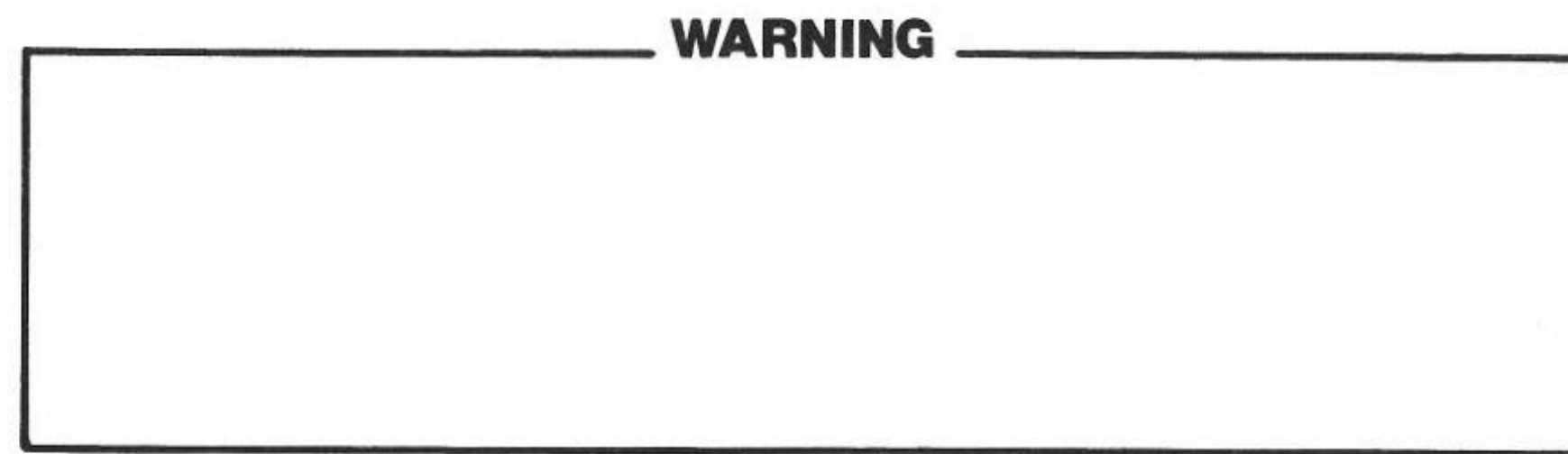
How This Manual Is Designed

Look for these visual aids throughout the manual:

/// E-Z Pieces Tips

Information labeled with */// E-Z Pieces Tips* presents different ways of using a particular feature.

Warning boxes like this alert you to potential problems.



"Notes:" point to useful information contained elsewhere in this or other manuals.

Your Ideals Are Welcome!

A reader response card appears at the back of this */// E-Z Pieces Manual*. Please fill it out and return it after you've had some experience using */// E-Z Pieces*.

Chapter 1

Understanding */// E-Z Pieces*

What Is <i>/// E-Z Pieces</i> ?	1-1
Equipment You Need	1-1
How Does <i>/// E-Z Pieces</i> Work?	1-2
About <i>/// E-Z Pieces</i> Files	1-4
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This chapter presents a general overview of */// E-Z Pieces*. It also tells about */// E-Z Pieces* files.

What Is */// E-Z Pieces*?

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

- The */// E-Z Pieces* Data Base allows you to work with information you normally keep in lists: names and addresses, schedules, inventories.
- The */// E-Z Pieces* Word Processor is for writing reports, memos, letters.
- The */// E-Z Pieces* Spreadsheet lets you create information you normally put on a worksheet and manipulate with a calculator: budgets, financial forecasts, income and expense statements.

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

Equipment You Need

To use */// E-Z Pieces*, you'll need this equipment:

- An Apple *///* computer.
- A video monitor capable of displaying 80 columns of text.
- The */// E-Z Pieces* disks named *Boot*, *Program*, and *Sample Files*.

To make maximum use of ///E-Z Pieces, you also need either a serial or parallel printer with the proper interface.

Here's some other nice-to-have equipment:

- A ProFile, with the interface card in slot 4.
- A clock chip installed in your Apple ///.
- One or more external floppy disk drives

How Does ///E-Z Pieces Work?

There are two levels of activity within ///E-Z Pieces, 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, ///E-Z Pieces contains information about where you store your files and about your printer. It controls information by moving files into the "Desktop", which is 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 ///E-Z Pieces 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 ///E-Z Pieces file to another.

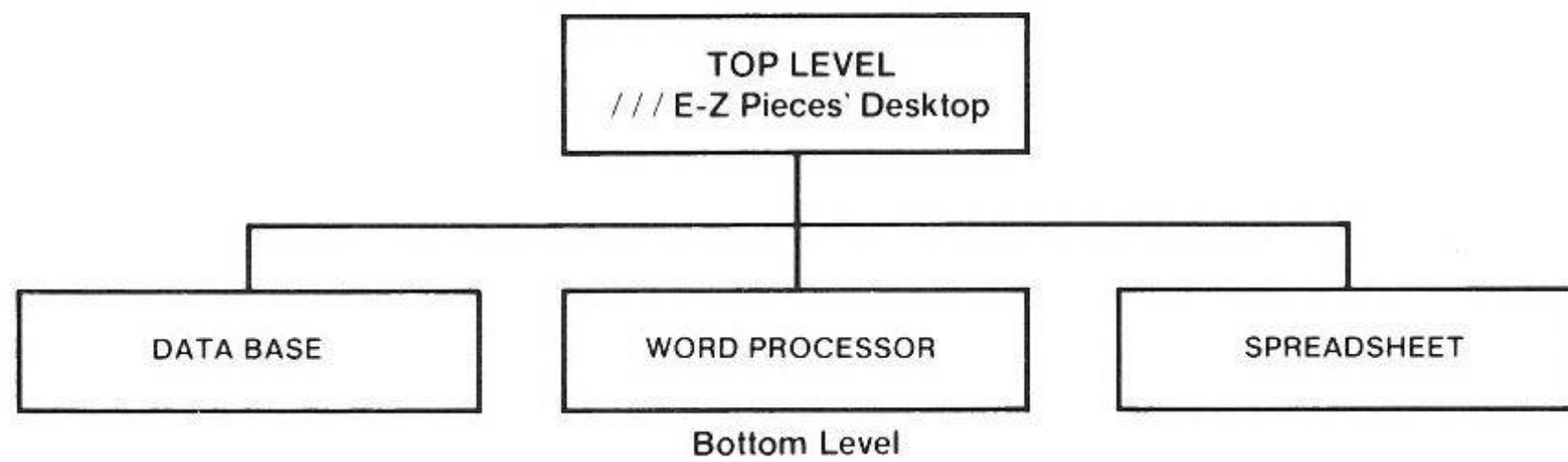


Figure 1-1.
///E-Z Pieces's Two Levels of Activities

///E-Z Pieces 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 a ///E-Z Pieces term that refers to area of the computer's RAM that is reserved for cut and paste.

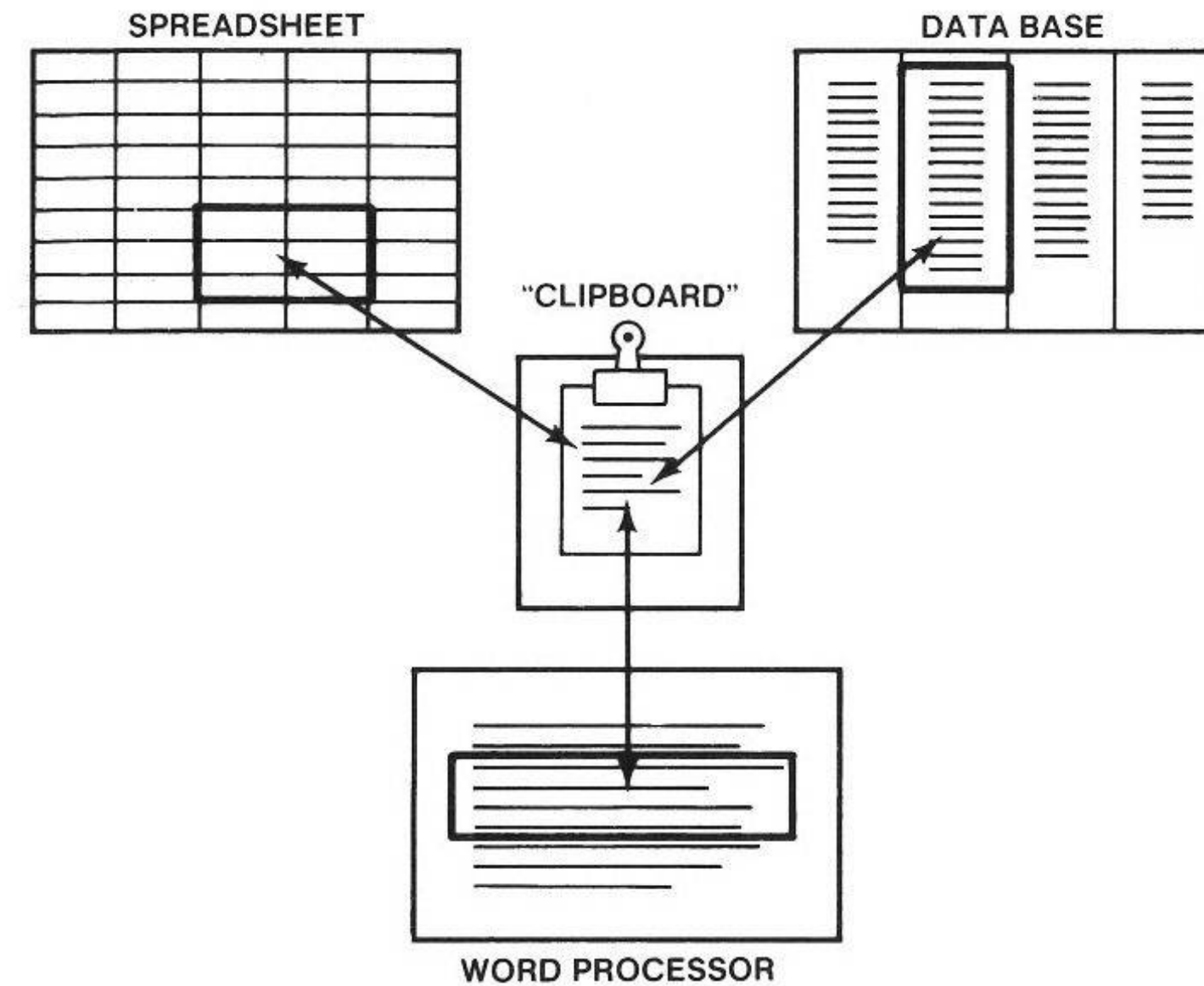


Figure 1-2.
///E-Z Pieces Flow Chart

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 ///E-Z Pieces by rebooting another program. You should make sure you save new and changed files permanently before you leave ///E-Z Pieces.

NOTES:

1. See "Quitting ///E-Z Pieces" in Chapter 2 for how to leave ///E-Z Pieces safely.
2. See Chapter 13 for complete cut and paste instructions.

Figure 1-3 is a flowchart of ///E-Z Pieces 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.

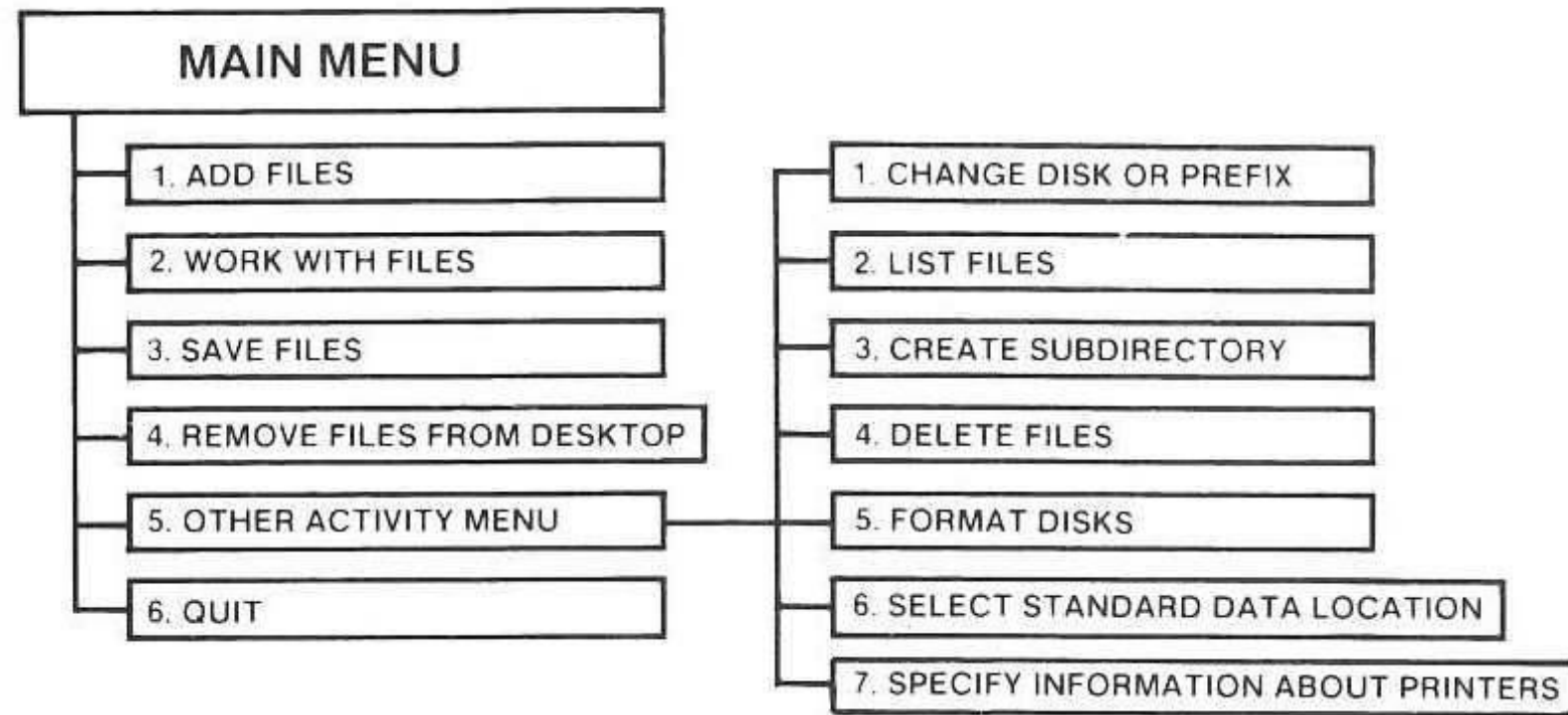


Figure 1-3.
///E-Z Pieces Flow Chart

About ///E-Z Pieces Files

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

File Sources

///E-Z Pieces allows you to create files from scratch using the Data Base, the Word Processor, and the Spreadsheet. In addition, ///E-Z Pieces adds to your data management capability by letting you use files created by other programs as sources for ///E-Z Pieces files. Then you can use ///E-Z Pieces' tools to work with these files. Figure 1-4 provides an overview of sources for ///E-Z Pieces files. The numbers to the explanations that follow.

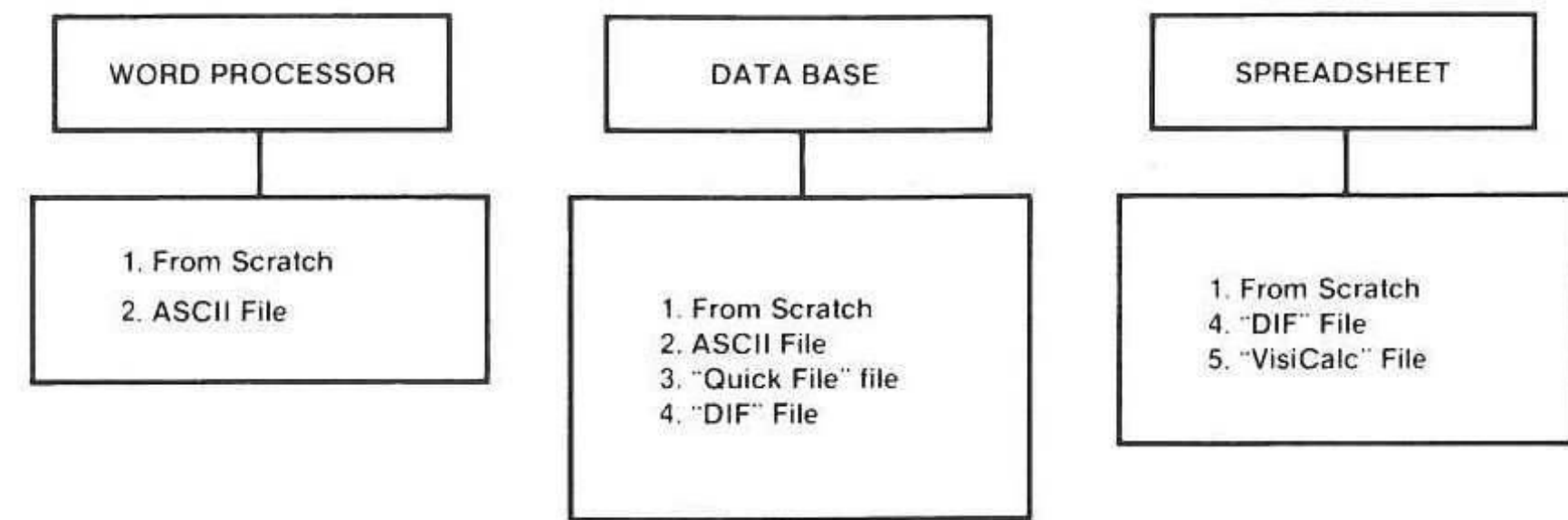


Figure 1-4
Sources of ///E-Z Pieces Files

1. Each software tool creates its own kind of file.
2. Text (ASCII) files are sources for Data Base and Word Processor files. Text files are files created by Apple Writer and some data base management systems.
3. Quick File files are sources for Data Base files.
4. DIF, or Data Interchange Format, files are 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.
5. VisiCalc files are sources for Spreadsheet files.

NOTE:

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

General Guidelines for /// E-Z Pieces Files

Table 1-1 contains general guidelines for /// E-Z Pieces files.

File Feature	Guideline
Maximum number of /// E-Z Pieces files per flexible disk	Depends on size of files; up to 140K total characters
Maximum number of /// E-Z Pieces files per SOS subdirectory	130
Maximum number of /// E-Z Pieces files allowed on /// E-Z Pieces' 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.

Table 1-1.
General /// E-Z Pieces File Guidelines

NOTE:

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 illustration.

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 /// E-Z Pieces gives you in naming files, it's easy to describe the contents of a file in the filename.

File Location

The /// E-Z Pieces program contains information about where it should look for you 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

/// E-Z Pieces stores information on disk that tells where it should always look for files at startup. This is the "standard location" of your files. You can override this standard location if you want by providing another, temporary, place where /// E-Z Pieces should look. This is the "current location" of files. /// E-Z Pieces saves on disk the standard location from one session to the next, but it doesn't save the current location.

NOTE:

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

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 /// E-Z Pieces and store files without giving another thought to things like SOS prefixes. Just store files by filename on a disk in a drive. No problem!

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. For example you may want to keep personal letters and lists of names and addresses in separate directories. Using subdirectories may make it easier for you to organize files.

If you group files by subdirectories and/or use a ProFile, you should set up a standard and/or current location using the SOS prefix for the files. The SOS prefix consists of all the identifying information for the file except the filename, including the volume name and the subdirectory names. Examples of pathnames are

```

/VOLUME3
/PROFILE/FINANCE
/LISTS

```

NOTE:

Complete information about using SOS prefixes to identify files and about pathnames is in the Apple /// Owner's Manual.

Backing Up Files

It's important to "back up" files, or make duplicate copies of them, frequently. You should always have a recent copy of /// E-Z Pieces data disks, stored in a safe place away from dust, magnetic fields, and temperature extremes. The easiest way to back up your /// E-Z Pieces data disks is to make duplicate copies of them using the Volume Copy commands on the SOS System Utilities disk. The user's manual for your system tells you how.

Chapter 2

Working With /// E-Z Pieces

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This chapter presents general information about working with /// E-Z Pieces. It tells how to start up /// E-Z Pieces and how to interact with /// E-Z Pieces. It also includes instructions for using Main Menu and Other Activity Menu menu options.

Starting to Use /// E-Z Pieces

Before you start using /// E-Z Pieces, make a copy of the /// E-Z Pieces boot disk. Use the SOS System Utilities to do this. Use the copies and put the originals in a safe place.

To start up /// E-Z Pieces, follow these instructions:

1. Put the /// E-Z Pieces Boot disk into Drive 1.
2. If the monitor is off, turn it on.
3. If the computer is off, turn it on. Press "CONTROL-RESET" if it is already on. It takes several seconds for the computer to read the instructions on the Boot disk. Then /// E-Z Pieces asks for the Program disk.
4. Remove the Boot disk, insert the Program disk, and press "RETURN". Then /// E-Z Pieces 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 clock chip with a battery, press "RETURN" to accept the date.) /// E-Z Pieces displays the Main Menu.

NOTE:

If you want to start up /// E-Z Pieces from a ProFile, see Appendix A

WARNING

If you are using one disk drive, /// E-Z Pieces 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 /// E-Z Pieces asks you to.

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 /// E-Z Pieces know where to look for your data.

Communicating With /// E-Z Pieces

This section provides general information on communicating with /// E-Z Pieces, information relating to your activities with /// E-Z Pieces whether

you are using the Desktop Manager, the Data Base, the Word Processor, or the Spreadsheet. It tells how to:

- use Open-Apple commands
- respond to prompts
- type and edit information
- use "ESC"
- use /// E-Z Pieces' Ruler.

Using Open-Apple Commands

Open-Apple commands are instructions to /// E-Z Pieces to use a special feature. They are always a combination of "OPEN-APPLE" and another key that reminds you of what you want to do. For example, the Help command is a combination of "OPEN-APPLE" and "?", which is written in this manual as "OPEN-APPLE"- "?". The Save command is a combination of "OPEN-APPLE" and "S", which is written in this manual as "OPEN-APPLE"- "S".

You should hold down "OPEN-APPLE" and press the other key lightly to give the command. Open-Apple commands usually mean the same thing whether you are using /// E-Z Pieces' Data Base, Word Processor, or Spreadsheet. This means you don't have to learn a lot of new keystrokes when you change tools. The keys that go with "OPEN-APPLE" remind you of what you want to do, so they're easy to remember.

Responding to Prompts

There are four types of /// E-Z Pieces 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 is a list of numbered options from which you select one, such as the Main Menu, illustrated in Figure 2-1. You select an option in either of these two ways:

- Press "UP-ARROW" and "DOWN-ARROW" until the option you want is highlighted. Press "RETURN" to confirm your selection.
or
- Type the number of the option you want and press "RETURN".

/// E-Z Pieces' default option is the option it thinks you'll choose. It's always highlighted, which makes it easy to select that option first.

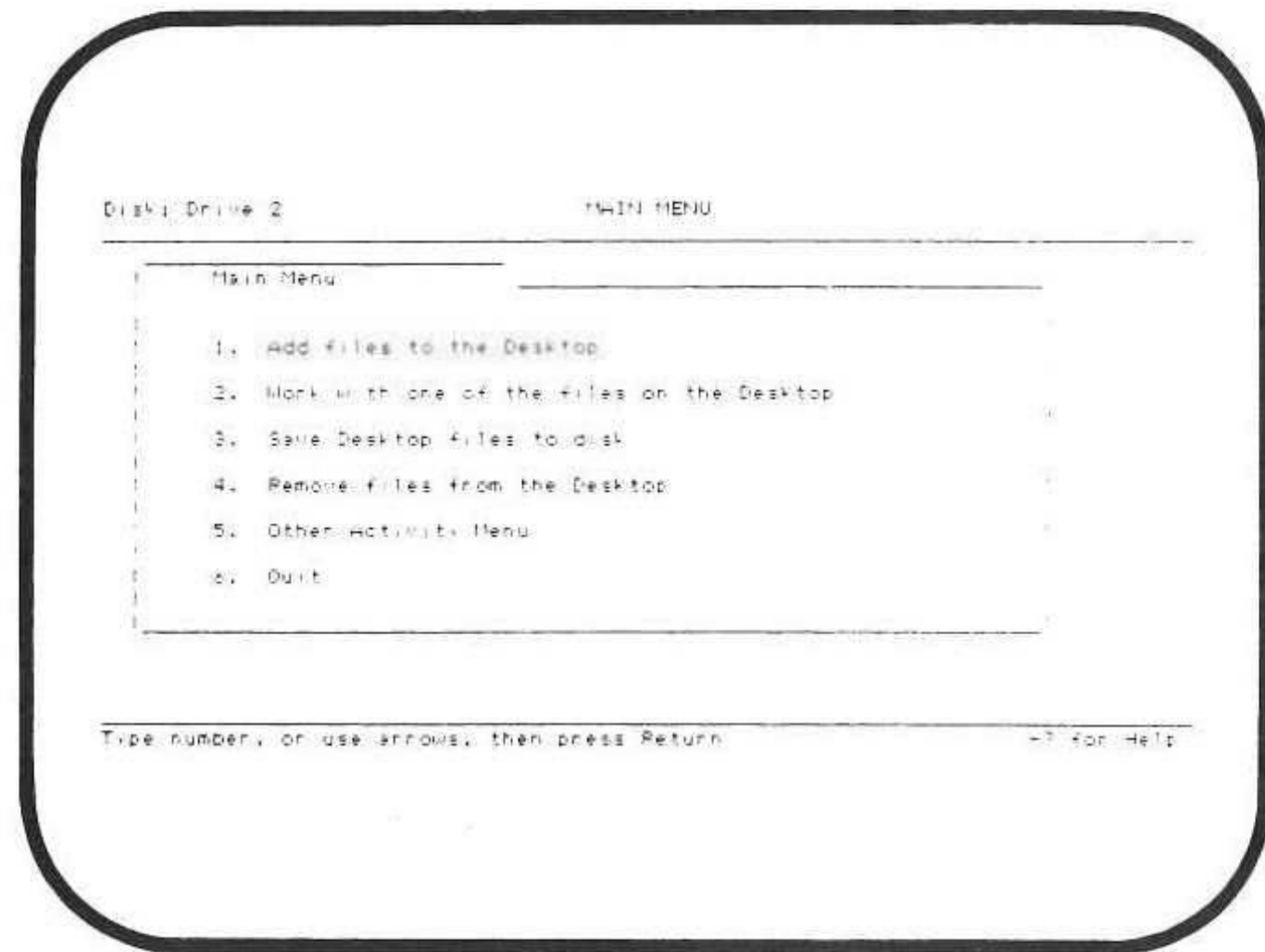


Figure 2-1.
Main Menu

Selecting an Answer to a Question

Sometimes /// E-Z Pieces 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 “RIGHT-ARROW” to highlight the answer then pressing “RETURN”.
- Type the first letter of any response, such as “b”, “t”, or “c”.

Choosing Files From Lists

/// E-Z Pieces presents lists of files from which you choose one or more:

- When you ask for files for the Desktop, you get the List of /// E-Z Pieces 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 /// E-Z Pieces files.

Here's how to choose files from lists:

- To choose one file from a list, use “DOWN-ARROW” and “UP-ARROW” to highlight the file's name. Then press “RETURN”.
- To choose more than one file from a list:
 1. Use “DOWN-ARROW” to move the highlight to a file you want. Then use “RIGHT-ARROW” to mark the name of the first file.
 2. Use “DOWN-ARROW” to highlight the next file you want and put an arrow by it with “RIGHT-ARROW”.
 3. Continue to use “DOWN-ARROW” and “RIGHT-ARROW” to mark files.
 4. Use “UP-ARROW”, or “DOWN-ARROW”, and “LEFT-ARROW” 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.

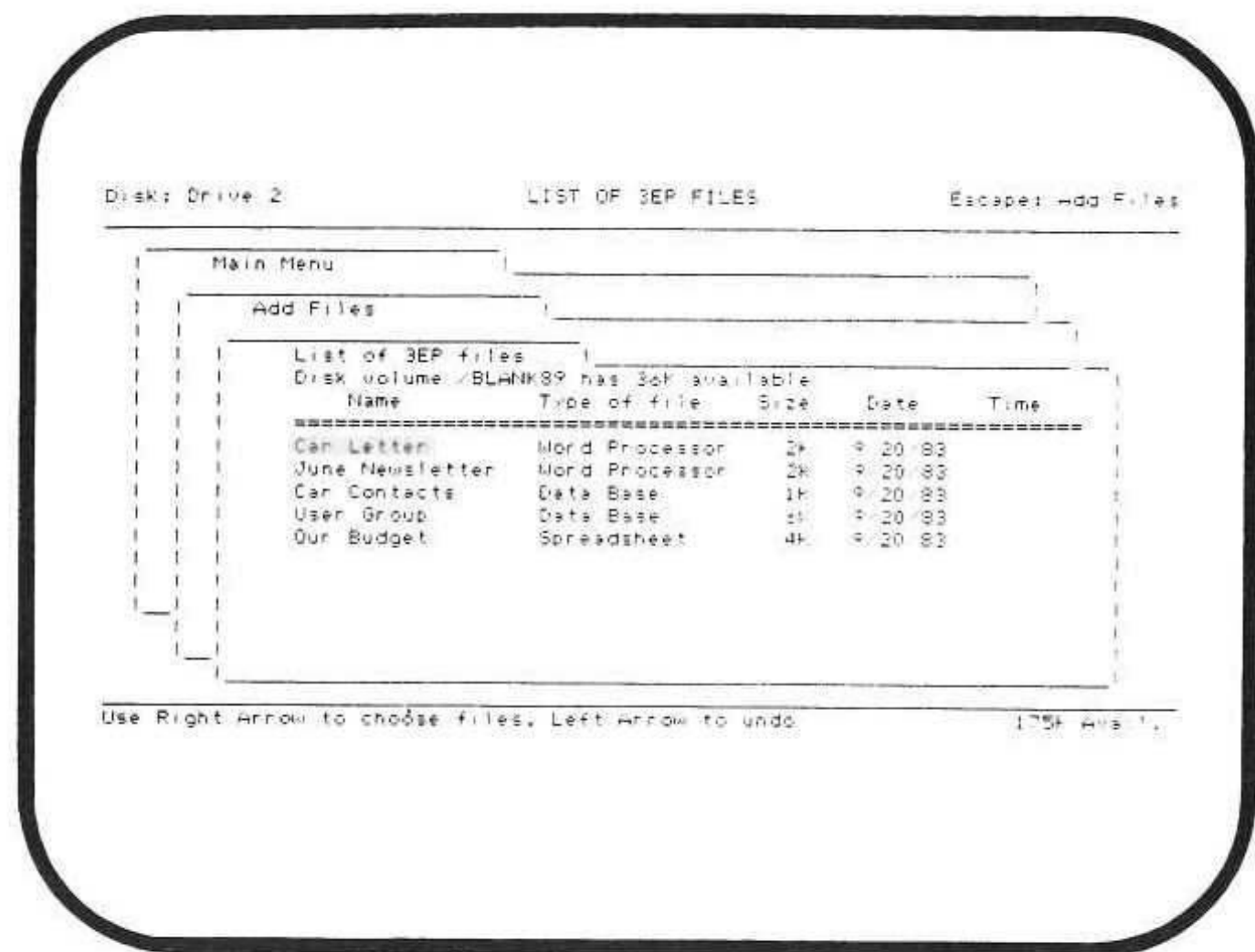


Figure 2-2.
List of ///E-Z Pieces Files

Answering Questions by Typing Information

Certain ///E-Z Pieces questions ask you to type information in response. For example, when you are creating a new file, ///E-Z Pieces 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 ///E-Z Pieces information. It describes how to use ///E-Z Pieces’ 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.

Using ///E-Z Pieces’ Two Cursors——

///E-Z Pieces 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 farther to the right.

- The blinking square 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 ///E-Z Pieces, you see the insert cursor. Change between the two cursors any time with “OPEN-APPLE”-“E” (for edit).

///E-Z Pieces Tips

Some ///E-Z Pieces 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 information.

- To delete a few letters or numbers, one at a time, use “DELETE”. (For users of earlier Apple /// Computers without an enhanced keyboard, the “Backslash Key” (\) functions as the “DELETE” key.) 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”.

Using “ESC”

“ESC” is ///E-Z Pieces’ 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 Activity Menu menu options in the meantime. Then ///E-Z Pieces 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 ///E-Z Pieces’ Ruler

///E-Z Pieces’ Ruler divides a file into eight approximate parts and then lets you move through the file by parts. If you add information to the file or delete information, the parts change.

The Ruler is a combination of “OPEN-APPLE” 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 /// E-Z Pieces' 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". /// E-Z Pieces displays the Add Files menu, which is illustrated in Figure 2-3.

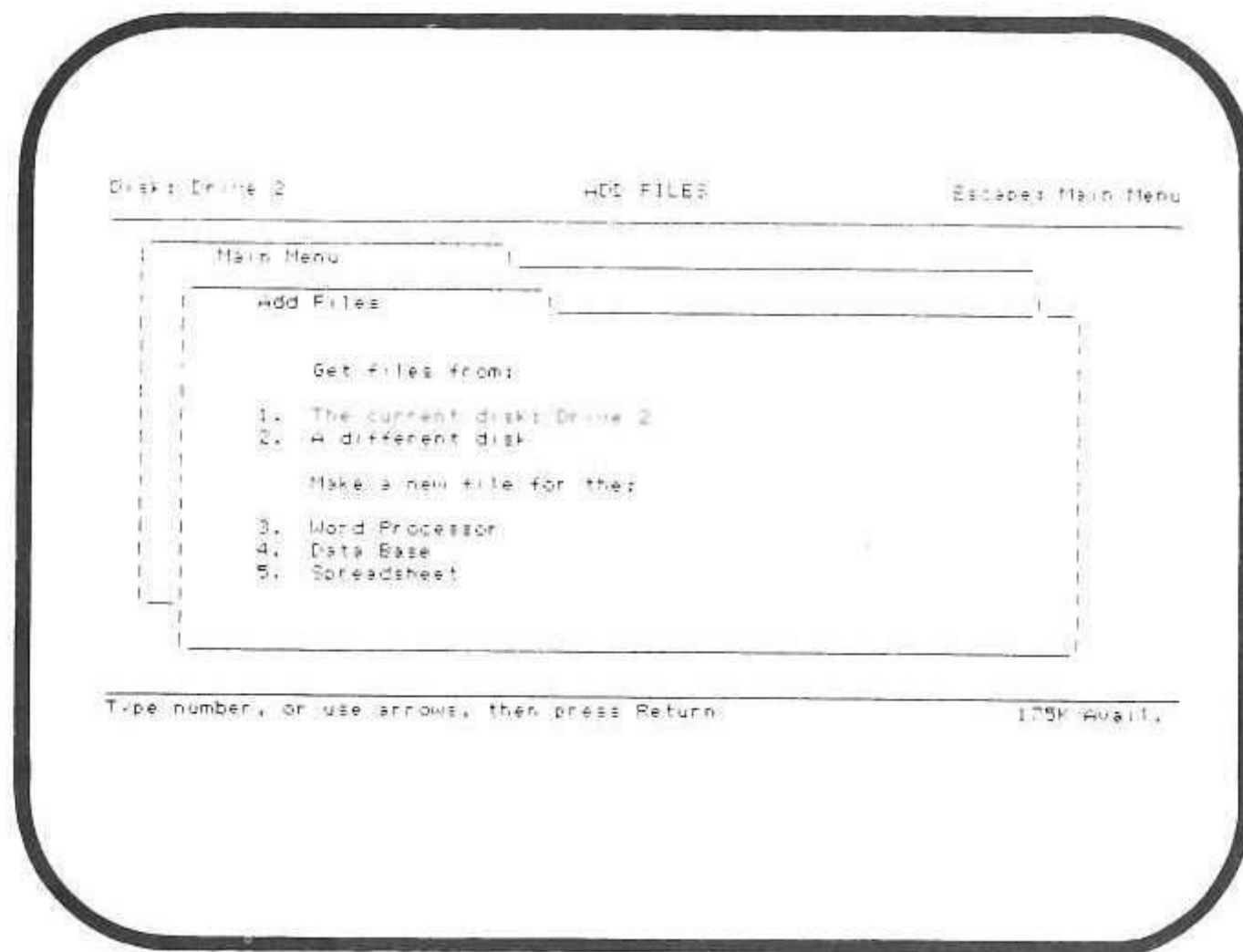


Figure 2-3.
Add Files Menu

3. Choose an option from the Add Files menu.

If you choose "Get files from the current disk", /// E-Z Pieces presents a list of /// E-Z Pieces 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 clock) the file was last saved. The list can contain up to 150 filenames. If there are

more than ten files in the list, you see "more" at the bottom of the screen. Press "DOWN-ARROW" to see the rest of the list.

If you choose "Get files from a different disk", /// E-Z Pieces asks you to choose the location of the files. After you do, you get the list of /// E-Z Pieces files for that disk.

If you choose any of the "Make a new file" options, /// E-Z Pieces asks if you want to make a file from scratch or from an existing file.

NOTE:

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

/// E-Z Pieces Tips

Sometimes /// E-Z Pieces 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 /// E-Z Pieces files on it, or the disk is in a location other than the one displayed in the top-left corner of the screen. When /// E-Z Pieces can't find /// E-Z Pieces files in the disk drive, it tells you so. You can check for the reason and then ask /// E-Z Pieces to look for the files again in the same location or in a different location.

4. To choose one file from the list, use "DOWN-ARROW" and "UP-ARROW" to highlight the file you want. Then press "RETURN".
5. To select several files, use "DOWN-ARROW" and "RIGHT-ARROW" to mark the files you want. Then press "RETURN".

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

After /// E-Z Pieces 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 "OPEN-APPLE"-Q" to get the Desktop Index or press the "SPACE" bar to return to the "ADD FILES" menu.

By the Way: /// E-Z Pieces won't let you add files so that the number on the Desktop exceeds 12. Neither will it let you add files that take up more than the available Desktop space. /// E-Z Pieces 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". /// E-Z Pieces displays the Desktop Index.
3. Choose the file you want to work with. /// E-Z Pieces 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.

If there is only one file on the Desktop, /// E-Z Pieces displays that file immediately, skipping the Desktop Index.

/// E-Z Pieces Tips

"OPEN-APPLE"-**Q** gets you in the Desktop Index from anywhere in /// E-Z Pieces.

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, /// E-Z Pieces 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 it is successfully saved. This is a safety measure 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 /// E-Z Pieces 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". /// E-Z Pieces displays the "SAVE FILES" menu, illustrated in Figure 2-4.

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.

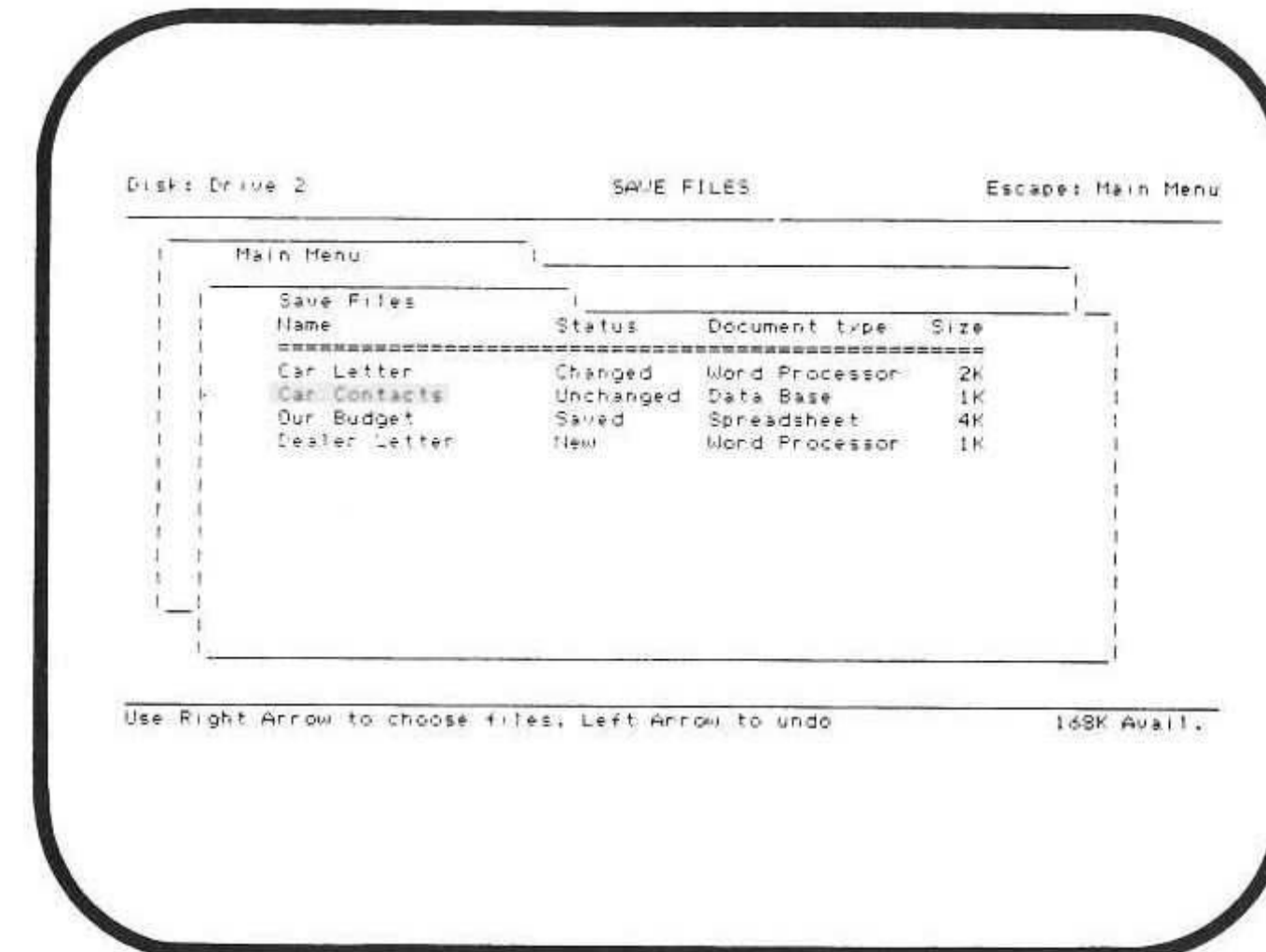


Figure 2-4.
Save Files Menu

3. Use "DOWN-ARROW" to choose the file you want to save. Then press "return". Or use "DOWN-ARROW" and "RIGHT-ARROW" 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, /// E-Z Pieces asks you if you want to put it 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 the file you designated is new or changed, /// E-Z Pieces asks you how to save the file. You can choose to save the file onto the current disk or save the file onto a different disk or directory. Then you have to specify the other disk or directory.

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.

NOTE:

See "Saving Desktop Files to Disk" to find out how /// E-Z Pieces saves files.

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 Desktop". /// E-Z Pieces displays the Remove Files menu, which is illustrated in Figure 2-5.

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.

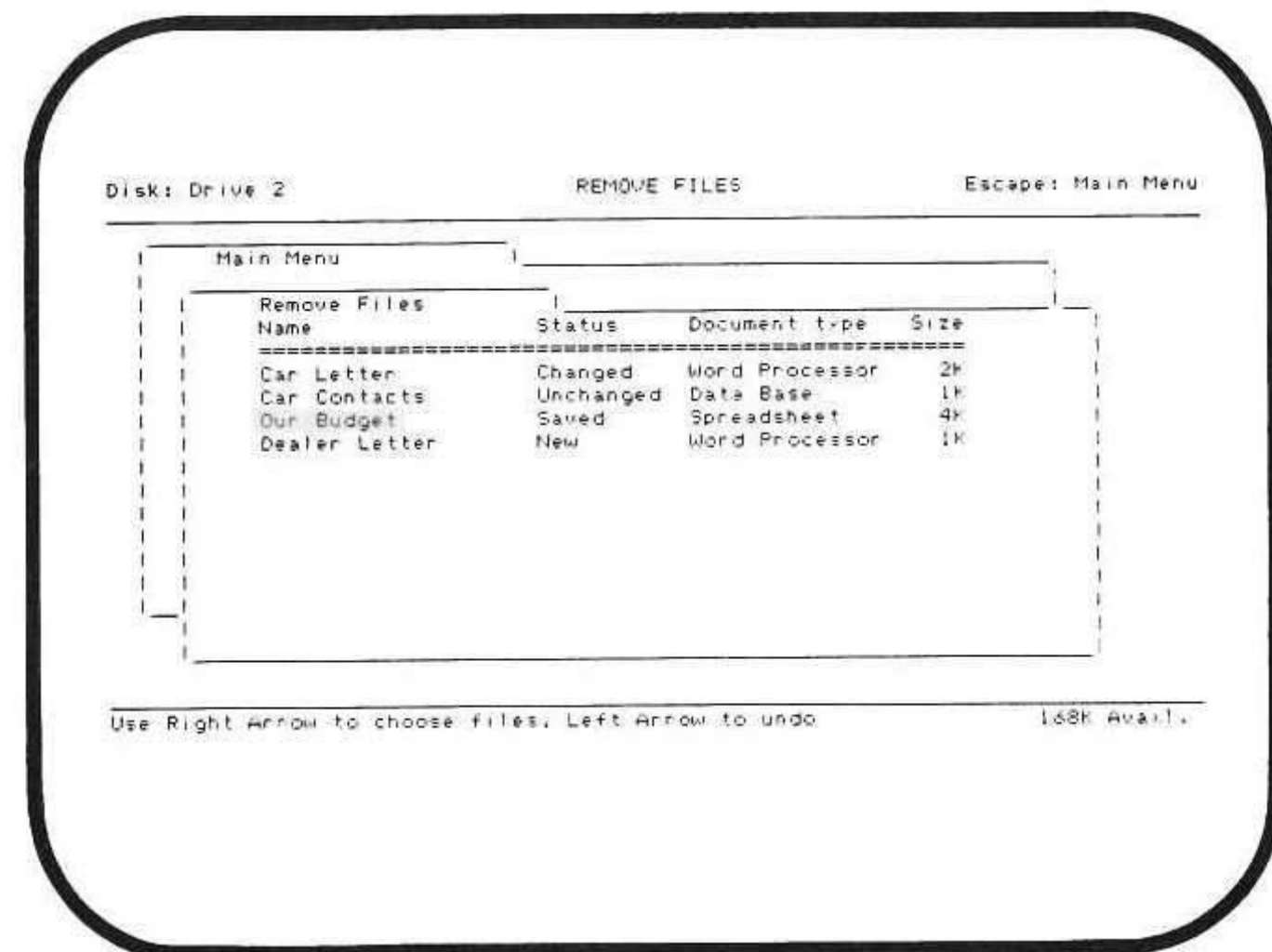


Figure 2-5.
Remove Files Menu

3. Use "DOWN-ARROW" to highlight the file you want to remove. Then press "RETURN". Or use "DOWN-ARROW" and "RIGHT-ARROW" 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, /// E-Z Pieces 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 /// E-Z Pieces 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". /// E-Z Pieces takes you back to the Main Menu.

Quitting /// E-Z Pieces

There are two ways to leave /// E-Z Pieces. 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.

NOTE:

See "Saving Desktop Files to Disk" to find out how /// E-Z Pieces saves files.

Here's the safe way to leave /// E-Z Pieces Pieces:

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. /// E-Z Pieces 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.
- Throw out the file. Then ///E-Z Pieces 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". ///E-Z Pieces presents the three options again.

If you want to throw out the file, choose "Yes". ///E-Z Pieces asks you then how to take care of the next new or changed file on the Desktop.

5. If a file is changed, ///E-Z Pieces 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 ///E-Z Pieces ensures that you will always at least think about saving new or changed files before you quit using ///E-Z Pieces.

Using Other Activity Menu Options

This section tells how to use the options available from ///E-Z Pieces' Other Activity Menu, including

- Changing the current disk drive or SOS prefix
- Lising 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 Activity Menu option, "Specify information about your printer(s)" is described in Chapter 13.

Changing the Current Disk Drive or SOS Prefix

When you want to make a temporary change to the location where ///E-Z Pieces automatically looks for files, you can change to a different disk drive. Or you can use a SOS prefix so ///E-Z Pieces looks in another location, perhaps to a subdirectory on ProFile, for files. This change lasts until you quit ///E-Z Pieces or until you change it again, whichever comes sooner.

Anytime you change the standard location by using Other Activity 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 Activity Menu".
3. Choose "Change current disk drive or SOS prefix". ///E-Z Pieces displays the "CHANGE CURRENT DISK" menu.
4. Choose the device you want.
5. Type the SOS prefix if you chose "ProFile or other SOS directory".

///E-Z Pieces Tips

///E-Z Pieces does not check the validity of SOS prefixes when you change the current location. If ///E-Z Pieces 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.

NOTE:

See "File Locations" in Chapter 1 for a discussion of current locations.

Listing Files on the Current Disk

It's handy to be able to get a list of all files (up to 150) on the current disk, not just ///E-Z Pieces 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 Activity Menu".
3. Choose "List all files on the current disk drive". ///E-Z Pieces displays the list, with ///E-Z Pieces files first and other files listed alphabetically at the bottom designated as "Other" or "Subdirectory". If the list contains more than ten files, you see "more" at the bottom of the display. Use "DOWN-ARROW" to see the rest of the list. To see the list of files in a subdirectory, change the current SOS prefix to include the subdirectory name.
4. Press "ESC" to return to the Other Activity Menu menu.

Creating a New Subdirectory

You can create a new subdirectory on the current disk or on ProFile. Here's how:

1. Make sure you have the Main menu displayed. If you don't, you can get it by press "ESC" one or more times.
2. Choose "Other Activity Menu".
3. Choose "Create a subdirectory".
4. Type the complete pathname of the subdirectory. Then press "RETURN". After /// E-Z Pieces 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 Activity Menu".
3. Choose "Delete files from disk". /// E-Z Pieces shows the "DELETE FILES" display, which lists all files on the current disk.
4. Use "DOWN-ARROW" to highlight the file you want to get rid of. Then press "RETURN". Or use "DOWN-ARROW" and "RIGHT-ARROW" to mark more than one filename. Then press "RETURN". (Remember, you can unmark files with "LEFT-ARROW".)

Then /// E-Z Pieces 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". /// E-Z Pieces takes you back to the Other Activity Menu menu or to the next file you chose.

If you want to permanently erase the file, choose "Yes". /// E-Z Pieces takes you back to the "DELETE FILES" menu.

NOTE:

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 /// E-Z Pieces data disk or for use with other SOS systems:

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 Activity Menu".
3. Choose "Format a blank disk". /// E-Z Pieces 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 have typed the name.
4. Make sure the disk is in the current drive. Press the "SPACE" bar when you are ready to format.

After /// E-Z Pieces formats the disk it reports "Success!"

/// E-Z Pieces Tips

Formatting a disk is a quick way of erasing all the files on the disk.

Selecting the Standard Location of the Data Disk

The standard location of the data disk is where /// E-Z Pieces 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.

Here's how to select the standard location:

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 Activity Menu".
3. Choose "Change standard location of data disk". /// E-Z Pieces presents the Standard Data Disk display, which allows you to name a disk drive or ProFile or other SOS directory as the standard location.
4. If you choose ProFile or other SOS directory, /// E-Z Pieces asks you to type the SOS prefix. After you press "RETURN", /// E-Z Pieces displays the Other Activity Menu again.

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

NOTE:

See "File Locations" in Chapter 1 for a discussion of standard locations.

/// E-Z Pieces Tips

Initially, the standard location for disks is Drive 1. If you are using any other location for /// E-Z Pieces data, 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 /// E-Z Pieces' 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.

Asking for Help

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

1. Press "OPEN-APPLE"- "?". /// E-Z Pieces displays the help information.
2. Use "DOWN-ARROW" and "UP-ARROW" 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 "OPEN-APPLE"- "Q" (for quick change). /// E-Z Pieces presents the Desktop Index, from which you can choose the file you want. The Desktop Index is available from anywhere in /// E-Z Pieces, so use it anytime 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 "OPEN-APPLE"- "S". /// E-Z Pieces saves the file immediately on the current disk, replacing 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 /// E-Z Pieces.

Printing a Copy of the Display

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

NOTE:

See Chapter 13, "Printers and Printing," for directions on how to specify a printer to print a copy of the display.

You can print a copy of the display any time you are using /// E-Z Pieces. 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 "OPEN-APPLE"- "?" whenever "OA-? 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 "OA-? for Help" does not.

Chapter 3

Understanding the Data Base

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/// E-Z Pieces' 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

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

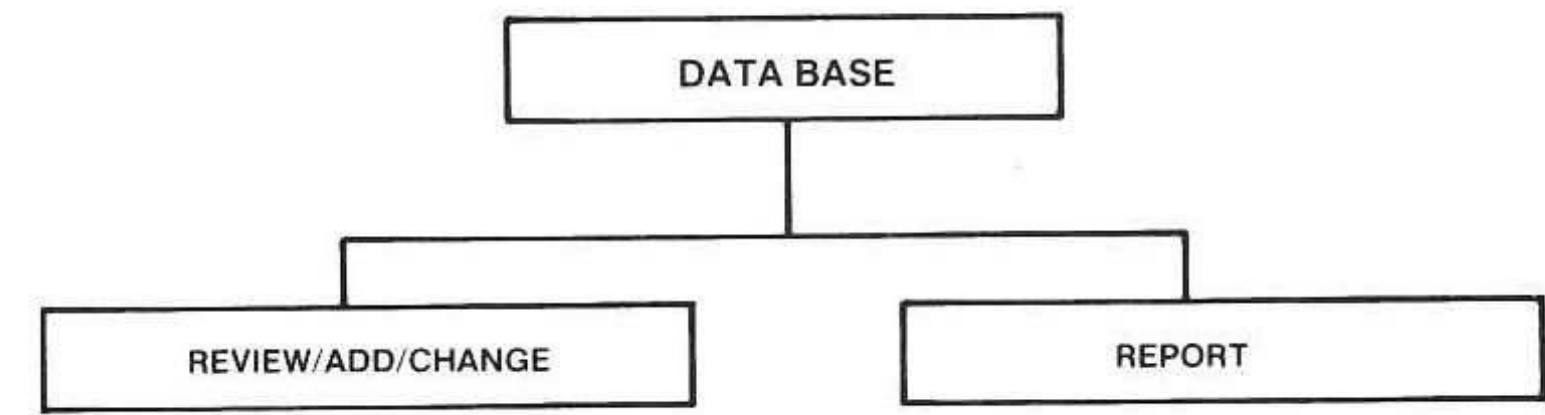


Figure 3-1.
Data Base's Two Main Functions

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 data in the file. You save the specifications so you can print the report any time you want with current data.

As well as printing a report on a printer, you can "print" it to the clipboard for inclusion in a Word Processor document or to the screen.

Activity Flow

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

Note:

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.

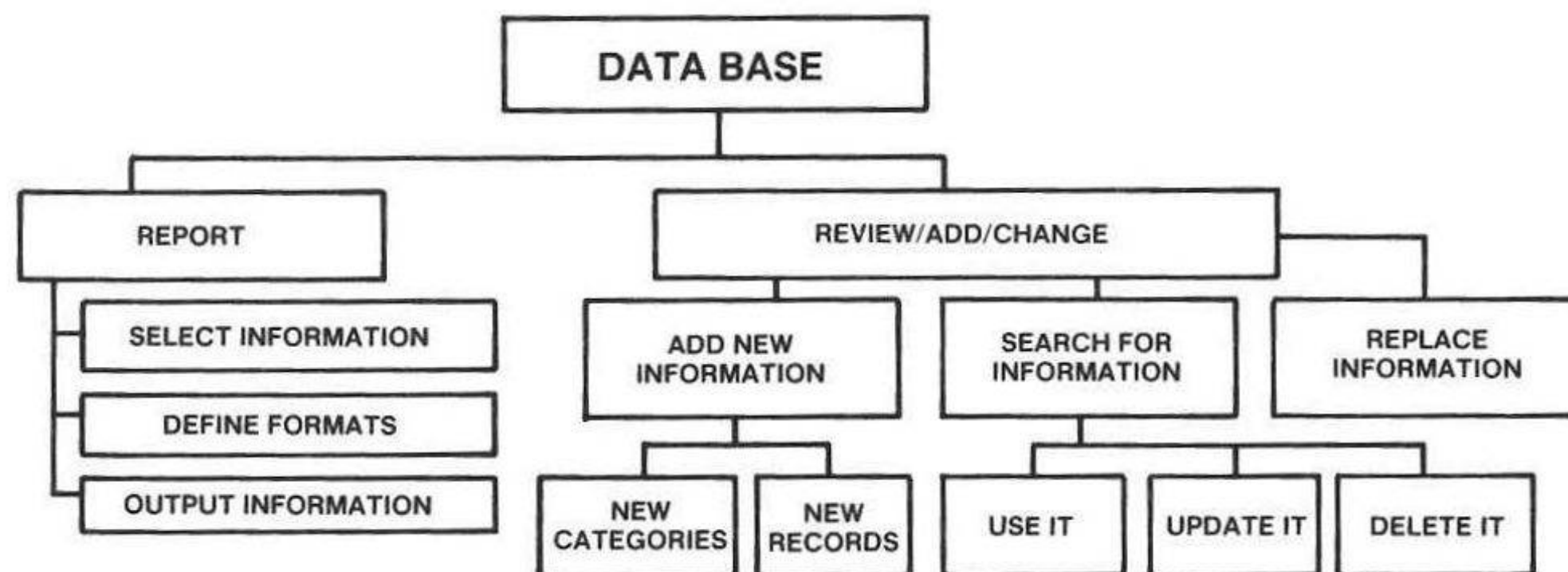


Figure 3-2.
Flowchart of Data Base Activities.

File Guidelines

Review your understanding of Data Base terminology before studying the Data Base file guidelines. Figure 3-3 illustrates a sample Data Base file. The numbers refer to the explanations of terminology that follow.

Item	Item No.	Cost
Courier 10 Printwheel	FF3882	6.95
Flip-top Disk File	FF1928	39.00
Flexible Disk Carrying Case	FF9710	59.95
Flexible Disk Binder	DD2837	6.95

Figure 3-3.
Data Base Terminology

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 "FF3882" 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 Flexible Disk Binder is in one record.

Table 3-1 lists guidelines for Data Base files.

File Feature	Guideline
Maximum number of records in a file assuming an average record size of 75 characters.	Apple /// with 128K RAM: About 625 maximum Apple /// with 256K RAM: About 2300 maximum
Maximum number of categories per record	30
Maximum length of a record	1024 characters maximum
Maximum length of an entry	79 characters maximum
Maximum number of characters in a category name	20

Table 3-1.
Data Base File Guidelines

Chapter 4

Working With Data Base Information

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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.

Each office item has a record in the file. For example, your copy machine and your answering machine each have records.

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

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 Who's!	0.00	159.95	1 year

Figure 4-1.
Office Inventory File

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", or "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. Press "RETURN" after each, including the last.
3. Press "ESC" when you are satisfied with the filename and the category names. /// E-Z Pieces then tells you the file doesn't contain any information and that you can begin inserting new records by pressing the "SPACE" bar. The section "Inserting Records Into a New File" tells how to continue.

To correct the filename, press "UP-ARROW" to return to the filename. Then retype it and press "RETURN".

To correct category names:

- Press "UP-ARROW" to go to the previous category name.
- Press "DOWN-ARROW" to go to the next category name.
- Press "OPEN-APPLE"- "I" to insert a category name ahead of the one the cursor is on.
- Press "OPEN-APPLE"- "D" to delete a category name. Then correct the category name and press "RETURN".

/// E-Z Pieces Tips

Use the category names that contain the words "date" and "time", such as "Birthdate" or "arrival time". Then /// E-Z Pieces 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.

NOTES:

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 /// E-Z Pieces 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.

/// E-Z Pieces 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.

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

1. If you chose "From a text (ASCII) file", /// E-Z Pieces 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 /// E-Z Pieces name for the file. Filenames can be up to 15 characters long. They must begin with a letter, and they can contain uppercase and lowercase letters, numbers, periods, and spaces. Then press "RETURN".

NOTE:

Pathnames are discussed briefly in Chapter 1 of this manual and in the Apple /// Owner's Manual".

/// E-Z Pieces Tips

When you first get the text file, categories are named "Category 1" and so on. You can change the categories' names with the "OPEN-APPLE"- "N" command.

From a DIF File

You can use a DIF file—a file created by /// E-Z Pieces' Spreadsheet, VisiCalc, and other programs—as the source of a Data Base 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.

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

1. If you chose "From a DIF file" /// E-Z Pieces asks for the file's **pathname**. Type the complete pathname and press "RETURN".
2. Type the /// E-Z Pieces name for the file. Filenames can be up to 15 characters long. They must begin with a letter, and they can contain uppercase and lowercase letters, numbers, periods, and spaces. Then press "RETURN".

NOTE:

Pathnames are discussed briefly in Chapter 1 of this manual and in the "Apple /// Owner's Manual".

/// E-Z Pieces Tips

When you first get the text file, categories are named "Category 1" and so on. You can change the categories' names with the "OPEN-APPLE"- "N" command.

From a Quick File File

You can use a Quick File file as the source of a /// E-Z Pieces Data Base file, too. Here's how:

1. If you choose From a Quick File file" /// E-Z Pieces get the Quick File file catalog from the disk in the current drive. After you select the Quick File file you want, /// E-Z Pieces adds it to the Desktop, and you're on your way.

Multiple- and Single-Record Formats

/// E-Z Pieces displays information contained in its data base files in either "multiple-" or "single-record formats". In multiple-record format, /// E-Z Pieces displays 15 records, line after line. As you can guess, single-record format displays only a single record at a time.

To get from multiple-record to single-record format, you "zoom in," and get from single-record format to multiple-record format you "zoom out". This is accomplished with the "OPEN-APPLE"- "Z" command as follows:

1. Place the cursor on the first character of the record you wish to zoom into.
2. Press "OPEN-APPLE"- "Z".

You may return to multiple-record format simply by pressing "OPEN-APPLE"- "Z" again. When you zoom back out to multiple-record format, the cursor is always on the same record as it was on in single-record format.

Single-record format generally allows you to see more information about individual records, and is useful for showing or adding information not seen in the multiple-record format.

NOTE:

See more information about single-and multiple-record layouts in the sections on "Inserting Records", "Moving the Cursor", and "Changing the Record Layout" in this chapter.

Inserting Records

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

/// E-Z Pieces Tips

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

NOTE:

See "Using Standard Values" in this chapter.

Records Into a New File

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

1. Press "ESC" after you set up the filename and the category names. /// E-Z Pieces tells you there are no records in the file and that you should press the "SPACE" bar to begin inserting records.
2. Press the "SPACE" bar. /// E-Z Pieces presents the first blank record in single-record layout.
3. Type information for each entry and press "RETURN". Or just press "RETURN" if the entry is blank. When you press "RETURN" after the last entry in the first record, /// E-Z Pieces presents the second blank record. Continue to create records until you are through.
4. Press "ESC" after you finish creating new records. /// E-Z Pieces presents the new records displayed in multiple-record layout.

/// E-Z Pieces Tips

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 79 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 "OPEN-APPLE"- "L".

NOTE:

See "Changing the Record Layout."

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 "OPEN-APPLE"-**"I"**. /// E-Z Pieces 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. /// E-Z Pieces 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". /// E-Z Pieces returns you to the place in Review/Add/Change where you were when you pressed "OPEN-APPLE"-**"I"**.

New records go immediately "before" the record the cursor is on when you press "OPEN-APPLE"-**"I"**. Then you can arrange records in the order you want them.

NOTE:

See "Arranging Records."

/// E-Z Pieces Tips

*Pressing "ESC" while you are inserting records always returns you to the place 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 "OPEN-APPLE"-**"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, if you have to, go into multiple-record format by pressing "OPEN-APPLE"-**"Z"** to zoom into the record. Press "DOWN-ARROW" to get past the last entry in this record. /// E-Z Pieces asks you if you want to insert new records. Choose "Yes". /// E-Z Pieces presents a blank record.*

*Changing the single-record layout, by pressing "OPEN-APPLE"-**"L"**, 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.*

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 "OPEN-APPLE"-**"I"** when you are in multiple-record layout. /// E-Z Pieces 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 "OPEN-APPLE"-**"Z"** to return to multiple-record layout.
4. Use "OPEN-APPLE"-**"C"** to make multiple copies of the blank record.

NOTE:

See "Copying Records".

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 category'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 "OPEN-APPLE"-**"L"**, then press "ESC", and choose "Right".

Putting Information Into entries

It's easy to type information into Data Base entries and then edit any that are incorrect. In addition, you can use special Data Base features that allow you to get information into entries easily, with a minimum of typing and correcting errors!

Typing and Editing Entries

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

1. Use the **insert cursor**, which is the blinking bar cursor, or the **overstrike cursor**, which is the blinking square cursor, when you are typing and editing entries. Anything you type with the overstrike cursor replaces what was there. 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.

Change between cursors with "OPEN-APPLE"-**"E"**.

2. Use "DELETE" to delete one character to the left of the cursor.
3. Press "ESC" to restore the former entry and move the cursor to the first character of the entry.
4. Use "LEFT-ARROW" and "RIGHT-ARROW" to move the cursor past characters, without changing them.
5. Press "CONTROL-Y" to erase the rest of an entry starting from where the cursor is. Pressing "RETURN" in the middle of an existing entry does not truncate the rest of the entry.
6. Use the insert cursor to insert characters into entries in the multiple-record layout. 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. You can zoom in to see the whole entry.

Dittoing Entries

In multiple-record format you can ditto, or copy, the entry above the one the cursor is on into the current entry just by pressing "OPEN-APPLE"-**"(quote)"** (do not press "SHIFT"). Use the ditto feature in multiple-record layout.

Using Standard Values

Standard values are values you create that /// E-Z Pieces automatically inserts in Data Base records. After you create a standard value for a category, each entry in that category when you are inserting records 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 similar data.

For example, when many people in your name and address file live in the same city, say, Chicago, the 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 ones 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 ("OPEN-APPLE"-**"I"**).
2. Press "OPEN-APPLE"-**"V"**. /// E-Z Pieces 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.

Whenever you insert records, categories with standard values are already filled in. You can leave the standard value or type information over it to change it.

To remove a standard value, start from Review/Add/Change or Insert New Records. Press "OPEN-APPLE"-**"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.

Using Dates and Times

/// E-Z Pieces 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.

/// E-Z Pieces can easily arrange the records in a file by date when you use the Arrange feature if dates are in this standard format. Table 4-1 shows some date entries that have been converted to standard format. They have already been arranged by date.

When You Enter:	/// E-Z Pieces Converts It 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 83	Jun 83

Table 4-1.
Dates Converted to Standard Format

Likewise, whenever a category name contains the word "time", as in "Time", or "StartTime", or "TIME", /// E-Z Pieces converts the times you enter to a standard format. Because /// E-Z Pieces 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.

When You Enter:	/// E-Z Pieces Converts It 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 to have it be considered a part of the business day, you should enter an "a" or a "p".

When You Enter:	/// E-Z Pieces Converts It To:
7 p or 7p	7:00 PM
12 a	12:00 AM
3 a	3:00 AM
659 a	6:59 AM

Table 4-2.
Times Converted to Standard Format

When you don't enter the day, month, or year, /// E-Z Pieces 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 /// E-Z Pieces they are "May 3 00" and "Mar 00 83".

The following dates won't be converted:

0 42783
42783
27 483
Ap

/// E-Z Pieces converts 24-hour time to 12-hour time. Thus, when you enter "1300", /// E-Z Pieces converts it to "1:00 PM". When you enter "0001", /// E-Z Pieces 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.

Moving the Cursor

The cursor movement keystrokes that are the same whether you are in 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

What You Want

Move cursor to next entry

Move the cursor to previous entry

Move the cursor to the right within an entry

Move the cursor to the left within an entry

Use /// E-Z Pieces' Ruler to move the cursor proportionally through a file

Move cursor down one category

Move cursor up one category

What You Use

"TAB" when the cursor is on the first character of any entry.

"OPEN-APPLE"- "TAB" when the cursor is on the first character of an entry

"RIGHT-ARROW"

"LEFT-ARROW"

"OPEN-APPLE"- "1" thru "9"

"DOWN-ARROW" when cursor is on the first character of an entry

"UP-ARROW" when cursor is on the first character of an entry.

NOTE:

See 'Using /// E-Z Pieces' Ruler' in Chapter 2 for a discussion of how the Ruler works.

Cursor Movement In Multiple-Record Layout

What You Want

Move the cursor to the top of the display and then to the top of the previous screenful, or "page", of records

What You Use

"OPEN-APPLE"- "UP-ARROW"

To move quickly toward the beginning of a long file, screenful by screenful, hold down: "OPEN-APPLE"- "UP-ARROW".

Move the cursor to the bottom of the display and then to the bottom of the text screenful, or "page", of records

"OPEN-APPLE"- "DOWN-ARROW"

To move quickly toward the end of a long file, screenful by screenful, hold down: "OPEN-APPLE"- "DOWN-ARROW".

Change the direction the cursor moves when you press "RETURN".

"OPEN-APPLE"- "L" then "ESC"

Choose the direction in which the cursor should go.

Cursor Movement In Single-Record Layout

What You Want

Move the cursor to the next entry

Move the cursor to the previous 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

What You Want

"DOWN-ARROW", "TAB", or "RETURN" when the cursor is on the first character in an entry

"UP-ARROW" when the cursor is on the first character in an entry

"OPEN-APPLE"- "DOWN-ARROW"

"OPEN-APPLE"- "UP-ARROW"

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 "OPEN-APPLE"- "D". /// E-Z Pieces 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 /// E-Z Pieces' cursor movement keystrokes to highlight more records. You can use "OPEN-APPLE"- "UP-ARROW" or "OPEN-APPLE"- "DOWN-ARROW" and the Ruler.

4. Press "RETURN".

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

1. Press "OPEN-APPLE"- "Z" to zoom in to single-record layout.
2. Press "OPEN-APPLE"- "D".
3. Choose "No" or "Yes" depending on whether you want to delete the record displayed.
4. Continue to choose "No" or "Yes" as /// E-Z Pieces displays succeeding records.
5. Press "ESC" after you finish deleting.

/// E-Z Pieces Tips

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

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

NOTE:

See "Displaying Certain Records" for information about the find feature and using record selection rules.

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 multi-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 "OPEN-APPLE"- "C".
3. If you are in multiple-record layout, choose "Current record".
4. Type the number of copies you want and press "RETURN".

Copying Groups of Records

When you copy groups of records, you use /// E-Z Pieces' 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 "OPEN-APPLE"- "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 "OPEN-APPLE"- "C".
9. Choose "From clipboard (paste)". The records are immediately copied from the clipboard.

Moving Records

When you move groups of records, you use /// E-Z Pieces' 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 record of the group to be moved.
3. Press "OPEN-APPLE"-“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 "OPEN-APPLE"-“M”.
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, 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 "OPEN-APPLE"-“R”.
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. /// E-Z Pieces displays all the records that meet the rule.

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

/// E-Z Pieces Tips

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 who batting average is over .300 "or" who drink Lite beer.

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

1. Press "OPEN-APPLE"-“R”.
2. Choose "Yes" to indicate that you want to display all records. /// E-Z Pieces displays all records again.

Finding Certain Records

You can ask /// E-Z Pieces 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 "OPEN-APPLE"-“F”.
2. Type the value you want /// E-Z Pieces to look for. /// E-Z Pieces displays the records that contain the value you provide.
3. Press "ESC" to return to Review/Add/Change.

/// E-Z Pieces Tips

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

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 ("OPEN-APPLE"-*R*) that tell /// E-Z Pieces 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. To get Bradshaw's record only, for example, you would have to make a Record Selection Rule such as "First Name equals Horace".*

Deleting Certain Records

You can set up record selection rules or find certain records that you want to delete. Press "OPEN-APPLE"-*D* to delete the records.

Arranging Records

/// E-Z Pieces 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 "OPEN-APPLE"-*A*.
3. Choose the way you want the records arranged.

To arrange by any number of categories: first arrange by the values in the less important category and then arrange by the values in the more important category.

Zooming In and Out

"Zooming in" means changing from multiple-record layout, and "zooming out" means changing from single-to multiple-record layout. You can usually see a complete entry in single-record layout, when 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 "OPEN-APPLE"-*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.

Changing the Record Layout

You can customize screen displays by changing the multiple-to 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 multi-record layout:

1. Make sure you are in multiple-record layout.
2. Press "OPEN-APPLE"-**"L"**. /// E-Z Pieces displays your options on top and three sample records on the bottom. The records are examples of how the file will look after you make your changes.
3. Change the record layout, choosing from the following options:

What You Want

Move the cursor to the next category

Move the cursor to the previous category

Switch the position of the category the cursor is on with the one on its right

Switch the position of the category the cursor is on with the one on its left

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.

What You Use

"RIGHT-ARROW" or "TAB"

"LEFT-ARROW" or
"OPEN-APPLE"-**"TAB"**

"OPEN-APPLE"-**">"** (You don't need to use "SHIFT" for ">".)

"OPEN-APPLE"-**"<"** (Again, no "SHIFT" required)

"OPEN-APPLE"-**"RIGHT-ARROW"**

"OPEN-APPLE"-**"LEFT-ARROW"**

"OPEN-APPLE"-**"D"**

Insert a previously deleted category just to the left of the category the cursor is on

"OPEN-APPLE"-**"I"**

After you type "OPEN-APPLE"-**"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.

You will probably want to use all the above options until you see "MARGIN" appear on the right side of the screen. This ensures that 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 each other. Here's how:

1. Zoom into single-record layout with "OPEN-APPLE"-**"Z"**.
2. Press "OPEN-APPLE"-**"L"**. /// E-Z Pieces displays the "CHANGE RECORD LAYOUT" screen, which looks like a record in single-record layout.
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

To move the cursor

What You Do

Press:
"LEFT-ARROW",
"RIGHT-ARROW",
"UP-ARROW",
"DOWN-ARROW", or
"RETURN".

To move categories

Press:
"OPEN-APPLE"-**"LEFT-ARROW"**,
"OPEN-APPLE"-**"RIGHT-ARROW"**,
"OPEN-APPLE"-**"UP-ARROW"**, or
"OPEN-APPLE"-**"DOWN-ARROW"**

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

Changing a File's Structure

/// E-Z Pieces 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. 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

Change to the filename or category names have no impact on customized record layouts and report formats. But inserted or deleted categories do. That is, 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 "OPEN-APPLE"-**"H"** (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 "OPEN-APPLE"-**"N"**. /// E-Z Pieces presents the "CHANGE NAME/CATEGORY" display, with the cursor at the bottom with the prompt "Type filename".
3. Type the new file name 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

Move cursor to previous or next category

Change a category name

Insert a new category

What You Do

Press "UP-ARROW" or "DOWN-ARROW".

Put the cursor on the category name you want to change.

Use editing features to change the name of the category and press "RETURN".

Put the cursor where you want the new category.

Press "OPEN-APPLE"-**"I"**

Answer "Yes" to the questions 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.

Press "OPEN-APPLE"- "D".

Answer "Yes" to the question whether you really want to set the custom record layouts back to standard.

5. Press "ESC" after you finish fixing the file.

NOTE:

See "Putting Information Into Entries" for instructions on how to use editing features.

/// E-Z Pieces Tips

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 5

Reporting With the Data Base

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Report Styles

/// E-Z Pieces 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, lists the names and addresses of the members of an Apple User's Group.

File:	User Group					Page 1
Report:	Phone List					11/10/93
First Name	Initial	Last Name	Tel. No.	Computer	Date Joined	
Paula	E.	Tuerr	555-0110	II	Apr 5 81	
Lana	B.	Hayden	555-0987	IIIe	Jan 15 83	
Robert	C.	Lairton		III+, III st	Aug 11 79	
Jaceline	M.	Lasundis	555-2738	IIIe	Jul 14 81	
Fred	H.	Manzini	555-2738	II	Mar 11 82	
Reg		Seiler	555-2948	IIIe, III+	Feb 3 81	
Annie	F.	Oakley	555-2309	III	Apr 1 83	
Homer	S.	Atkins	555-2338	IIIe	Jul 4 83	
Hardin	Fitz	Simmons	555-3047	IIIe	Mar 7 82	
J.	R.	Dermati	555-3049	III+	Nov 7 83	
Horace	P.	Floriss	555-3284	III	Apr 17 82	

Figure 5-1.
Tables-Style Report

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 User's Group. This time, though, more specific information about each individual is included.

Paula E. Tuerr
1423 Lochner Dr.
Plains, TX 77480
555-0110

Lana B. Hayden
4473 E. Numb. Dr.
Scotts Valley, TX 77045
555-0987

Robert C. Lairton
20427 Sunrise
Plains, TX 77509

Figure 5-2.
Labels-Style Report

When you think about whether you want to create a table-style report or a labels-style report, decide whether you want your records in rows or columns across the page, like the User's Group Phone List or grouped vertically down the page, like the Address Listing.

NOTE:

Table-style reports are similar to records in multiple-record layout, and labels-style reports are similar to records in single-record layout.

Labels-style reports allow you to print complete records without page width limitations.

Report Formats

Report formats are specifications you give /// E-Z Pieces 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 the report format.

In the User's Group Phone List Report, the individuals' names, phone numbers and model of computers are included in the report format.

For labels-style reports, you tell which categories should be included and how they should be placed. In the Address Listing Report, address information is included, but phone numbers are left out.

Report formats are saved with and become 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.

Report Menu

When you are in Review/Add/Change for a file and indicate you want to report ("OPEN-APPLE"-P), /// E-Z Pieces displays all the Report menu, which is illustrated in Figure 5-3. It presents all your options for beginning reporting.

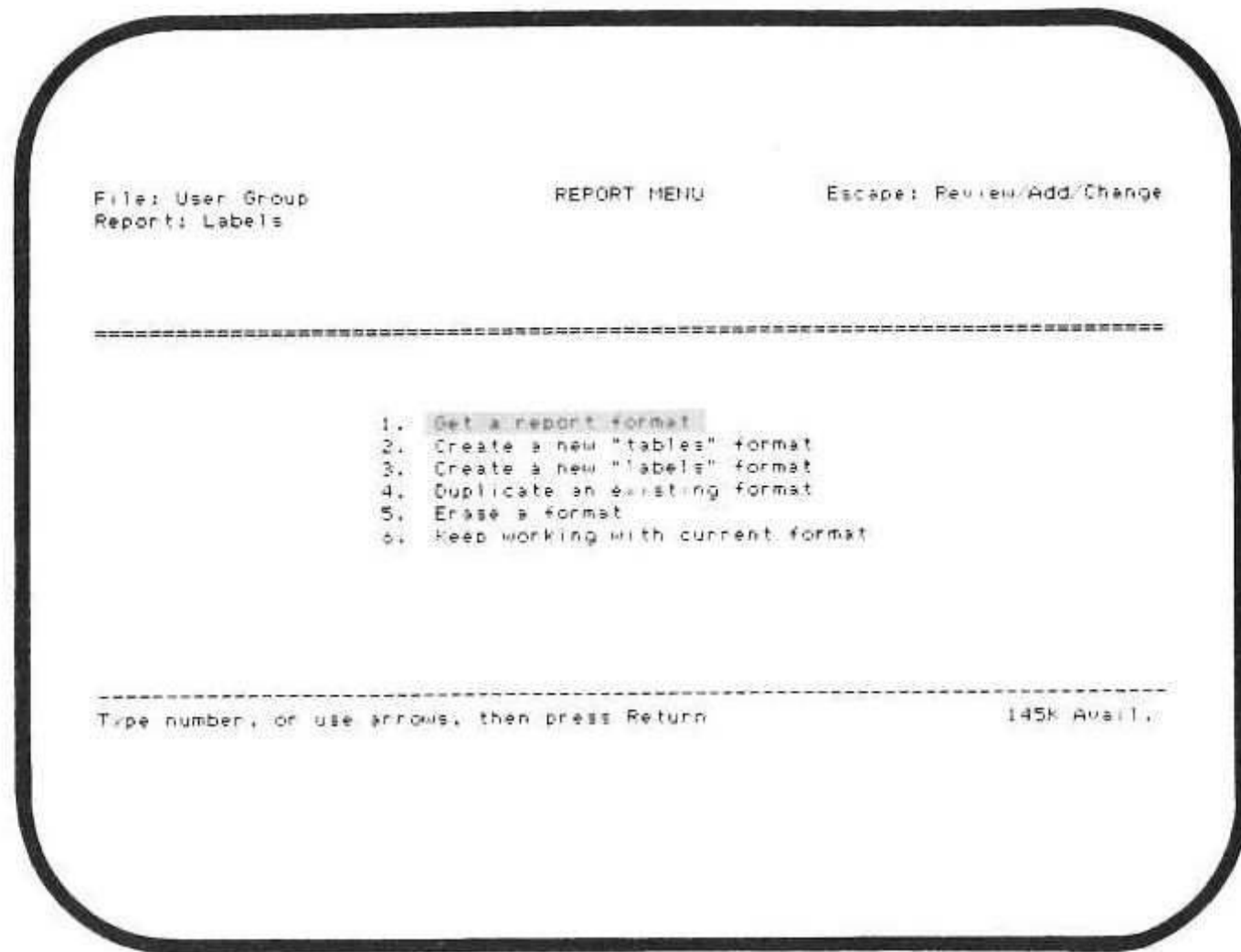


Figure 5-3.
Report Menu

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, /// E-Z Pieces 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 so you can duplicate it. After you give it a new name, /// E-Z Pieces 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, /// E-Z Pieces 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 "OPEN-APPLE"-P. /// E-Z Pieces presents the Report menu.
3. Choose "Create a new "tables" format". /// E-Z Pieces 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 and can be the same as the file name. Press "RETURN". /// E-Z Pieces presents the Report Format display.

Figure 5-4 illustrates the tables-style Report Format display for the User Group file.

The options you have now for creating the report format.

Examples of records from the file. The changes you make in the report format 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.

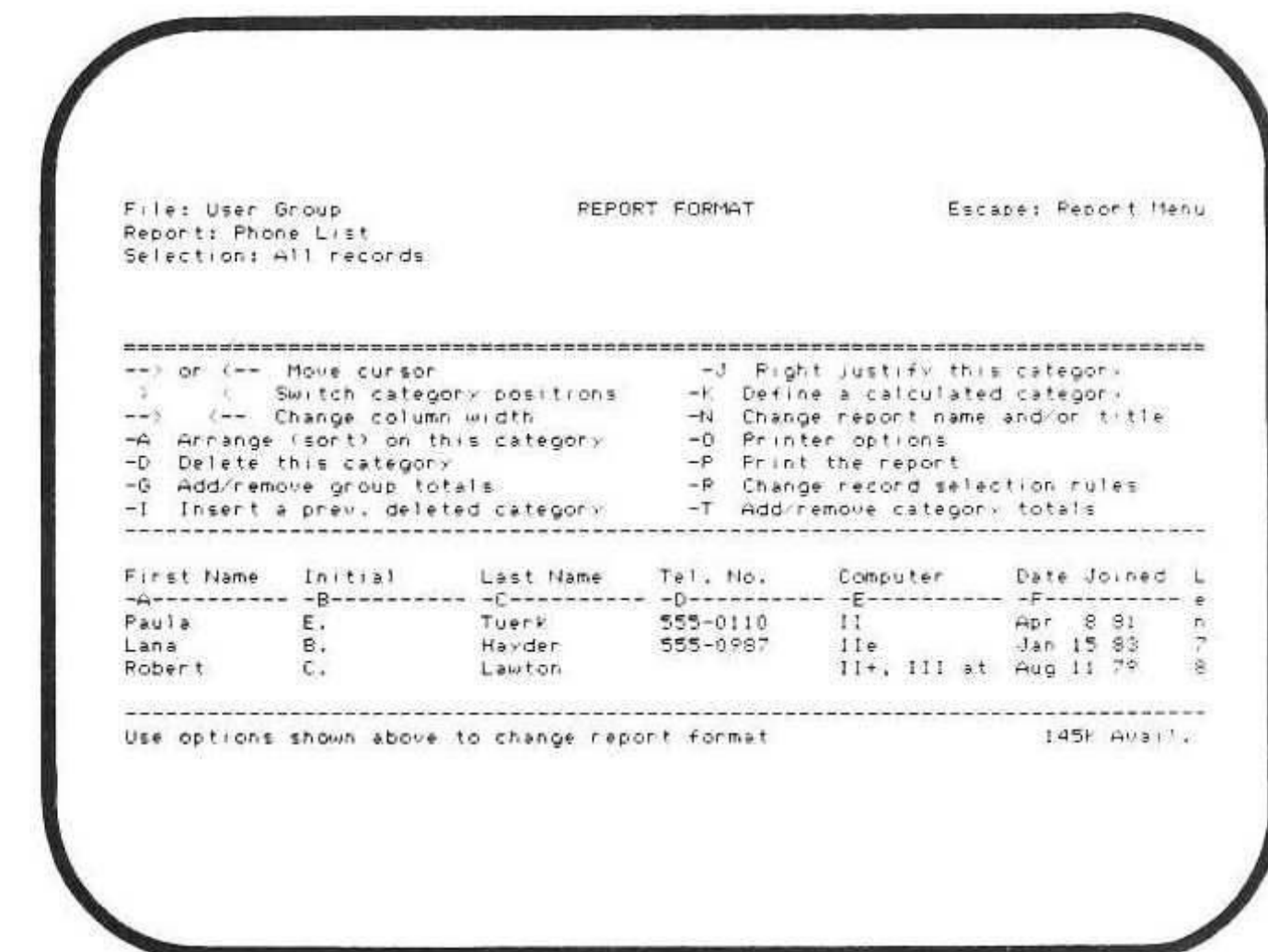


Figure 5-4.
Tables-Style Report Format Display

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.

Main Consideration	Data Base Feature
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
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 or Titles
Calculating in reports	Creating Calculated Categories Adding and Removing Totals Specifying Group Totals
Communicating with your printer	Working with Printer Options Chapter 13, "Printers and Printing"

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

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 cursor one category to the right	"RIGHT-ARROW"
Move the cursor one category to the left	"LEFT-ARROW"

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. Changing the widths is also helpful in ensuring that the listing is not too wide. The column width is always identical in the right column of the layout. It also ensures that information fits correctly on your printer.

To change the width of columns:

What You Want	What You Use
Increase the width of a column	Put the cursor on the column Press "OPEN-APPLE"- "RIGHT-ARROW"
Decrease the width of a column	Put the cursor on the column Press "OPEN-APPLE"- "LEFT-ARROW"

/// E-Z Pieces Tips

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 /// E-Z Pieces to display pound signs (#) instead.

Switching Category Positons

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 Use
Switch a column with the one on its right	Place the cursor on the category to be moved. Press "OPEN-APPLE"- ">" (do not press "SHIFT").
Switch a column with the one on its left	Place the cursor on the category to be moved. Press "OPEN-APPLE"- "<" (Again do not press "SHIFT").

/// E-Z Pieces Tips

You can move a category where you want it, too, by deleting it from one position ("OPEN-APPLE"- "D") and inserting it where you want it ("OPEN-APPLE"- "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 'OPEN-APPLE"- "D".

/// E-Z Pieces Tips

To delete a category from your "file", use the "OPEN-APPLE"- "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 "OPEN-APPLE"- "D" function, 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 "OPEN-APPLE"- "I". /// E-Z Pieces presents a numbered list of previously deleted categories.
3. Choose the category you want to insert.

Changing Record Selection Rules

When you first create a report format, the record selection rule is "Selection: All records". Thus, all records are included in the report. 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.

NOTE:

See "Changing Record Selection Rules" in Chapter 4.

Arranging Records for the Report

You can arrange records for the report so the records 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 "OPEN-APPLE"- "A".
3. Choose the way you want the records arranged.

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

NOTE:

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

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 "OPEN-APPLE"- "J". /// E-Z Pieces 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".) /// E-Z Pieces 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 that you want to be included and press "RETURN".

After you respond to these prompts, /// E-Z Pieces fills the appropriate column in the record examples with "9"s to show how the information will line up when it is printed.

/// E-Z Pieces Tips

When you specify columns for totals using "OPEN-APPLE"- "T", they are automatically right justified, and you don't have to use "OPEN-APPLE"- "J".

Adding or Changing Report Names and 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.

In addition, you can give a report a title. The title can be up to 79 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 "OPEN-APPLE"- "N". /// E-Z Pieces prompts you for the new report name.
2. Type 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

/// E-Z Pieces 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).

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. 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 either delete columns in the A-Z group or physically move columns 27-30 to the left into the A-Z group.

NOTE:

Calculation rules are based on column letters. If you rearrange columns, rules may apply to different columns.

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 "OPEN-APPLE"-**"K"** (for calculated category). A column called 'Calculated' appears in the space. The examples of information in that column consist of "9"'s, which means the category will be right justified. In addition, *///E-Z Pieces* 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. Use the following keys to designate the four functions.

plus	+
minus	-
multiply	*
divide	/

All operations are performed from left to right.

After you enter the calculation rules, they appear above the double line at the top of the display. *///E-Z Pieces* then asks you how many decimal places to include in this category.

5. Type the number of decimal places to include and press "RETURN". Just press "RETURN" if you want to accept *///E-Z Pieces*' default value for this number. *///E-Z Pieces* 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.

///E-Z Pieces Tips

You can't see the contents of the new column until you either print the report on a printer or display it on the display. To do either, you use "OPEN-APPLE"-**"P"**.

You can use "OPEN-APPLE"-**"T"** to get a group total and a grand total for the numbers in the calculated category. You can't, however, use "OPEN-APPLE"-**"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.

You can have three calculated categories in each *///E-Z Pieces* report.

Adding and Removing Totals

It's easy to get a grand total for specified categories. Here's how.

1. Place the cursor on the column you want to total.
2. Press "OPEN-APPLE"-**"T"**. *///E-Z Pieces* 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 *///E-Z Pieces*' best guess by pressing "RETURN". *///E-Z Pieces* 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 *///E-Z Pieces*' default by pressing "RETURN".

///E-Z Pieces 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 a grand total for this category.

Here's how to remove the grand total:

1. Place the cursor on the category with the grand total.
2. Press "OPEN-APPLE"- "T". The sample records will replace the "9"'s.

/// E-Z Pieces Tips

Follow the procedure above to get group totals (subtotals) for categories. But, in addition, use the "OPEN-APPLE"- "G" function on the category that should "control" the group totals.

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. Whenever a change in value occurs in this controlling category, a group total is calculated and printed for categories you specified with "OPEN-APPLE"- "T".

To designate the controlling category for group totals:

1. Put the cursor on the controlling category.
2. Press "OPEN-APPLE"- "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.

/// E-Z Pieces displays the controlling category for the group totals to the left and above the double line on the Report Format display.

/// E-Z Pieces Tips

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

Creating a Labels-Style Report

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

1. Start in the Review/Add/Change of the file you want to create a report for.
2. Press "OPEN-APPLE"- "P". /// E-Z Pieces presents the Report menu.
3. Choose "Create a new "labels" format". /// E-Z Pieces 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". /// E-Z Pieces presents the Report Format display.

Figure 5-5 illustrates the labels-style Report Format display for the User Group file.

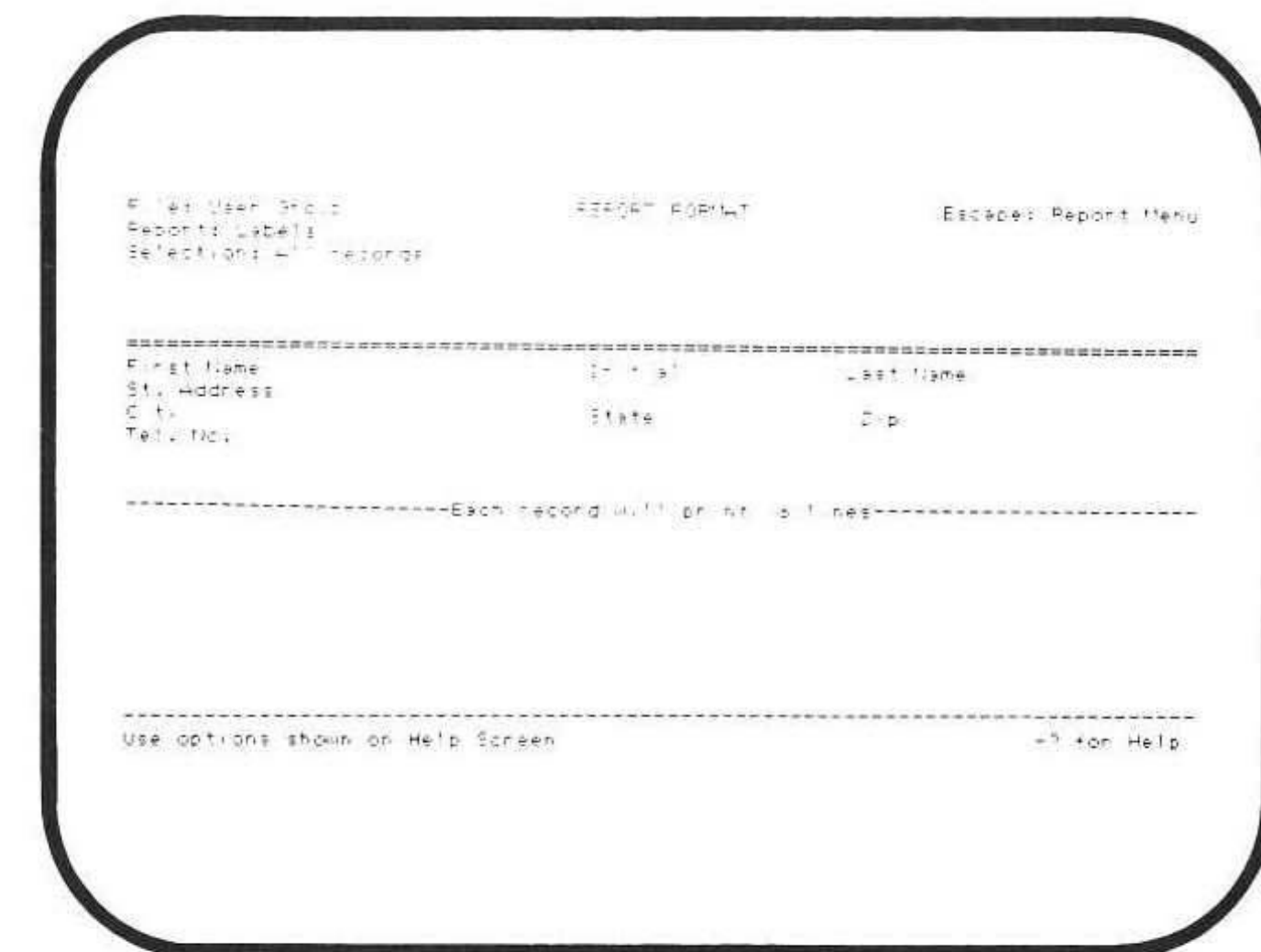


Figure 5-5.
Labels-Style Report Format Display

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.

Main Consideration	Data Base Feature
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	Chapter 13, "Printers and Printing"

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

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, or down	"LEFT-ARROW", "RIGHT-ARROW", "UP-ARROW", "DOWN-ARROW", and "RETURN"

/// E-Z Pieces Tips

Although you can move the cursor anywhere through the categories, you can move categories only when the cursor is on the first character of the category.

Moving Categories

To place categories where you want them on the report, /// E-Z Pieces 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, up, or down	"OPEN-APPLE"- "LEFT-ARROW", "OPEN-APPLE"- "RIGHT-ARROW", "OPEN-APPLE"- "UP-ARROW", or "OPEN-APPLE"- "DOWN-ARROW"

/// E-Z Pieces 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 "OPEN-APPLE"-“D”. When you delete a category, a spacing line remains, which you may delete if you want.

/// E-Z Pieces Tips

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 "OPEN-APPLE"-“I” feature. 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 "OPEN-APPLE"-“I”. /// E-Z Pieces 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

/// E-Z Pieces 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 Justification	Without Left Justifying
Joe Maxwell	Joe Maxwell
Josephine Maxwell	Josephine Maxwell

Follow these steps to left justify categories:

1. Place the categories side by side in the order you want them.
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 "OPEN-APPLE"-“J”. /// E-Z Pieces displays the “ ” character to the left of the left justified category.

/// E-Z Pieces Tips

You can see the effect of left justifying a category only by using the "OPEN-APPLE"-“P” command to actually print the report or display it on the screen.

Arranging Records for the Report

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 "OPEN-APPLE"-“A”.
3. Choose the way you want the records arranged.

NOTE:

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

Changing Record Selection Rules

When you first create a report format, the record selection rule is "Selection: All records". Thus, all records are included in the report. 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 "OPEN-APPLE"-“R” command.

NOTE:

See "Changing Record Selection Rules" in Chapter 4.

Looking at Records

The Report Format display displays 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 additional records.

What You Want	What You Do
To zoom in to actual records	Press "OPEN-APPLE"->"Z"
To move about through the files after you zoom in	Press "OPEN-APPLE"->"1" through "9" to move proportionally through the file Press "OPEN-APPLE"->">" (no "SHIFT") to display next record Press "OPEN-APPLE"->"<" (no "SHIFT") to display the previous record
To zoom out to the category names again	Press "OPEN-APPLE"->"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 category name you want to appear on the report.
2. Press "OPEN-APPLE"->"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 "OPEN-APPLE"->"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.

In addition, you give a report a title. The title can be up to 79 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 "OPEN-APPLE"->"N". ///E-Z Pieces 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.

Working With Printer Options

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

Here's how to tell ///E-Z Pieces you want to work with printer options:

What You Want	What You Do
Indicate that you want to work with printer options	Press "OPEN-APPLE"->"O" from the Report Format display.
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, ///E-Z Pieces 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.

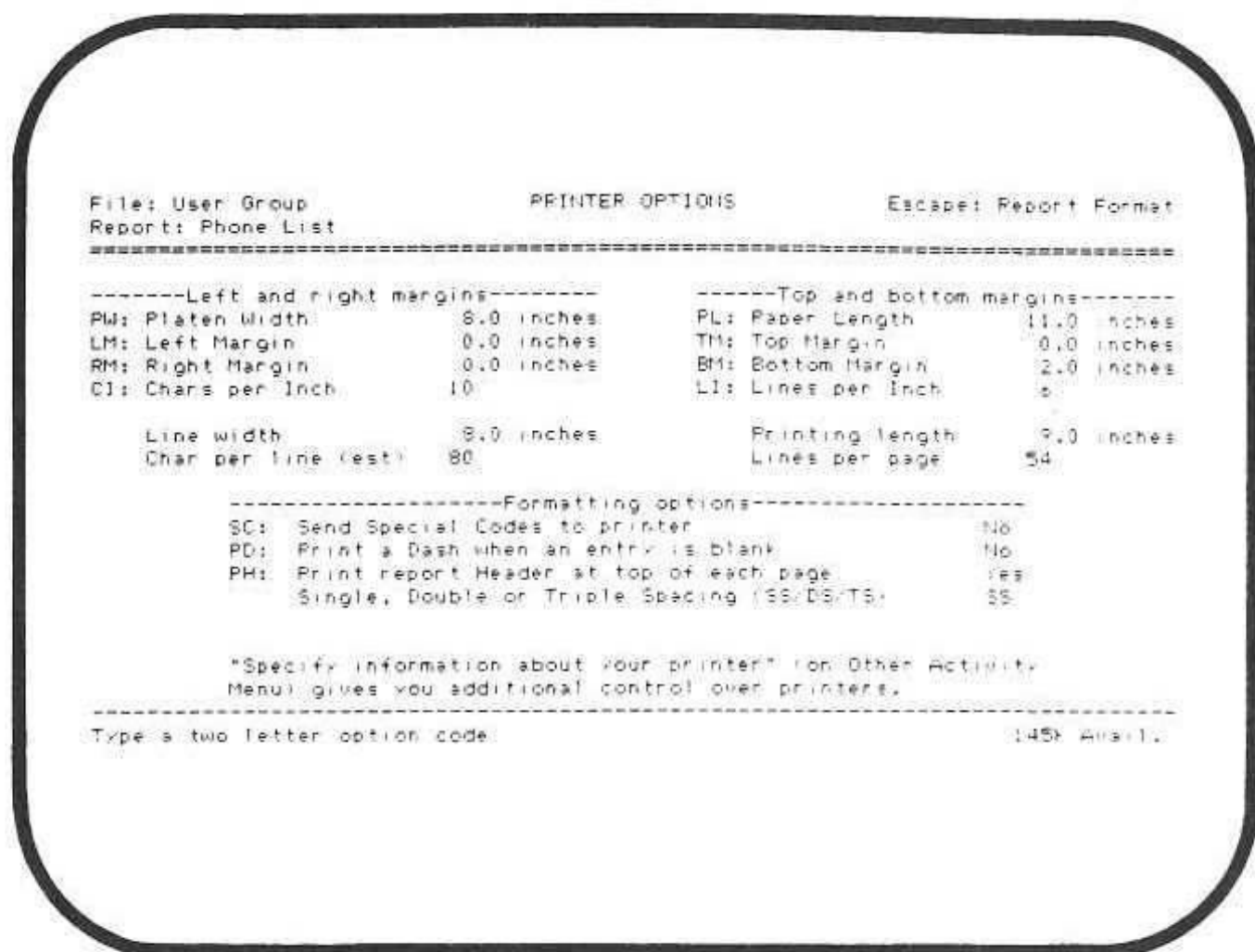


Figure 5-6.
Tables-Style Printer Options

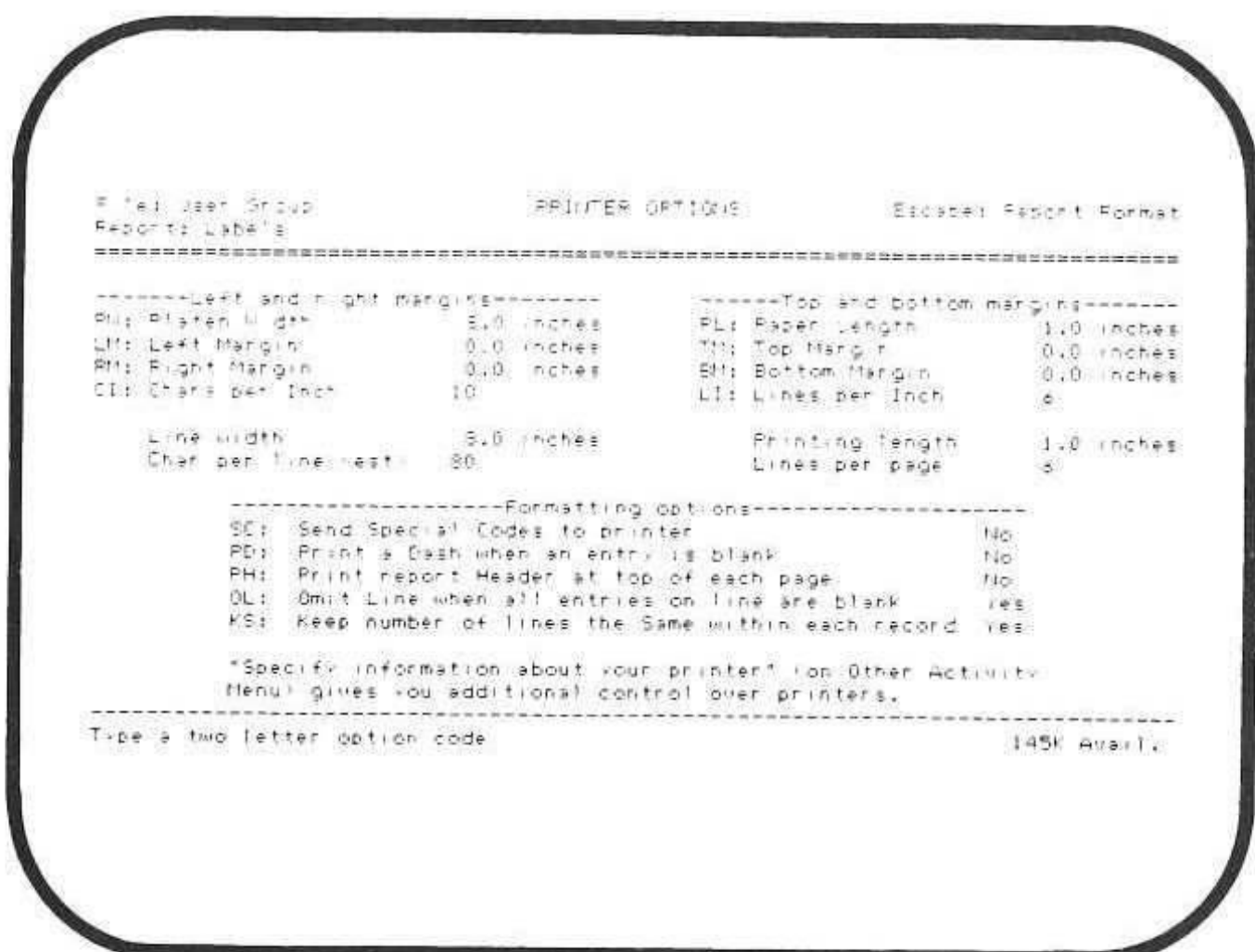


Figure 5-7.
Labels-Style Printer Options

The information that follows tells how to work with these printer options.

Using Left and Right Margin Options

Table 5-3 describes left and right margin options.

The Printer Option "Platen width (PW)"

Controls

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.

"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, that is, 1.5 inches, 1.6 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

Table 5-3.
Left and Right Margin Options

When you change any of the above values, /// E-Z Pieces 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		
x	Chars per inch	x	12 characters per inch		
=	Chars 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".

/// E-Z Pieces Tips

For tables-style reports, the characters per line shouldn't be any less than the length of the line on the report format, which is specified by "Len", followed by the number of characters long each line will be.

Using Top and Bottom Margin Options

Table 5-4 describes 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

"Bottom margin (BM)"

Default = 0.0 inches. This default value accommodates /// E-Z Pieces 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 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.

Table 5-4.
Top and Bottom Margin Options

When you change any of the above values, /// E-Z Pieces 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		

$$\frac{x \text{ Lines per inch}}{= \text{ Lines per page}}$$

$$\frac{x \text{ 6 lines per inch}}{= 45.0 \text{ lines per page}}$$

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".

Using Other Formatting Options

Table 5-5 describes other formatting options.

The Printer Options	Control
"Send Special Codes to Printer (SC)"	Use this code if you want your printer to use a 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, /// E-Z Pieces asks for the control characters. Type the control characters and type "^" when you finish. If you change this option to "no", you must include control characters for characters per inch.
"Print a Dash When an Entry Is Blank (PD)"	If an entry is blank, /// E-Z Pieces can print a single dash to mark its place. This printer option can have the value "yes" or "no". Default = "no"
"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 "OPEN-APPLE"- "N").

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

Default = "yes" Choose "no" for labels.

Table 5-5.
Other Formatting Options

To change the value of the above options:

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

Determining Spacing in Tables-Style Reports

You can specify whether you want your tables-style report to be single, double, or triple spaced. /// E-Z Pieces' default is single spacing. Here's how to change the spacing:

1. Type the code that stands for the spacing you want, "S" 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.

Printer Options	Controls
"Omit line when all entries on line are blank (OL)"	If you leave the value of this option at /// E-Z Pieces' default, "yes", /// E-Z Pieces will not substitute a blank line when all entries on a line are blank. That is, it will close up lines with blank entries.

“Keep number of lines the same within each record (KS)”

If you change this option to “no”, ///E-Z Pieces 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.

If “OL” is “yes” and you leave the value of this option at ///E-Z Pieces’ default, “yes”, ///E-Z Pieces 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:

1. Type the code that stands for the option and press “RETURN”.

///E-Z Pieces automatically changes the value to its opposite.

///E-Z Pieces Tips

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’s 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

The Word Processor's Two Main Functions 6-1
Activity Flow 6-2
File Guidelines 6-2

/// E-Z Pieces' 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

/// E-Z Pieces' 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 and quickly and easily edit mistakes and make other necessary changes. You can also use special features that allow you to delete, move, or copy blocks of text within documents, replace old information with new information, find specific information, and others.

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 that require special printing techniques such as boldface and underlining.

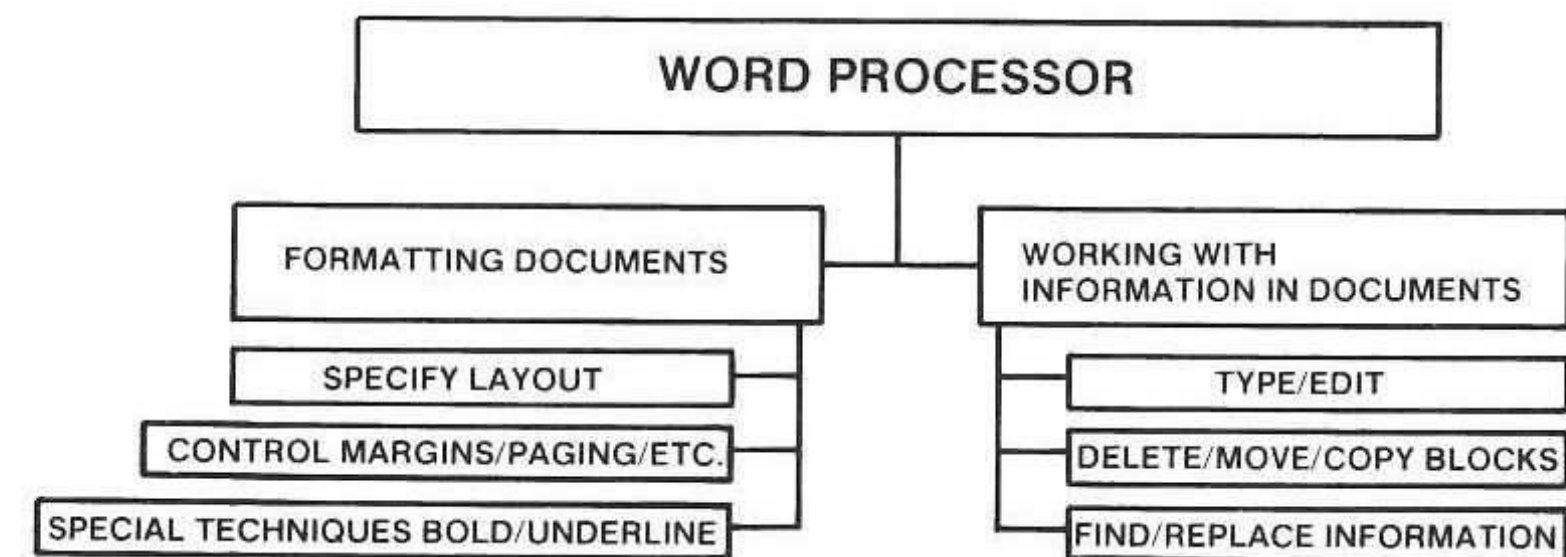


Figure 6-1.
Overview of Word Processor

Activity Flow

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

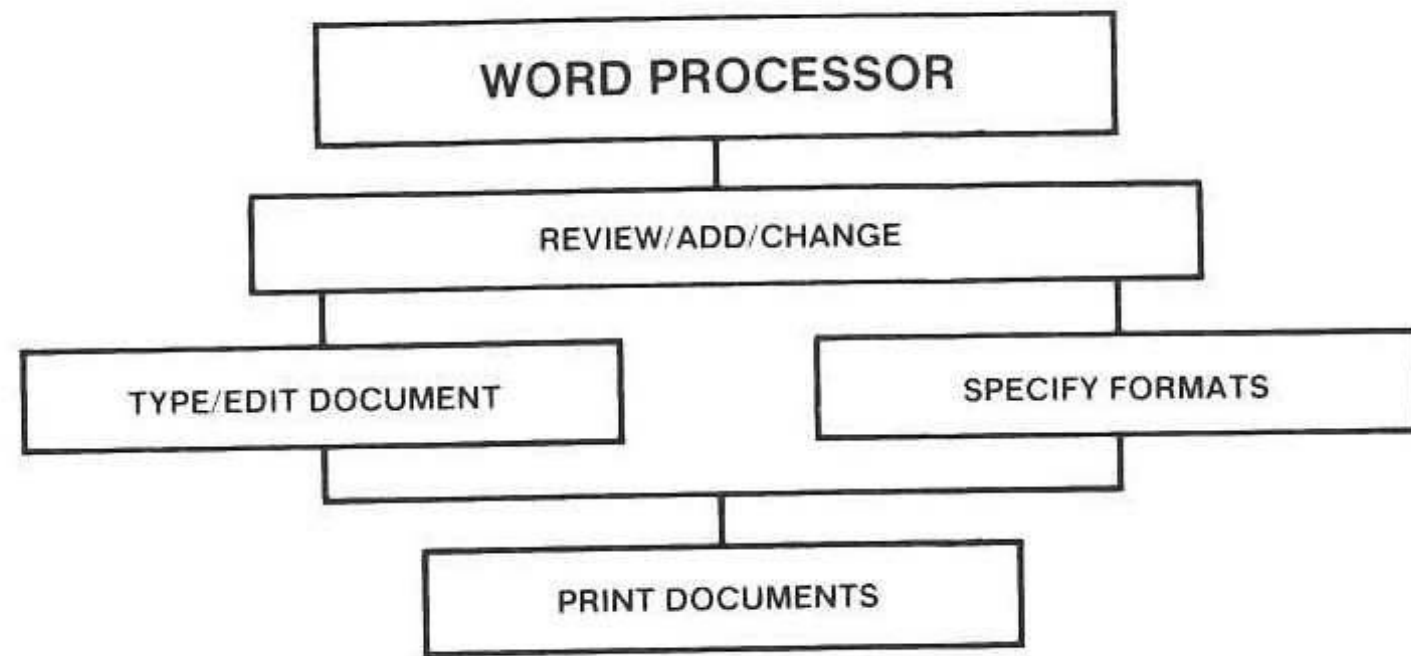


Figure 6-2.
Word Processor Flowchart

File Guidelines

The only Word Processor file guideline is for the length of a Word Processor file. A Word Processor file can be 3584 lines maximum. For single-spaced pages of 54 lines each, that's about 66 pages.

Another way of judging Word Processor file size is by number of characters: a file with 47,000 characters (maximum size for a computer with 128K RAM) is about eighteen pages long. A file with 175,000 characters (maximum size for a computer with 256K RAM) is about 70 pages, however the maximum of 66 pages discussed above will still apply, so the overall maximum is 66 pages for a 256K computer.

Chapter 7

Working With Word Processor Documents

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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

/// E-Z Pieces' 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 /// E-Z Pieces' 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:

1. Specifications for horizontal spacing. /// E-Z Pieces' default values are:
 - Platen width = 8.0 inches
 - Left Margin = 1.0 inches
 - Right Margin = 1.0 inches
 - Characters per inch = 10

NOTE:

See "Controlling Horizontal Spacing" in Chapter 8.

1. Specifications for vertical spacing. /// E-Z Pieces provides these default values:
 - Paper length = 11.0 inches
 - Top margin = 0.0 inches
 - Bottom margin = 2.0 inches
 - Lines per inch = 6

NOTE:

See "Controlling Vertical Spacing" Chapter 8.

3. Whether lines should be
 - Unjustified—that is, even left and uneven right margin
 - Justified—that is, both margins even
 - Centered

/// E-Z Pieces' default is that you'll want your lines unjustified.

NOTE:

See "Controlling Layout" Chapter 8.

4. Spacing
 - Single spacing
 - Double spacing
 - Triple spacing

/// E-Z Pieces' default is that you'll want single spacing.

NOTE:

See "Controlling Vertical Spacing" in Chapter 8.

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 of 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.

You may never use any special layout techniques or section headers. You may never even underline or use boldface. What you should be convinced of, however, is /// E-Z Pieces' flexibility. You can make up your mind about specifications or change your mind at any time, and /// E-Z Pieces will respond.

/// E-Z Pieces Tips

You can make a Word Processor file containing nothing but specifications you use frequently. Then, to start a new document, simply get this file and start putting information into it. Be sure to change its name before you save it, though.

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". File names can be up to 15 characters long. They must start with a letter, and they can contain upper- or lowercase letters, numbers, periods, and spaces. Then press "RETURN".

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

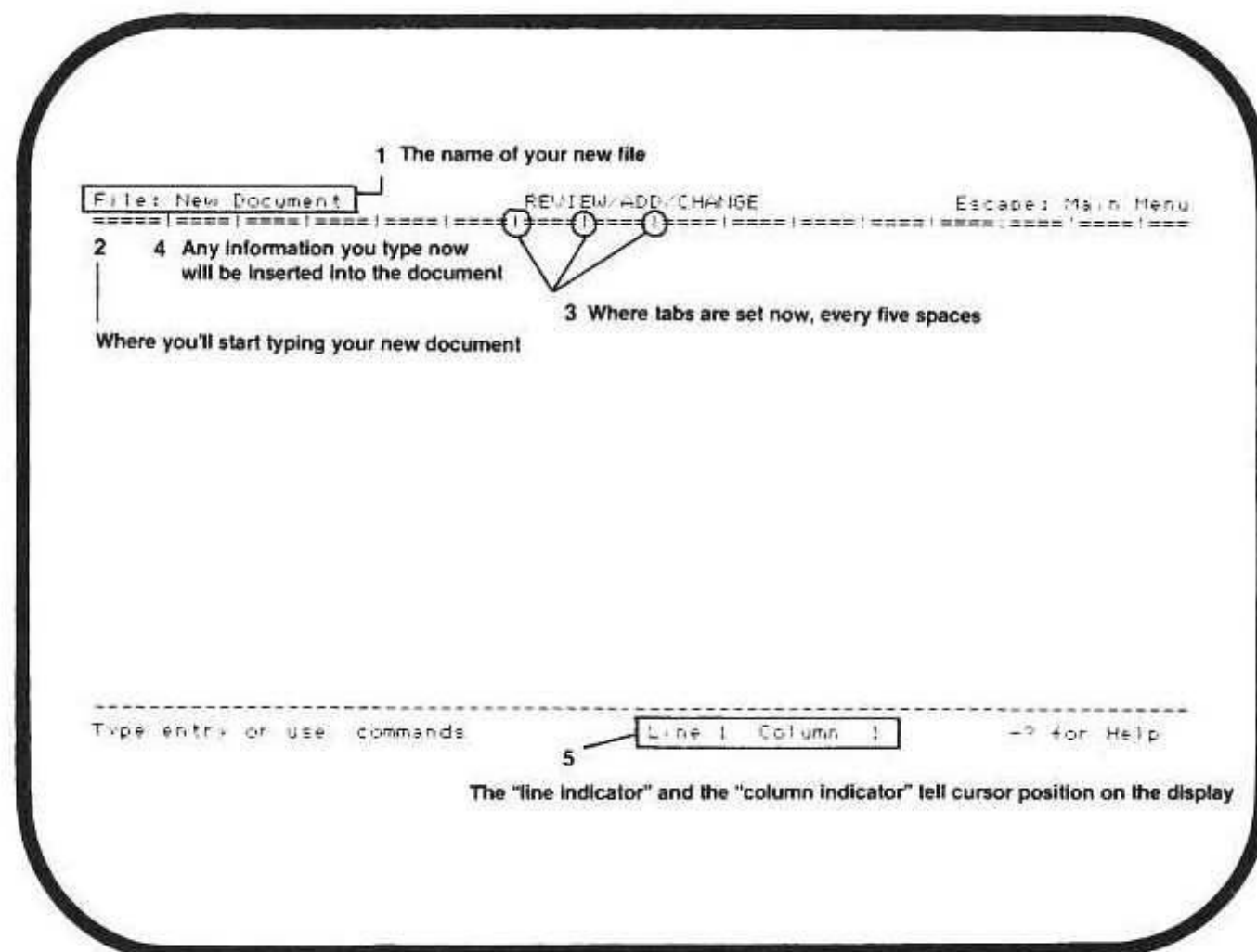


Figure 7-1.
New Word Processor Document

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)

/// E-Z Pieces' Word Processor can use ASCII text files on SOS-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 manual of the system that originated your file to see if it creates ASCII text files.

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

1. If you choose "From a text (ASCII) file", /// E-Z Pieces 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". File names can be up to 15 characters long. They must start with a letter, and they can contain upper- or lowercase letters, numbers, periods, and spaces. Then press "RETURN".

NOTE:

Pathnames are discussed briefly in Chapter 1 of this manual and in the Apple /// Owner's Manual.

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, the lines of information go into the document as if they were wrapped around a pole. This feature is called **word wraparound**.

Lines of information in a paragraph are actually long spirals of characters. /// E-Z Pieces formats each line for you according to the margins you have set so that words do not break at the end of lines. If you come to the end of a line in the middle of a work, /// E-Z Pieces brings the whole word to the beginning of the next line.

NOTES:

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

See “Using Sticky Spaces” in Chapter 8 for information on how to use sticky spaces.

Using “RETURN”

Each time you press “RETURN”, you get a space one line long. 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.

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 to the right of it moves to the right. Figure 7-2 shows an example of inserting.

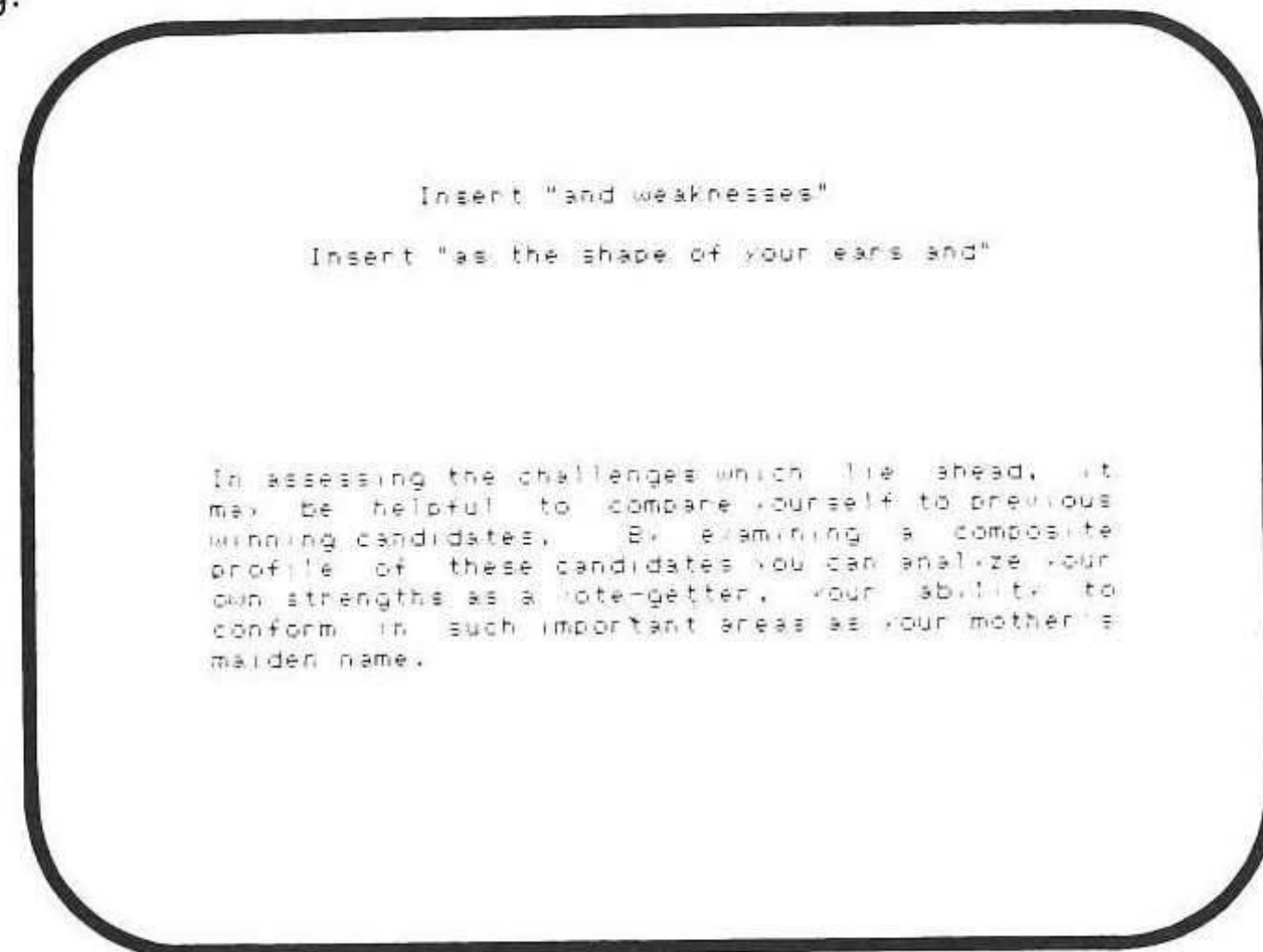


Figure 7-2.
Inserting

1. Get the insert, blinking bar cursor if you don't have it: press “OPEN-APPLE”-“E”.
2. Move the cursor to the “a” in “as a vote-getter”.
3. Type “and weaknesses” and press SPACE once.
4. Move the cursor to the “y” in “your mother’s maiden name”.
5. Type “as the shape of your ears and” and press SPACE once.

Striking Over Existing Information

Use the overstrike cursor, which is the blinking square 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.

Figure 7-3 shows an example of striking over existing information.

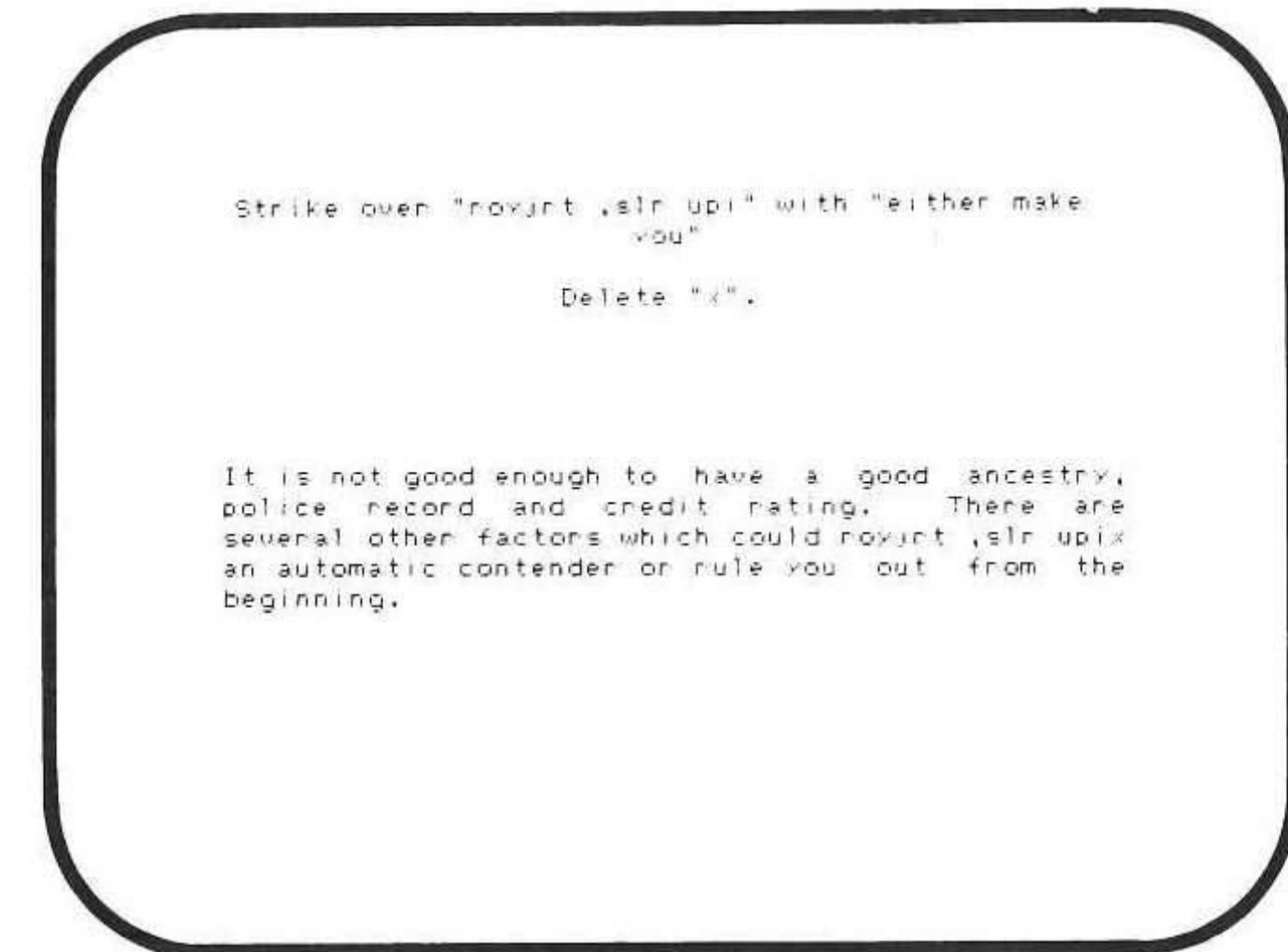


Figure 7-3.
Striking Over

1. If you don't have it, get the overstrike, blinking square, cursor: press “OPEN-APPLE”-“E”.
2. Move the cursor to the “r” in “royjrt ,slr upi”.
3. Type “either make you”.
4. Move the cursor to the space between “x” and “an”.
5. Press DELETE once.

Editing Information

When you're editing information, use

- DELETE to erase one character to the left of the cursor.
- CONTROL and Y to delete information to the end of the line the cursor is on, up to a carriage return, if there is one. The Word Processor closes the space created.

- The Word Processor's cursor movement keystrokes to move the cursor past characters without changing them.
- "OPEN-APPLE"-E" to change between the insert and the overstrike cursors.

/// E-Z Pieces Tips

Zoom in to see all the existing cursor returns. They're noted as "backslashes" when you're zoomed in to the text. Press "OPEN-APPLE"-Z" to zoom in. You can be zoomed in or out when you insert new information or strike over existing information.

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.

To move the cursor within a Word Processor document:

Move the cursor to the right or to the left from character to character	RIGHT-ARROW, LEFT-ARROW LEFT-ARROW 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 the line above it.
Move the cursor up to down from line to line	UP-ARROW, DOWN-ARROW
Move the cursor to the right or left to the space before the next or preceding word or group of characters	"OPEN-APPLE"-RIGHT-ARROW or LEFT-ARROW
Move the cursor to the next tab stop	"TAB"
Move the cursor to the previous tab stop	"OPEN-APPLE"-TAB"

Move the cursor through a document	"OPEN-APPLE"-I" through "9"
Move the cursor to the bottom of this screen and then to the bottom of the next screenful of information (20 lines)	"OPEN-APPLE"-DOWN-ARROW"
Move the cursor to the top of this screen and then to the top of the previous screenful of information (20 lines)	"OPEN-APPLE"-UP-ARROW"

Viewing Your Document

For the most part, /// E-Z Pieces 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 /// E-Z Pieces 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 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.

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 upper- or lowercase characters. For example, if you want to find the word “the”, /// E-Z Pieces will also find “THE” and “The”.

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

Deleting Information

You can delete information in two ways: you can use the DELETE key (BACKSLASH key on older Apple /// computers) 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 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 “OPEN-APPLE”-“D”.
3. Move the cursor to the beginning or end of the information you want to delete. /// E-Z Pieces highlights this information as you go. deleted information was. (If you change your mind about deleting, press ESCAPE instead).

/// E-Z Pieces Tips

Follow this procedure to delete screenfuls of information at a time: press “OPEN-APPLE”-“D”. Then press “OPEN-APPLE”-“UP-ARROW” 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 “OPEN-APPLE”-“1”. Then press “OPEN-APPLE”-“D” and “OPEN-APPLE”-“9”. Then press “RETURN”.

To delete printer options, zoom in, move the cursor to the line you want to delete, press “OPEN-APPLE”-“D”, and then press “RETURN”.

To delete a pagebreak line, put the cursor anywhere on the line, press “OPEN-APPLE”-“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.

Replacing Existing Information

/// E-Z Pieces 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.

/// E-Z Pieces keeps a record of the last text you asked it to replace or find (“OPEN-APPLE”-“F”). When you ask to replace text the next time, /// E-Z Pieces supplies the last replaced or found text as its best guess 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 /// E-Z Pieces to replace “mountains” with “molehills”	“mountains” will be the best guess for the next replace or find.
--	--

If the text cannot be found, /// E-Z Pieces responds with “Not found, press Space Bar to continue”. That message means the text isn’t in that part of the file you asked /// E-Z Pieces to search, or in the whole file if you started at the beginning.

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 ///E-Z Pieces to start searching. (Remember you can easily get to the beginning of a document with "OPEN-APPLE"-“1”.)
2. Press "OPEN-APPLE"-“R” (for Replace). ///E-Z Pieces supplies the last found or replaced text if you have used find or replace in the session.
3. Type the replaced text. Then press "RETURN".
4. Type the new text. Then press "RETURN".
5. Choose "One at a time".
6. ///E-Z Pieces highlights the first occurrence of the old information. Choose "No" or "Yes", depending on whether or not you want to replace it.
7. ///E-Z Pieces 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 ESCAPE.

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 ///E-Z Pieces to start searching.
2. Press "OPEN-APPLE"-“R” (for Replace).
3. Type the text you want to replace. Then press "RETURN".
4. Type the new text. Then press "RETURN".
5. Choose "All".

///E-Z Pieces 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".

That means

"there"

Becomes

"thosere"

To make sure ///E-Z Pieces replaces only what you want it to, you should make the text to be replaced unique. You could ask ///E-Z Pieces to replace " the " with " those ", for example. Then you could eliminate the replacement in "there".

///E-Z Pieces 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 "OPEN-APPLE"-“M” (for Move).
3. Choose "Within document". Then ///E-Z Pieces presents the text in zoomed-in format, so you can see all the cursor 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.

///E-Z Pieces Tips

If you move part of a paragraph, ///E-Z Pieces closes up the space where the information was. Try to move only the information you want, with or without surroundings spaces, blank lines, or carriage returns. You may have to adjust spacing, however, after you move the information. That's easy to do—delete spaces with DELETE. And add spaces with the insert cursor and "SPACE".

The copy feature is similar to the move feature except that copy lets you leave the text in its original place, too.

Figure 7-4 shows a paragraph where text will be moved.

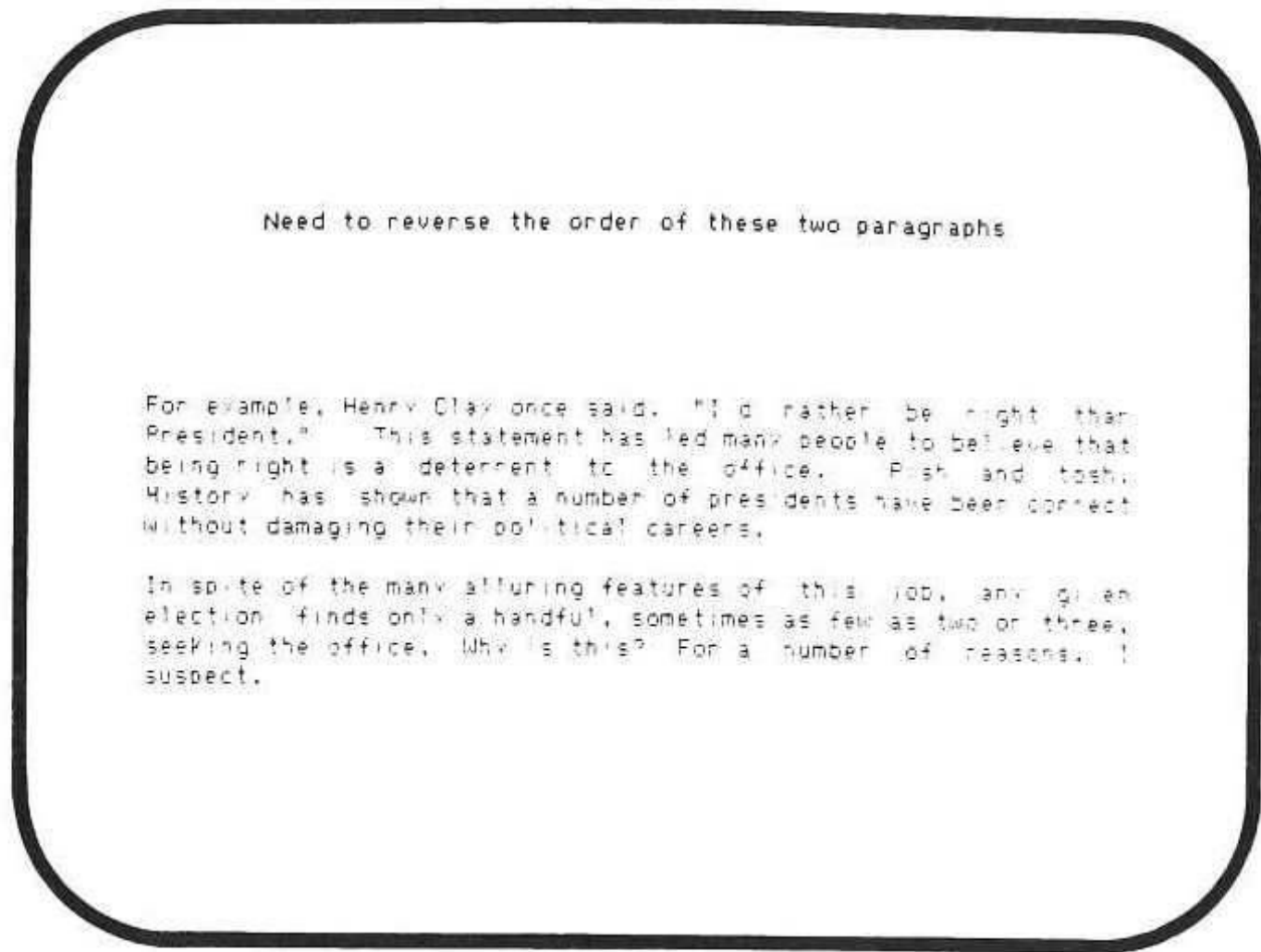


Figure 7-4.
Moving Paragraphs

1. Move the cursor to the "I" in "In spite of".
2. Press "OPEN-APPLE"- "M".
3. Choose "Within document".
4. Move the cursor to the blank line after the paragraph. Press "RETURN".
5. Move the cursor to the "F" in "For example,".
6. Press "RETURN".
7. Adjust spacing, if necessary.

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 move.
2. Press "OPEN-APPLE"—"C" (for Copy).

3. Choose "Within document". Then /// E-Z Pieces presents the text in zoomed-in format, so you can see all the cursor 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.

/// E-Z Pieces Tips

The Word Processor's move feature is similar to the copy feature, except that when you move information, you do not leave a copy in the original place.

FINDING INFORMATION

/// E-Z Pieces finds three types of information in your document for you:

- Text—words or phrases, usually—that you provide as comparison information
- A specific page
- A marker, which identifies a certain spot in the document

This section provides information about the first two.

NOTE:

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

Finding Text

When you supply text for /// E-Z Pieces to find, /// E-Z Pieces 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.

To find specific text:

1. Move the cursor to wherever you want /// E-Z Pieces to start searching. (Remember you can easily get to the beginning of a document with "OPEN-APPLE"—"1".)
2. Press "OPEN-APPLE"—"F" (for Find).

3. Choose "Text" to indicate you want to find specific text. If you have already used find or replace, /// E-Z Pieces supplies the last found or replaced text.
4. Type the text and press "RETURN". /// E-Z Pieces moves the cursor to the text and highlights it.
5. Choose "No" or "Yes", depending on whether you want /// E-Z Pieces to find the next occurrence of the text.

Spaces at the beginning or end of the comparison information are part of the text.

/// E-Z Pieces keeps a record of the last text you asked it to find or replace (OPEN-APPLE-"R"). When you ask to find text the next time, /// E-Z Pieces supplies the last found or replaced text as its best guess for what you want this time. Press "RETURN" if you want to find the next occurrence of this same information. Or type new text and press "RETURN" if you want to find different information.

For example,

If you last asked /// E-Z Pieces to replace "29 giraffes" with "30 elephants"

"29 giraffes" will be the best guess for the next find or replace.

/// E-Z Pieces does not search through printer options for the information you want, because printer options are not considered text.

If the text cannot be found, /// E-Z Pieces responds with "Not found, press Space Bar to continue".

Some Examples

Figure 7-6 shows text with several items of information found.

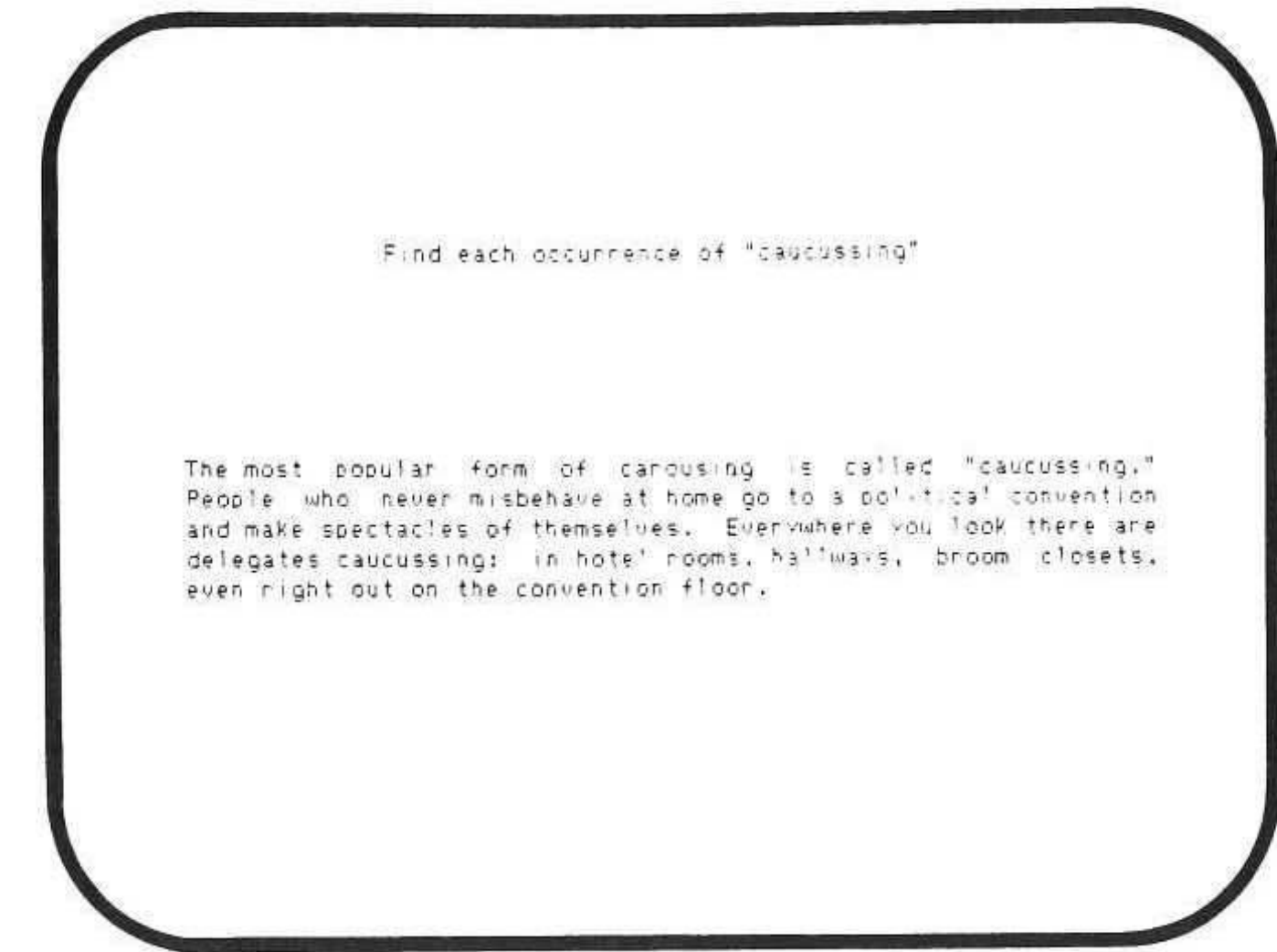


Figure 7-6.
Finding Information

Here's how to find the occurrences of "caucussing":

1. Press "OPEN-APPLE"- "F".
2. Choose "Text".
3. Type "caucussing" and press "RETURN". The cursor moves to the first occurrence of "caucussing".
4. Choose "Yes" if you want to find the next occurrence of "caucussing". "Caucussing" will be /// E-Z Pieces best guess for your next find or replace.

Finding a Specific Page

To find a specific page, follow these steps:

1. Press "OPEN-APPLE"- "F".
2. Choose "Page".
3. Type the page number and press "RETURN".

/// E-Z Pieces Tips

/// E-Z Pieces starts searching for pages from the beginning of the document. The cursor moves to the first character on the page you request.

To get to any page past 1, you must have already calculated page numbers (OPEN-APPLE-"K") or printed the document (in which case /// E-Z Pieces automatically paginates the document).

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 "OPEN-APPLE"- "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.
5. Press ESCAPE.

/// E-Z Pieces Tips

The marker number can be any number between 1 and 254. That's probably enough!

Finding a Marker

Once you identify the spot by setting a marker, it's easy to jump to that spot by asking /// E-Z Pieces to find the marker.

To find a marker:

1. Press "OPEN-APPLE"- "F".
2. Choose "Marker".
3. Type the number of the marker ("1", "2", or "3", for example), and press "RETURN".

/// E-Z Pieces Tips

/// E-Z Pieces starts searching for markers at the beginning of the document.

Find Options for Printer

Finding printer options is much like finding other information in /// E-Z Pieces. After pressing "OPEN-APPLE"- "F", choose "O" and the list of printer options will appear. Select the option you wish to find and press "RETURN". /// E-Z Pieces will find the next occurrence of that option.

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.

Setting and Clearing Tabs

Here's how to set and clear tabs.

1. Press "OPEN-APPLE"- "T". The cursor moves to the double line at the top of the screen, where tabs are noted with a vertical line.
2. Use LEFT-ARROW and RIGHT-ARROW to move the cursor to wherever you want to set or clear a tab. Type "S" to set a tab or "C" to clear a tab in that spot.
Or type "R" to remove all existing tabs.
3. Press ESCAPE when you are finished setting or clearing tabs.

/// E-Z Pieces Tips

Watch the column indicator as you are setting tabs.

Moving the Cursor to Tabs

To move the cursor to tabs, just press "TAB". Use "OPEN-APPLE"- "TAB" to move the cursor to the previous tab.

/// E-Z Pieces Tips

Set tabs for formatting columns within text.

Changing the Name of your File

Here's how to change the name of your file:

1. Press "OPEN-APPLE"- "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 upper- and lower-case letters, numbers, spaces, and periods. Then press "RETURN".

/// E-Z Pieces Tips

/// E-Z Pieces 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.

Chapter 8

Formatting a Word Processor Document

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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 handling 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

Take a look at several sample documents to get an idea of some of /// E-Z Pieces' features for formatting Word Processor documents. The file containing the sample document in Figure 8-1 is called "Tower of Mammon." The file is on the sample files disk. You can display or print it if you want. The settings of certain printing format options are as follows

Platen width = 8 inches
Left margin = 1 inch
Right margin = 1 inch
Characters per inch = 10
Right margin is unjustified.
Page length = 11 inches
Top margin = 1 inch
Bottom margin = 2 inches
Lines per inch = 6
Single spacing
Superscript

Subject: Tilt in the Tower of Mammon
To: Nicholas Beelzebub, Commissioner, Internal Works
From: Pontius Pilate, 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 approximately 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.

Figure 8-1.
Tower of Mammon Document

Figure 8-2. shows a page of a more formal document with several special formatting techniques. The file containing this document is "Qualifications" on the sample files disk. The settings of certain printing format options are as follows:

- Platen width = 8 inches
- Left margin = .5 inch
- Right margin = 1 inch
- Characters per inch = 12
- Right margin is justified.
- Page length = 11 inches
- Top margin = 1 inch
- Bottom margin = 1 inch
- Lines per inch = 6
- Single spacing
- Bullets
- Page header
- Page footer with page number



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 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.

Figure 8-2.
Qualifications Document

Using the Word Processor's Printer Options

This section defines the Word Processor's printer options and tells how to change them. It also discusses /// E-Z Pieces' best guesses 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 the point where you change the spacing to double or triple. Margins stay the same until the 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.

/// E-Z Pieces' printer options give you a great deal of control over printing your documents.

Zooming In on Printer Options

Any time you want to see the text marked with printer options, zoom in. To do so, press "OPEN-APPLE"-**Z**.

When you press "OPEN-APPLE"-**Z** while looking at the Qualifications Document, for example, the display looks like Figure 8-3.

Left margin is 1.0 inches

Information will be unjustified.

The beginning of a group of information that shouldn't be split by the end of the page

Text that follows should be indented, for bulleted items.

Carriage returns are marked by backslashes

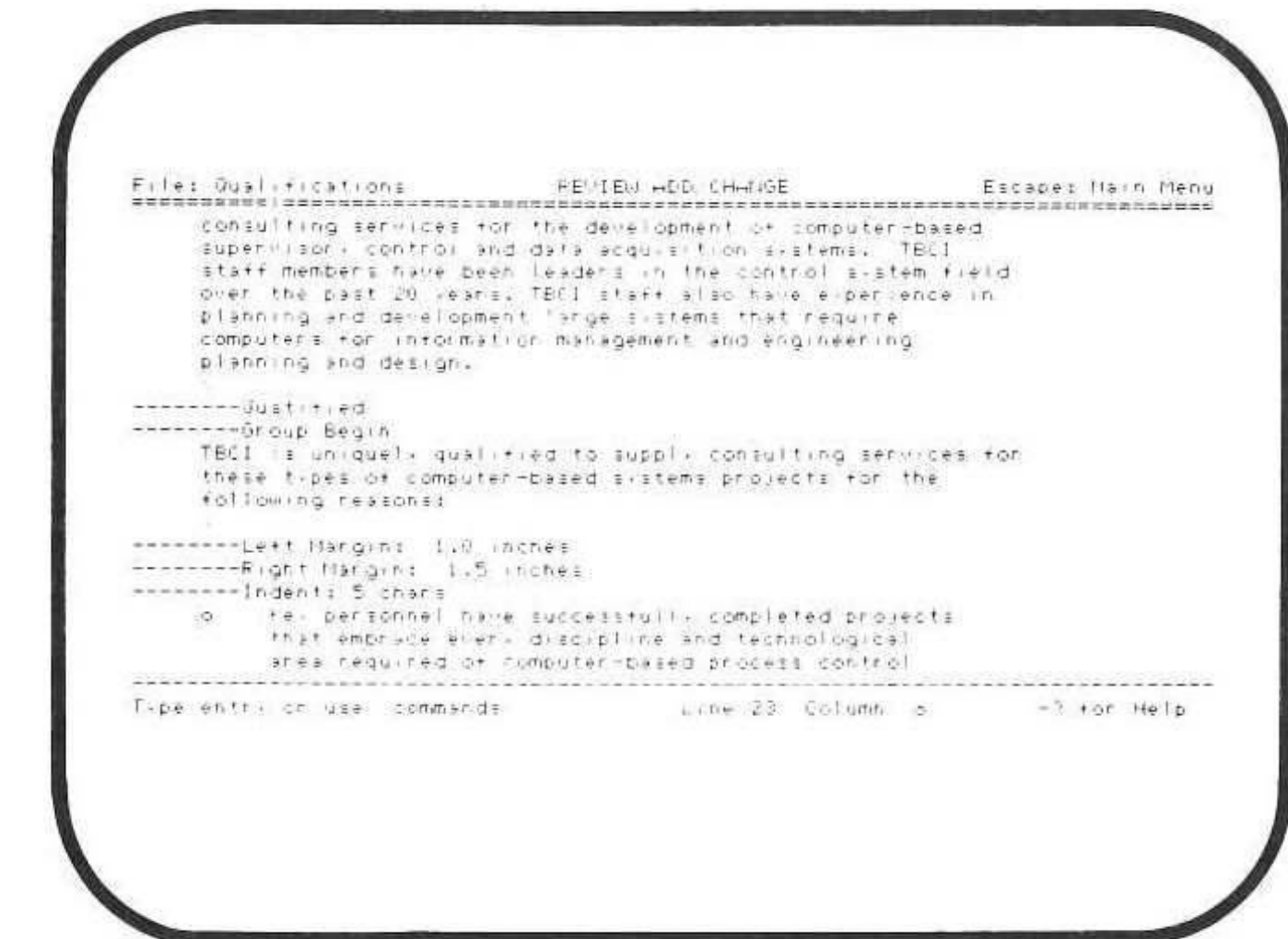


Figure 8-3.
Zoomed In "Qualifications"

Use the arrow keys to move the cursor through the document, so you can see the printer options. The only ones you see, though, are the ones added or changed from /// E-Z Pieces' best guesses. You can see /// E-Z Pieces' best guesses by using the "OPEN-APPLE"-**O** feature, described next.

/// E-Z Pieces Tips

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 "OPEN-APPLE"-**"1"** to get to the top of the document.
2. Press "OPEN-APPLE"-**"O"** (for Options).

/// E-Z Pieces 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.

List of printer options
Code that stands for the option
Options are grouped by function.

Main printer options in effect right now. You can always find out the current values for the main printer options by checking this display.

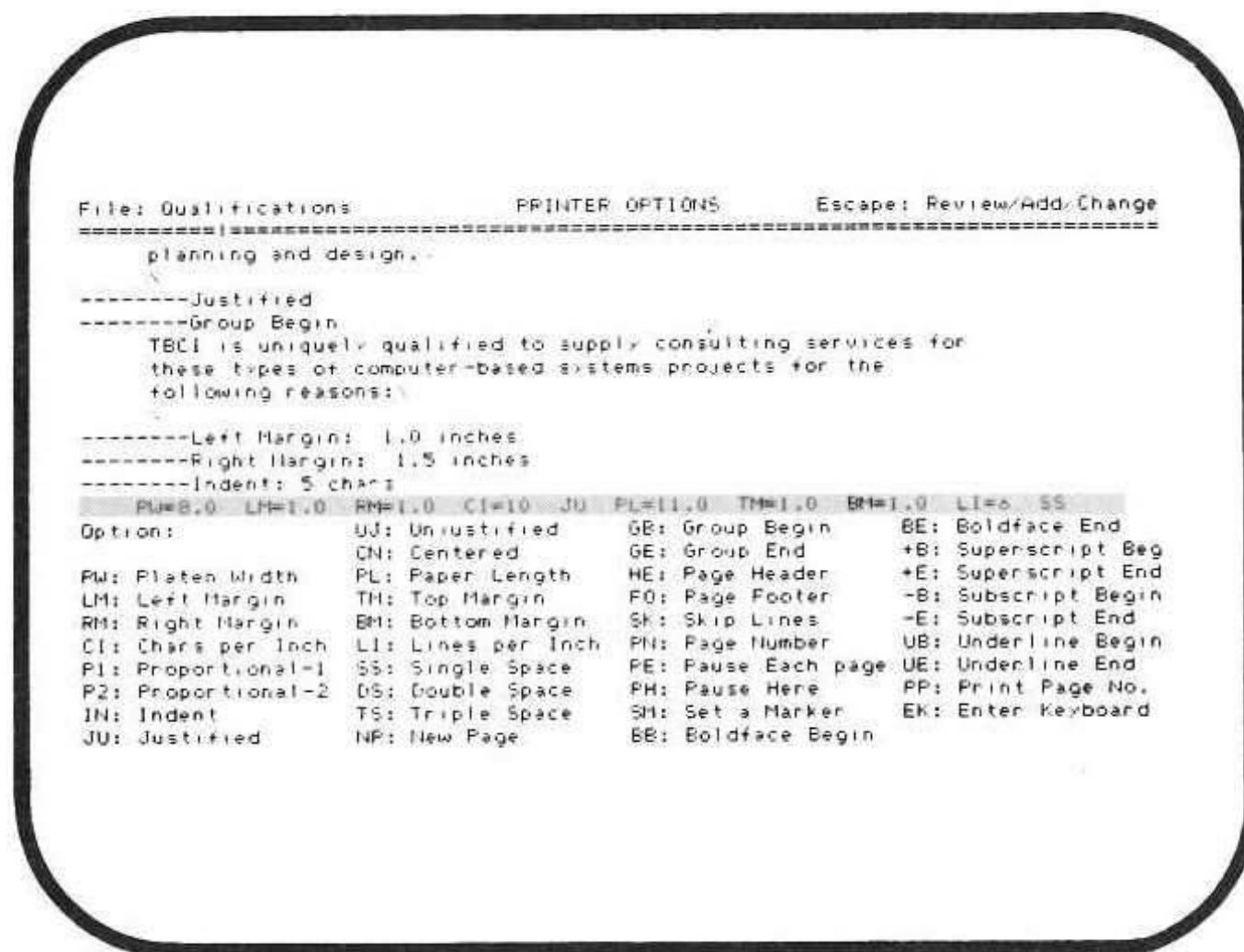


Figure 8-4.
Printer Options

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 /// E-Z Pieces 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 "ESCAPE" after you finish.

While you are working with printer options, /// E-Z Pieces displays the text in zoomed-in format, so you can see the printer options as you add or change them.

/// E-Z Pieces' Best Guesses for Main Printer Options

The following are /// E-Z Pieces' best guesses for the main printer options. These printer options and their best guesses 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.

The Printer Option:

Platen width (PW)

Controls

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 printer's platen width you

specify in "Other Activities" Menu option "Specify information about your printer(s)".

Best guess = 8.0 inches

The maximum you can use is 13.2 inches.

Left margin (LM)

The width of the left margin in inches

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

Best guess = 1.0 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, that is, 1.5 inches, 1.6 inches.

Best guess = 1.0 inches

The maximum you can use is 9.0 inches.

Table 8-1.

Printer Options for Horizontal Spacing

Horizontal spacing is also controlled by print density.

NOTE:

For more information on print density, see "Controlling Print Density" in this chapter.

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
=	<u>Text Width</u>		=	<u>5.5 inches</u>

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 may also choose to print proportionally, again depending on the capability of your printer. Then narrow and wide letters take up narrow and wide spaces. I'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!

Printer	Number of Proportional Spacing Types
Apple Dot Matrix	2
Apple Daisy Wheel	1
Other Daisy Wheel	Varies
Other Dot Matrix	Varies
Silentype	0

Table 8-2.
Printers and Proportional Spacing Types

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 /// E-Z Pieces' best guess, 10 characters per inch, to a new one for the whole document.
2. Press "OPEN-APPLE"- "O".
3. Type "P1" or "P2" and "RETURN" if you are choosing a proportional printing style, or type "C1" 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 "ESCAPE".

if you choose a print density your printer doesn't have, /// E-Z Pieces uses the next higher one. When in doubt, try it out!

/// E-Z Pieces Tips

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.

Occasionally you may decide to change the print density within a document. For example, you may print a letterhead at 10 characters per inch and then print the text of the letter at 12 characters per inch. P1 and P2 don't work well with tabular information.

NOTE:
See "Viewing Your Document."

Controlling Vertical Spacing

The eight printer options that control vertical spacing are listed in Table 8-4.

The Printer Option	Controls
Paper length (PL)	The vertical measurement of the paper you are using, in inches. Best guess = 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.



Bottom margin (BM)

Best guess = 0.0 inches.
This best guess accommodates /// E-Z Pieces users who have sheet feed printers (printers with no tractor). If you have one of these printers, you should leave the best guess at 0 and position the paper exactly where you want the first line to be.

/// E-Z Pieces users with tractor feed printers will probably want to change this value.

The maximum you can use is 9.0 inches.

The length in inches from the last line of printing to the bottom of the paper

Best guess = 2.0 inches

The maximum you can use is 9.0 inches.

Single, double and triple spacing (SS, DS, and 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.

Best guess is single spacing.

Displayed lines are single spaced. Double and triple spacing takes effect when you print.

Lines per inch (LI)

How many lines will be printed per vertical inch on the page.

Best guess = 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

Table 8-4.
Printer Options for Vertical Spacing

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

/// E-Z Pieces 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 hanging paragraphs 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 bulleted items have an "o" or another letter or a number in the left margin, and succeeding lines are indented. Here are some examples of bulleted items (and again, not necessarily of good English):

- Being moribund on arrival at the hospital, the doctor could do nothing for the patient.
- His pelvis was fractured by being thrown from an automobile.
- There were four deaths, only one of which lived more than two months.

To create hanging paragraphs and bulleted items with /// E-Z Pieces:

1. Press "OPEN-APPLE"- "O".
2. 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.
3. Type "IN" (for INdent) and press "RETURN".
4. Type a number to specify the number of spaces you want succeeding lines to be indented. Then press "RETURN".
5. Press "ESCAPE".

Now begin typing the hanging paragraphs and bulleted items. When you type the bulleted items, type the "o" (or "*" or "-") at the left margin. Then space over (or tab) to where you want to start typing. Beginning with the second line, lines will be indented the number of spaces you request in step 4. Figure 8-5 shows a display with indenting commands and text.

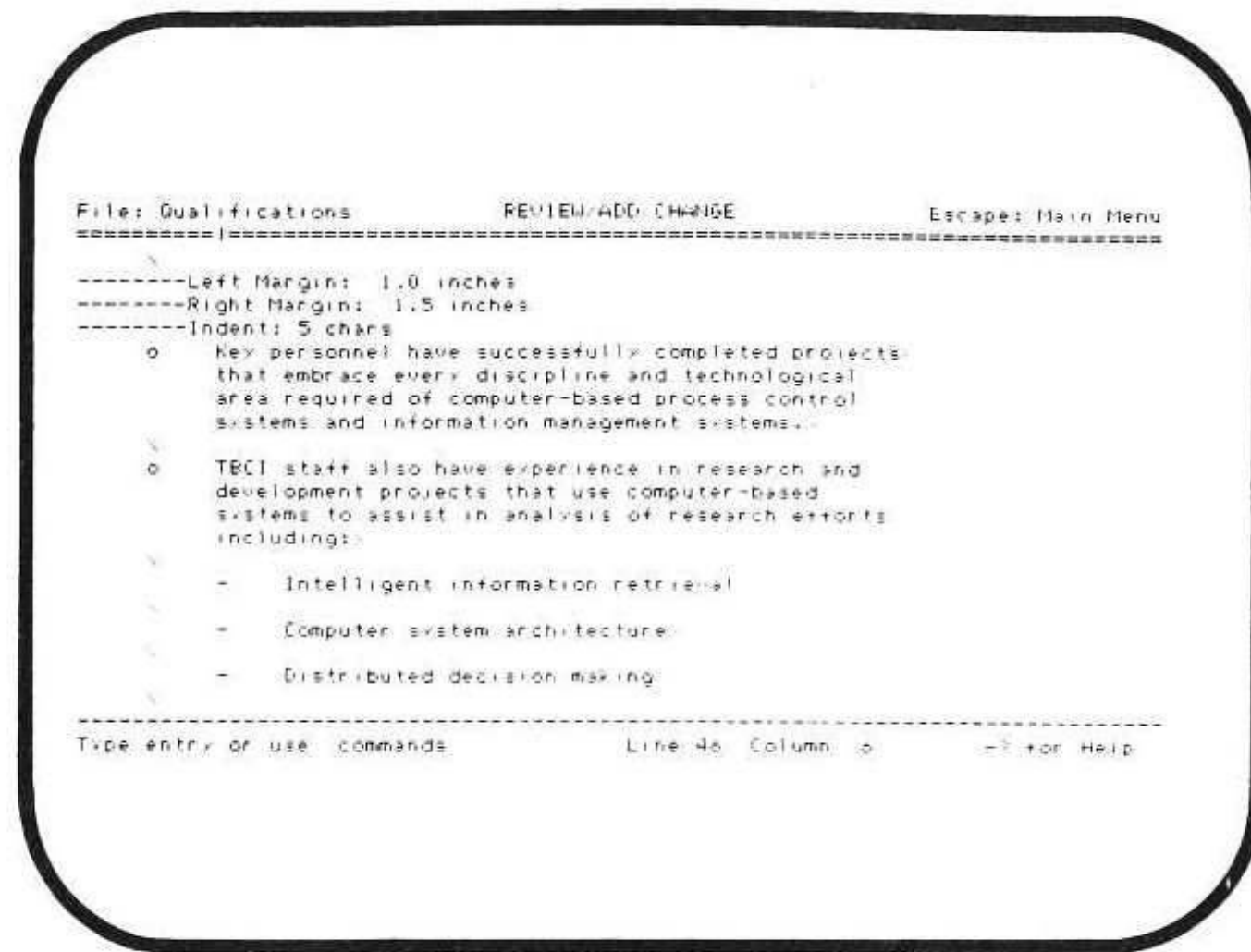


Figure 8-5.
Indented Text

After you finish typing the hanging paragraphs or bulleted items, follow these steps:

1. Press "OPEN-APPLE"-<O" again.
2. Type "IN" and press "RETURN".
3. Type "0" and press "RETURN". You are un-indenting by changing the value of "INdent" to 0.
4. Reset margins you changed previously.
5. Press "ESCAPE".

/// E-Z Pieces Tips

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).

Justifying, Unjustifying, and Centering

Text is either justified, unjustified, or centered. Figure 8-6 illustrates all three.

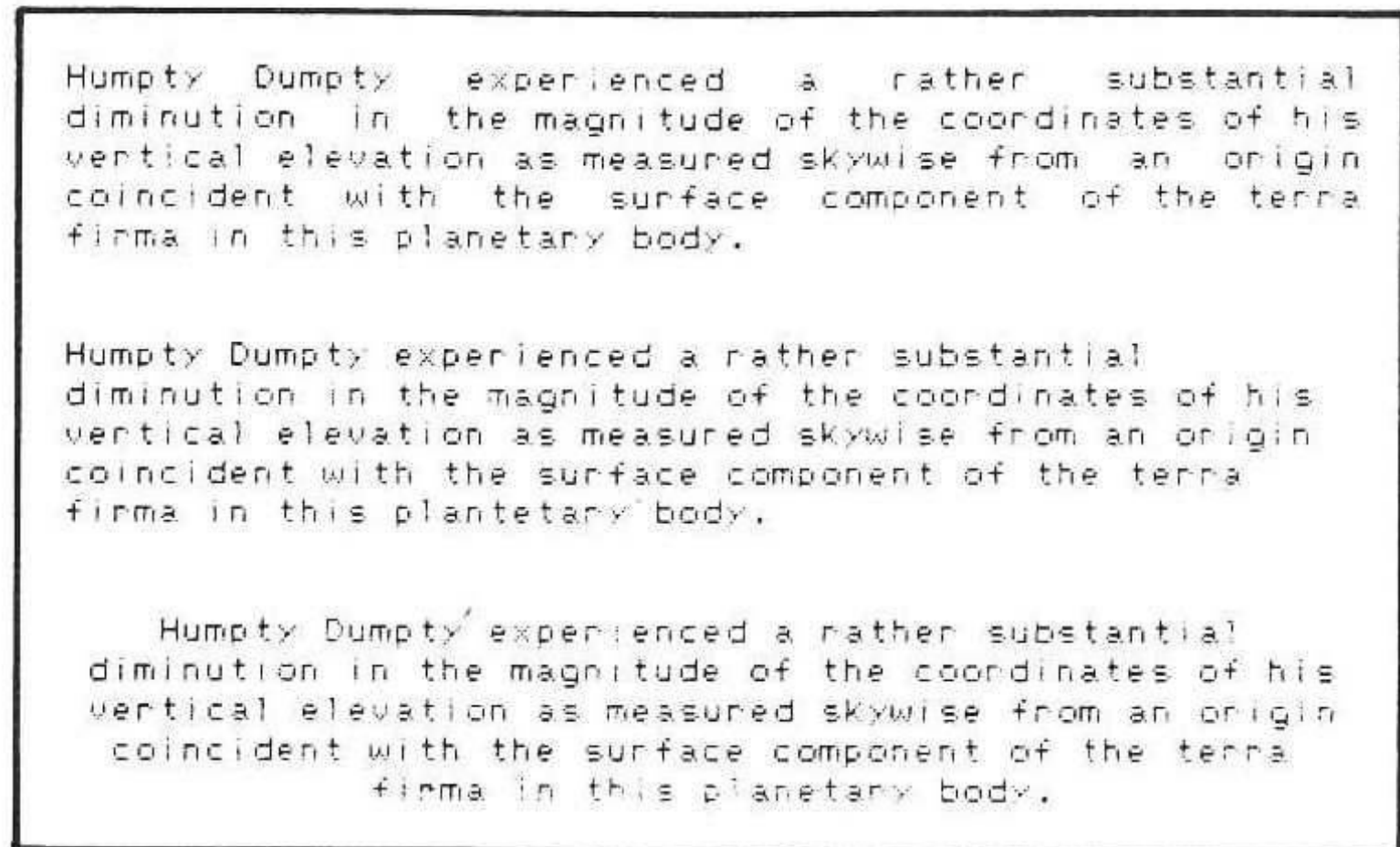


Figure 8-6.
Justified, Unjustified, and Centered Text

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 "OPEN-APPLE"-<O".
3. Type the option you want: "UJ" for unjustified, "JU" for justified, or "CN" for centered. Then press "RETURN".
4. Press "ESCAPE".

Using Page Headers and Footers

You can put a one-line page header at the top of each page. /// E-Z Pieces 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. /// E-Z Pieces prints the page footer on the last printing line before the bottom margin. It skips two lines between the last line of the text and the page footer.

Figure 8-7 shows several examples of page headers and footers.

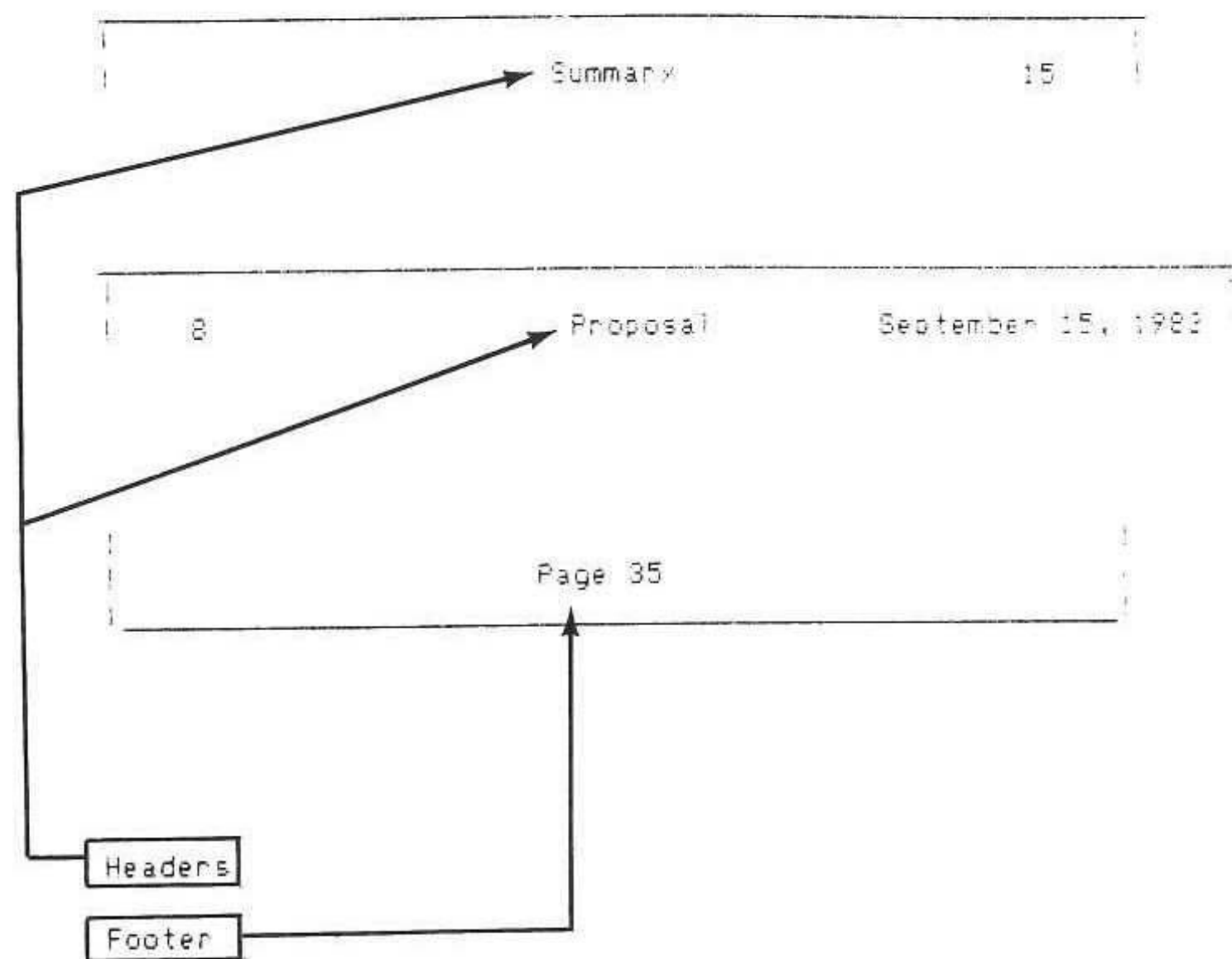


Figure 8-7.
Headers and Footers

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 "OPEN-APPLE"-**O**.
3. Type "HE" for a header or "FO" for a footer and press "RETURN".
4. Press "ESCAPE".
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.

/// E-Z Pieces Tips

*Before you set up page headers or footers, calculate page numbers with "OPEN-APPLE"-**K**.*

Use the Print Page No. (PP) printer option to get page numbers on headers or footers.

Page header and footer printer options display in the zoomed-out and zoomed-in text, but they don't print.

NOTE:

See "Printing Page Numbers" for information on how to get page numbers into headers and footers.

Using Special Printing Techniques

Special printing techniques let you use

- Boldface
- Underlining
- Subscripts
- Superscripts
- Sticky Spaces

Using Boldface and Underlining

To specify boldface and underlining:

1. Put the cursor on the first character to be boldfaced or underlined.
2. Press "CONTROL"-**B** or "CONTROL"-**L**.

/// E-Z Pieces inserts a caret ("^") right before the first boldfaced or underlined character. All succeeding characters are boldfaced or underlined until you either stop the boldfacing or underlining or the paragraph ends.

To stop the boldfacing and underlining:

1. Put the cursor on the character or space just past those to be boldfaced or underlined.
2. Press "CONTROL"-**B** or "CONTROL"-**L**.

/// E-Z Pieces 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”, “BoldfaceEnd”, “Underline Begin”, or “Underline End” highlights at the bottom of the screen.

/// E-Z Pieces Tips

To shortcut the printer options when you want to underline or boldface text, use these special commands:

- Use *CONTROL* and “B” to begin and end boldface.
- Use *CONTROL* and “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 display the carets, also.

Using Superscripts and Subscripts

To specify text for superscripts and subscripts:

1. Put the cursor on the first character to the superscripted or subscripted.
2. Press “OPEN-APPLE”-“O”.
3. Type “+B” for Superscript Begin or “-B” for Subscript Begin. Then press “RETURN”.
4. Press “ESCAPE”.

/// E-Z Pieces 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 “OPEN-APPLE”-“O”.
3. Type “+E” for Superscript End or “-E” for Subscript End. Then press “RETURN”.
4. Press “ESCAPE”.

/// E-Z Pieces 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” highlights 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 groups of characters that may not 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 “OPEN-APPLE”-“SPACE” bar. /// E-Z Pieces inserts a caret, which signifies the sticky space.

Controlling Paging and Page Numbers

To control paging and page numbers,

- Calculate page numbers
- Specify a new page
- Specify groups of information
- Number pages
- Print page numbers

Calculating Page Numbers

When ///E-Z Pieces calculates page numbers, it breaks pages appropriately and assigns page numbers to the pages. ///E-Z Pieces follows several rules when it calculates page numbers:

- ///E-Z Pieces 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.
- ///E-Z Pieces won't overrule page breaks you specify.
- If you specify that a group of information shouldn't be broken, ///E-Z Pieces won't break it.

If you don't care what happens to the page breaks, go ahead and print the document. ///E-Z Pieces 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 perforated lines across the display.

If you do care what happens to page breaks, follow these steps:

1. After you have typed the document and before you print it, press "OPEN-APPLE"-“K” (for Calculate).
2. Choose "Beginning" if you want to calculate page numbers from the beginning of the document. Choose "This page" if you want to calculate from the page the cursor is on. (If you haven't calculated yet, choose "Beginning".)
3. Choose the printer you want to calculate for.

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 "OPEN-APPLE"-“O”.

3. Type "NP" and press "RETURN".
4. Press "ESCAPE".

///E-Z Pieces Tips

Ordinarily you won't use the new page feature, but you'll use the other paging features (///E-Z Pieces' rules and grouped information) and the "OPEN-APPLE"-“L” feature to control paging. The primary use of the New Page feature is to allow you to make sure titles go at the top of a new page.

///E-Z Pieces won't overrule these 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, ///E-Z Pieces 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 ///E-Z Pieces 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

To do so, follow these steps:

1. Put the cursor on the first line of the group.
2. Press "OPEN-APPLE"-“O”.
3. Type "GB" and press "RETURN".
4. Put the cursor on the line following the last line of the group.

5. Press "OPEN-APPLE"-“O”.
6. Type "GE" and press "RETURN".

Numbering Pages

You can control page numbering yourself by overriding /// E-Z Pieces' 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:

- Put the cursor somewhere on the page you want to assign a number to.
2. Press "OPEN-APPLE"-“O”.
3. Type "PN" and press "RETURN".
4. Type the number of the page up to 254. Then press "RETURN".

Printing Page Numbers

You can cause page numbers to print on a page, either the numbers /// E-Z Pieces 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.

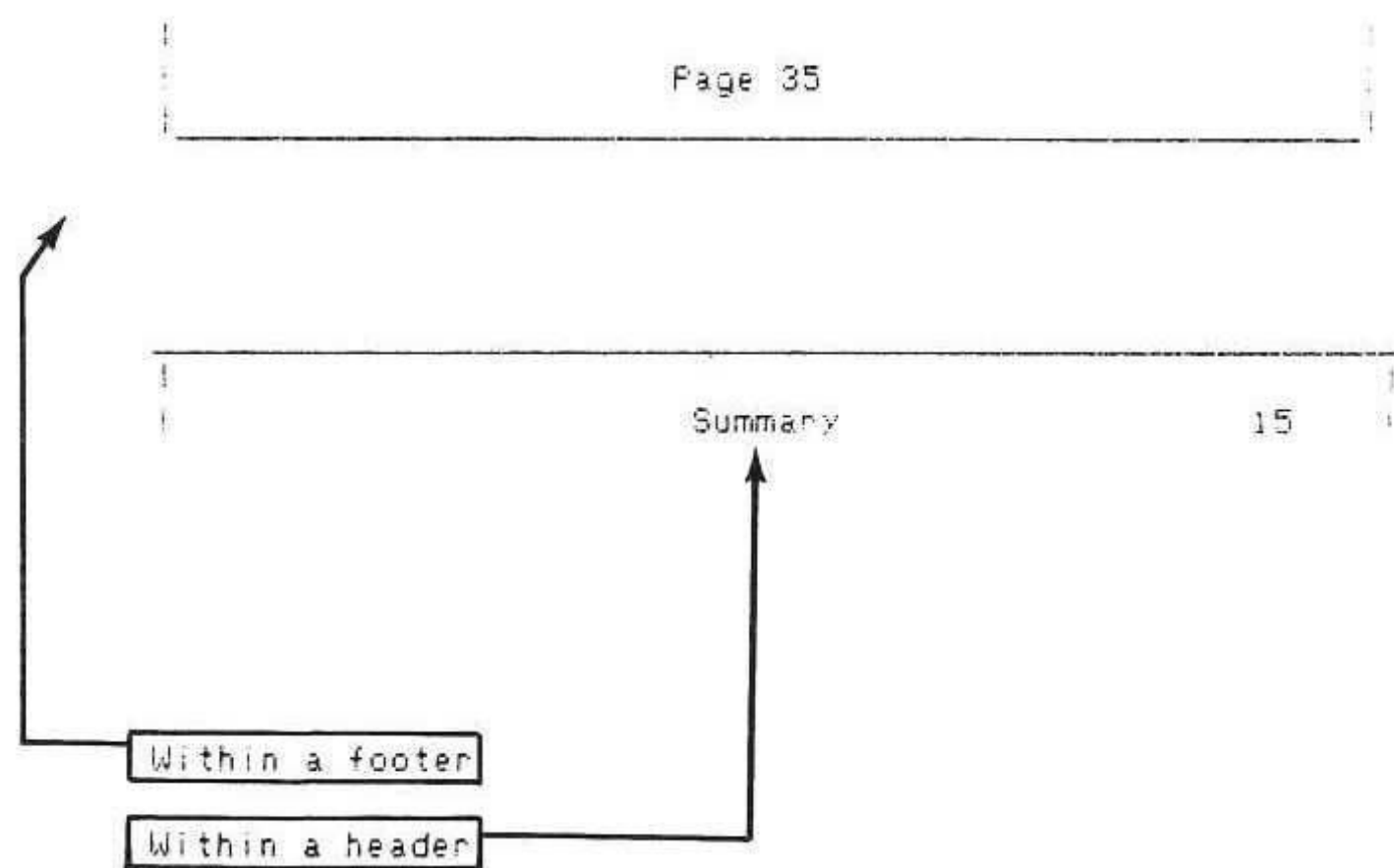


Figure 8-8.
Page Numbers Within Headers and Footers

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 bar once.
3. Press "OPEN-APPLE"-“O”.
4. Type "PP" and press "RETURN". /// E-Z Pieces 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 typed information will go.
2. Press "OPEN-APPLE"-“O”.
3. Type "EK" and press "RETURN".

/// E-Z Pieces 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".

An 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 9

Understanding the Spreadsheet

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File Guidelines	9-3

/// E-Z Pieces' Spreadsheet allows you to work with numbers you usually write in rows and columns. The Spreadsheet's calculation techniques let you speculate and forecast, changing numbers and immediately see 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 worksheets, allows you to create worksheets 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 worksheet, 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 worksheet. You can control the way numbers in separate areas of the worksheet are displayed and look at the worksheet from different viewpoints, for complete flexibility in number manipulation. It's easy, too, to make changes to worksheets 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.

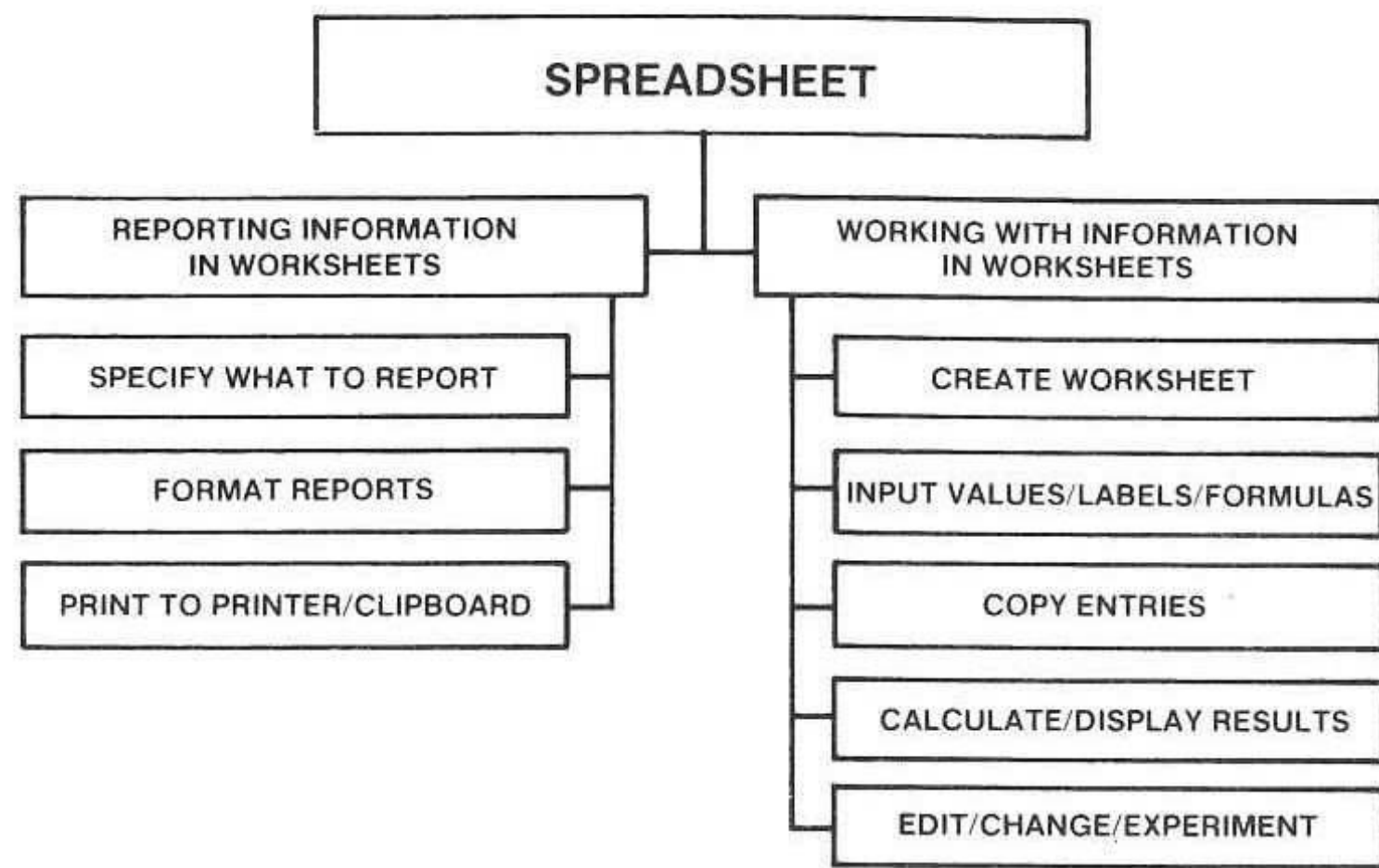


Figure 9-1.
Spreadsheet's Two Main Functions

Activity Flow

Figure 9-2 shows the flowchart of activities when you are using Spreadsheet files. All the activities fall into Review/Add/Change.

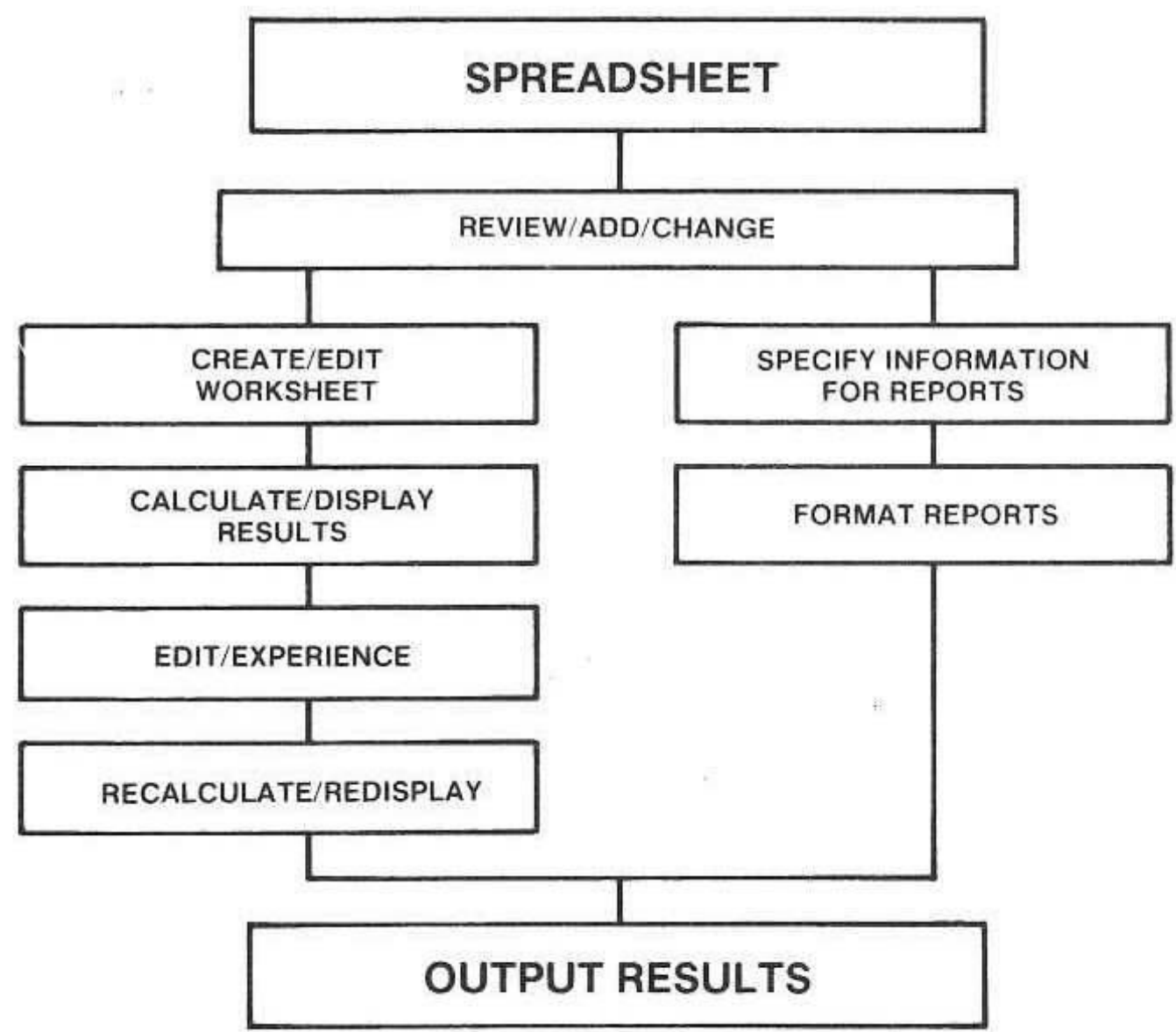


Figure 9-2.
Spreadsheet Flowchart

File Guidelines

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:

- "For an Apple computer with 128K RAM" About 3100 filled cells maximum
- "For an Apple Computer with 256K RAM" About 11,000 filled cells maximum

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

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Working with information in worksheets involves creating the information using special Spreadsheet techniques that make it easy, looking at the worksheet and displaying numbers in different ways, and rearranging information when necessary. These activities are discussed in this chapter.

Making a Worksheet

This section discusses the general concepts involved in planning a worksheet and tells how to make a worksheet from scratch, from a VisiCalc file, and from a DIF file.

Planning a New Worksheet

When you plan a worksheet, you decide

- what answers you want,
- what values you need to produce these answers,
- what formulas will produce the answers, and
- how you want the worksheet to look.

These questions are discussed in general here. See specific sections for detailed information. To help you plan your own worksheets, several sample files have been included in the sample files disk. As planning is explained here, references will be made to these sample files. If you want, you can display each of these files.

“By the Way:”

Spreadsheet files other than the ones mentioned here are on the sample files disk. Take a look at all the Spreadsheet files on the disk. You may want to use them as a basis for your own worksheets.

The first file, which contains net personal worth information, is illustrated in Figure 10-1. The worksheet is in a file called “Personal Worth” on the /// E-Z Pieces sample files disk.

Personal Financial Net Worth Statement		1/1/84	
ASSETS		LIABILITIES	
Fluid Assets:		Bills Due:	
Cash on Hand	500	VISA	875
Checking Accounts	435	Sears	465
Savings Account	2050	Medical Bills	330
	-----	Dental Bills	120
	2985	Homeowner's Ins.	150
		Auto Ins.	600
		Life Ins.	465

Long Term Assets:		Taxes We Owe:	
Certif. Deposit	5000	Real Estate Tax	770
U.S. Savings Bonds	1000	Self Empl. Tax	1200
Life Insurance	175000		-----
	-----		1970
	181000	Loans We Owe:	
Market Value of Securities:		Mortgage on Home	95000
Stocks	4500	Mortgage on Duplex	65000
Options	1250	Auto Loans	8000
	-----	Furniture Loan	4400
	5750	Home Imprv. Loan	3000

Market Value of Real Property:			175400
Home	125000		
Duplex	120000		

	245000		
Market Value of Durable Assets:			
Furn., Appliances	10000		
Automobiles	13000		
Clothing	4500		
Jewelry, Tableware	1250		
Computer Equipment	2750		
Stamp Collection	1250		

	32750		
Other:			
Tax refund due	375		
Loan to Bill	900		

	1275		

TOTAL CURRENT ASSET VALUE	468760	TOTAL CURRENT LIAB. VALUE	180375
	=====		=====
>>>>> NET WORTH AS OF THIS DATE		288385	<<<<<<

Figure 10-1.
Net Personal Worth Worksheet

Figure 10-2 shows the Winter Grades worksheet. The worksheet is in a file called "Winter Grades" on the /// E-Z Pieces sample files disk.

Winter Grades					
Students	Score Test 1	Score Test 2	Score Test 3	Score Test 4	Average
Avenir, George	98	95	88	94	94%
Balder, Marsha	88	87	92	85	88%
Cleveland, Mark	77	83	80	67	77%
Edwards, Bret	83	80	85	84	83%
Hegley, Elaine	85	88	87	88	87%
Jenred, Jack	77	80	79	84	80%
Lofter, Laura	99	98	99	95	98%
Matthews, Orem	91	90	89	92	91%
Normans, Cuz	66	70	74	80	72%
Prince, Perry	77	68	66	75	69%
Serenski, Bob	81	83	80	85	82%
Winthrop, Nigel	98	95	99	98	97%
Class Average	85	84	85	86	85%

Figure 10-2.
Winter Grades Worksheet

The Loan Schedule worksheet is illustrated in Figure 10-3. The worksheet is in the file called "Loan Schedule" on the /// E-Z Pieces sample files disk. You can play "What If?" by changing the loan amount, payments per year, total number of years, and nominal interest rate.

LOAN AMORTIZATION SCHEDULE			
Payment No.	Principal	Payment	Interest
1.....	75200.00	759.08	736.33
2.....	75177.26	759.08	736.11
3.....	75154.29	759.08	735.89
4.....	75131.10	759.08	735.66
5.....	75107.68	759.08	735.43
6.....	75084.04	759.08	735.20
7.....	75060.16	759.08	734.96
8.....	75036.05	759.08	734.73
9.....	75011.70	759.08	734.49
10.....	74987.11	759.08	734.25
11.....	74962.28	759.08	734.01
12.....	74937.21	759.08	733.76

Figure 10-3.
Loan Schedule Worksheet

What Answers Do You Want?

The first step in planning a worksheet, and certainly the most important, is to decide what answers you want your worksheet to produce. Knowing the answers you want will make all the steps along the way a lot easier.

If you're doing a personal budget worksheet, 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, you'll want each student's average and the class average. If you're figuring your net personal worth, you'll want assets minus liabilities.

What Values Produce the Answers?

As you decide what answers you want your worksheet to produce, you also define the values you need that produce the answers.

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

"Terminology Trivia:"

In traditional data processing terms, the answers you want to produce are called the "output". And the values you need to produce the answers are called the "input". Depending on who you want to impress, you may want to remember this.

What Formulas Make the Values Produce the Answers?

After you decide on the answers you want and the values that produce those answers, you will want to 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 Worksheet Look Like?

At this point, you can probably visualize the layout of your worksheet. For example, the net worth worksheet 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 subtalled. 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 worksheet works best as a typical rows and columns grid. Each kind of grade is listed across the top and students' names are listed down on the left. The grades for each student are averaged across, and the class average is taken for each test at the bottom of the worksheet.

The last sample worksheet, the loan schedule, allows you to provide several values at the top of the worksheet. After you supply the values, /// E-Z Pieces calculates all the principal, payment, and interest figures in one long column.

Visualizing your worksheet helps you decide the best way to place "labels", or titles, and numbers on the worksheet. Of course, there are as many ways to do a worksheet as there are /// E-Z Pieces users, so you can do it the way that works best for you.

Now think about how you want the worksheet to look. That's determined by worksheet "standard values". Standard values determine how information is displayed.

First of all, labels have standard values. The worksheet standard values for labels determine whether a title such as "Assets" is left justified, right justified, or centered. /// E-Z Pieces' best guess is that you'll want your labels left justified.

"Values", or numbers, have standard values, 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. /// E-Z Pieces' best guess for values is called "Appropriate." "Appropriate," in general, means "displayed as you type it." /// E-Z Pieces does its best to display a value as you type it, depending on the column width you provide.

Along with setting standards for values and labels, you set the widths of columns, too. You can use /// E-Z Pieces' best guess, 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 value, too, both in when it's done and in what order. You should think about whether you want /// E-Z Pieces to calculate all your values automatically every time you change a value or if you want to give the signal for calculation. /// E-Z Pieces' best guess 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. /// E-Z Pieces' best guess is down columns and across rows. You can change that to across rows and down columns, or to the order /// E-Z Pieces thinks is appropriate. The Loan Schedule worksheet, 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 worksheets will give you an idea about formatting:

The standard value for values in the Personal Worth worksheet is commas format. This means two decimal places, commas between thousands, and no dollar signs. You could also choose to format these values in fixed decimal format with no decimal places. The totals at the bottom are formatted differently, in dollars format, with dollar signs.

The standard value for values in the Winter Grades worksheet is fixed decimal format with no decimal places. The percentages down the right and across the bottom, however, are in percent format, with a percent sign following.

The standard value for values in the Loan Schedule worksheet is fixed decimal format with two decimal places. One value is formatted differently, the "PMT/YR" value. It is formatted in fixed decimal format with no decimal places.

To summarize, planning your worksheet involves

- Planning the input values and the formulas you need to produce the answers,
- Planning the general layout of the worksheet, and

Determining how values and labels should be displayed as well as the width of columns and how calculation should happen.

Creating the Worksheet

Follow these steps to create a new worksheet:

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 file", or "From a VisiCalc™ file" from the "SPREADSHEET" menu.

From Scratch

Follow these steps to create your worksheet 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 they can contain upper- or lowercase letters, numbers, periods, and spaces. Then press "RETURN".

/// E-Z Pieces displays a worksheet such as the one illustrated in Figure 10-4. The callouts refer to the numbered items in the text that follows.

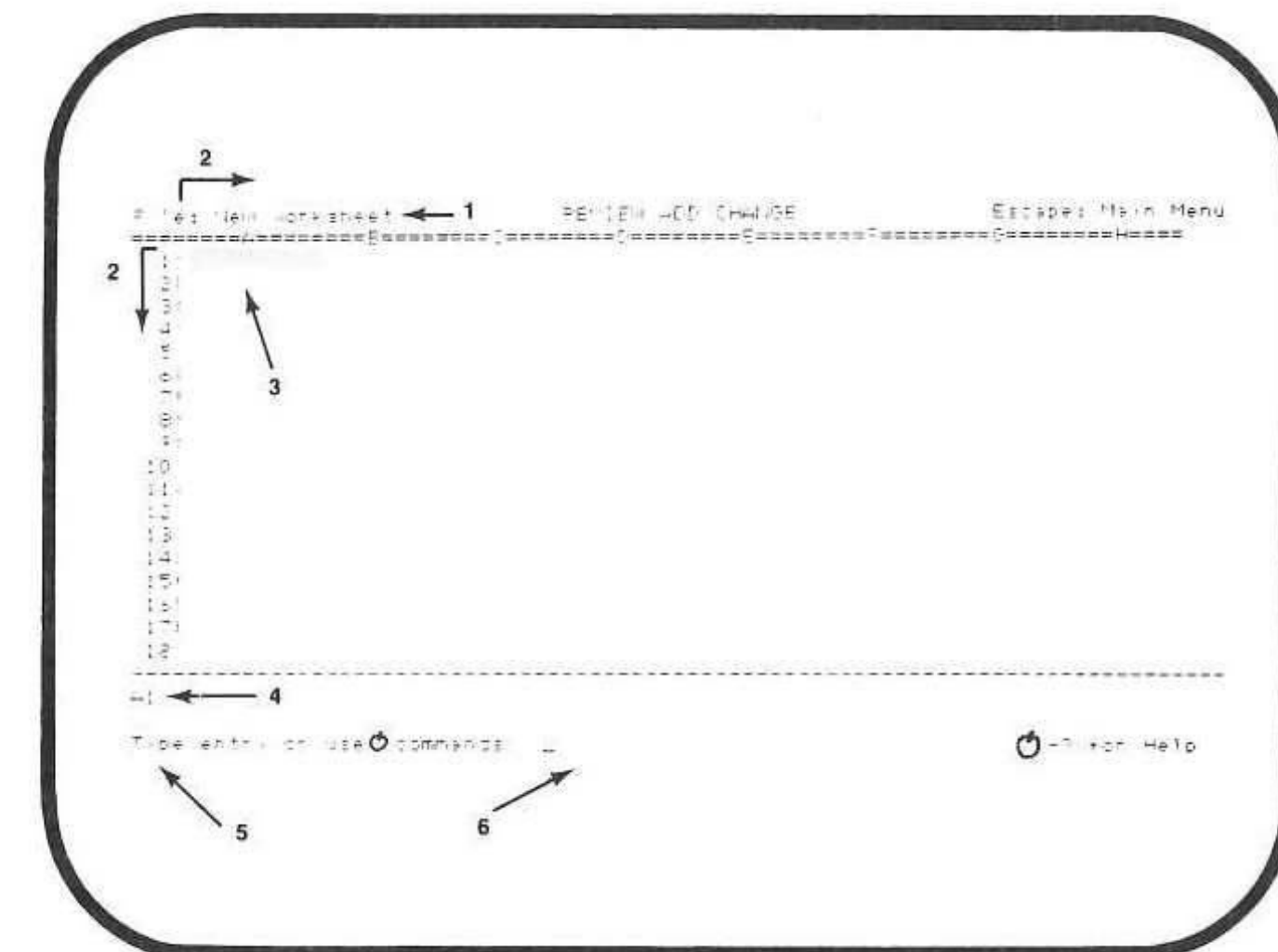


Figure 10-4.
A New Worksheet

1. The name of your new file
2. The rows and columns, or "coordinates", that divide your worksheet into "cells". A cell is the intersection of a row and a column.
3. Your place within the worksheet. What you type now will go into this cell.

4. The “cell indicator” tells which 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 worksheet. You can

- Set the standards for the values and labels in the worksheet, for the order and frequency of recalculation, and for the column width.
- Type the titles and the values.

NOTES:

See “Using Worksheet Standard Values.”

See “Typing and Editing Information.”

From a DIF File

You can use a DIF file—a file created by /// E-Z Pieces’ 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.

Follow these steps to make a Spreadsheet file from a DIF file:

1. If you chose “From a DIF file”, /// E-Z Pieces asks for the file’s “pathname”. Type the complete pathname and press “RETURN”.
2. Type the /// E-Z Pieces name for the file. Filenames can be up to 15 characters long. They must begin with a letter, and they can contain upper—or lowercase letters, numbers, periods, and spaces. Then press “RETURN”.

NOTE:

Pathnames are discussed briefly in Chapter 1 of this manual and in the Apple /// Owner’s Manual.

From a VisiCalc File

You can use a VisiCalc file as the source of a Spreadsheet file.

Follow these steps to make a Spreadsheet file from a VisiCalc file:

1. If you chose “From a VisiCalc file”, /// E-Z Pieces asks for the file’s “pathname”. Type the complete pathname and press “RETURN”.

2. Type the/// E-Z Pieces name for the file. Filenames can be up to 15 characters long. They must begin with a letter, and they can contain upper- or lowercase letters, numbers, periods, and spaces. Then press “RETURN”.

NOTE:

Pathnames are discussed briefly in Chapter 1 of this manual and in the Apple /// Owner’s Manual.

Working with Worksheet Standard Values

Worksheet “standard values” specify how information in the worksheet is displayed. Worksheet 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 worksheet or at any time while you are working with it, you can change the best guess standard values. You change worksheet standard values with the “OPEN-APPLE”-“V” (standard Values) command, discussed later in this section. After you change the standard values, the information you have already typed is displayed according to your specifications. And new information is displayed as you type it according to the same specifications.

Worksheet standard values are available for “value formats”, “label formats”, “column widths”, “protection”, and “recalculate”.

You can override worksheet standard values for specific cells with the “OPEN-APPLE”-“L” command.

NOTE:

See “Working With Cell Layouts” for information on how to override standard values.

Figure 10-5 shows the worksheet standard values in the Winter Grades worksheet. The numbers refer to the explanations that follow.

Winter Grades	Students	Score Test 1	Score Test 2	Score Test 3	Score Test 4	Average
	Avenir, George	98	95	88	94	94%
	Balder, Marsha	88	87	92	85	88%
	Cleveland, Mark	77	83	80	67	77%
	Edwards, Bret	83	80	85	84	83%
	Hegley, Elaine	85	88	87	88	87%
	Jenred, Jack	77	80	79	84	80%
	Lofter, Laura	99	98	99	95	98%
	Matthews, Drem	91	90	89	92	91%
	Normans, Cuz	66	70	74	80	72%
	Prince, Penny	77	60	66	75	69%
	Serenski, Bob	81	83	80	85	82%
	Winthrop, Nigel	98	95	99	98	97%
	Class Average	85	84	85	86	85%

Figure 10-5.
Worksheet Standard Values

1. Titles are left justified.
2. Numbers are fixed decimal format with no decimal places.
3. Columns are nine characters wide.
4. The values in percentage format are exceptions to the worksheet standard values.

The two other worksheet standard values—Recalculation Order and Frequency, and Protection—are not evident by looking at a worksheet, but rather when you use the worksheet or by scrolling to the end of the “Help” listing for the Spreadsheet.

NOTE:

See “Protection” and “Recalculate.”

After you provide a standard for labels, such as, right justified, and for values, such as, fixed decimal with two decimal places, then all values take the format of the labels standard.

Remember, however, 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	/// E-Z Pieces displays	And stores
1.2345	Fixed decimal, no decimal places	1	1.2345
1	Fixed decimal, three decimal places	1.000	1

Details About Worksheet Standard Values

Worksheet standard values are discussed in detail in this section. Instructions for changing them are in the next section.

Value Formats

Five value formats are available as worksheet standard values—Fixed, Dollars, Commas, Percent, and Appropriate. Table 10-1 describes them.

Format	Description	Example
Fixed	Contains a fixed number of decimal places, 0-7	163 -137.00
Commas	Provides commas between thousands. Negative amounts are in parentheses. Contains a fixed number of decimal places, 0-7.	113.58 1,345.09 (4.66)
Dollars	Same as commas except with a dollar sign before each amount.	\$113.58 \$1,345.09 (\$4.66) \$1.6
Percent	A percentage with a specified number of decimal places (0-7).	1235.7% -4.25%
Appropriate	Appropriate means that /// E-Z Pieces 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.	

Table 10-1.
Standard Values for Values

Appropriate is /// E-Z Pieces' best guess for worksheet standard values for values.

If a number does not fit in the width you have 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: "#####". Widen the column if necessary.

Label Formats

Three label formats are available as worksheet standard values—Left Justified, Right Justified, and Centered. Table 10-2 describes them.

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 -

Table 10-2.
Standard Values for Labels

Left justified is /// E-Z Pieces' best guess for the standard value for labels.

Column widths

Nine-character-wide columns are the worksheet standard for all new worksheets. You can change the worksheet standard to columns from 2 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 worksheet. Then the cell contents can be changed only if /// E-Z Pieces recalculates it.

Protection is accomplished with the combination of the "OPEN-APPLE"- "V" command and the "OPEN-APPLE"- "L" command. The "OPEN-APPLE"- "V" command enforces or removes protection specified by the "OPEN-APPLE"- "L" command. /// E-Z Pieces' best guess is protection, so any cells you protect with the "OPEN-APPLE"- "L" 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 "OPEN-APPLE"- "V".

Recalculation

When you type a new value into your worksheet, /// E-Z Pieces 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 10-3 describes both.

The Order Setting includes:	Which Means:
Calculation by rows	Values calculated according to formulas in cells across rows and down columns
Calculation by columns	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	/// E-Z Pieces automatically recalculates new values whenever you change a value.
Manual	/// E-Z Pieces recalculates new values whenever you use the "OPEN-APPLE"-“K” (for Calculation) command.

Table 10-3.
Recalculation Order and Frequency

Columns is the best guess for order of recalculation. If the formulas in your worksheet work across rows, change to Rows.

Automatic is the best guess for frequency of recalculation. However, if you are typing a lot of values and formulas, you may want to keep typing and calculate all at once. Then change to manual recalculation.

Checking Standard Values in Effect

Worksheet standard values in effect for your worksheet are available on the help screen. Press "OPEN-APPLE"-“?” to see them.

Changing Worksheet Standard Values

Here's how to change worksheet standard values:

1. Press "OPEN-APPLE"-“V”.
2. Choose "Value format", "Label format", "Column width", "Protection", or "Recalculate", depending on whether you want to change the worksheet standard values for values, labels, column width, protection, or recalculation.

If you choose:	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 "OPEN-APPLE"-“RIGHT-ARROW” or "LEFT-ARROW" to change the column widths. Press "ESCAPE" when you're through.
"Protection"	Choose "No" or "Yes". "Yes" enforces protection, and "No" removes protection.
"Recalculation"	Choose "Order" or "Frequency" For "Order", choose "Appropriate", "Rows", or "Columns" For "Frequency", choose "Automatic" or "Manual"

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:

1. Use the "overstrike cursor", which is the blinking square cursor, or the "insert cursor", which is the blinking bar cursor, whichever is easier for you, when you type new entries. Whatever you type with the overstrike cursor replaces the information under the cursor. Whatever you type with the insert cursor goes to the left of the character the cursor is on. Information to the right of the cursor moves to the right. Switch back and forth between the two cursors with "OPEN-APPLE"-**"E"**.
2. Each time you press DELETE, one character to the left of the cursor is deleted.
3. Press "RETURN" at the end of each entry. Or press the arrow keys to confirm the entry *and* move the cursor in the direction of the arrow.

WARNING

It's important to remember that pressing "RIGHT-ARROW", "LEFT-ARROW", "DOWN-ARROW", or "UP-ARROW" *confirms your entry and moves the cursor* to another entry. In the Data Base, however, pressing "RIGHT-ARROW", or "LEFT-ARROW" moves the cursor within an entry.

Editing Entries

To edit information in a cell, use the "OPEN-APPLE"-**"U"** (Use edit feature) command. To do so:

1. Put the cursor on the cell you want to edit.
2. Press "OPEN-APPLE"-**"U"**. /// E-Z Pieces displays the contents of the cell on the entry line, just under the cell indicator. That's where you edit.
3. Use either cursor when you are editing.

4. Press "ESCAPE" to restore the former entry and back the cursor up to the first character of the entry.
5. Use "LEFT-ARROW" and "RIGHT-ARROW" to move the cursor past characters, without changing them.
6. Press CONTROL-**"Y"** to erase the rest of an entry starting from where the cursor is.
7. Press "RETURN" after you finish editing the entry.

After you press "RETURN" /// E-Z Pieces checks your formula to see if it's legal. It checks, for example, to see whether all the entries in a range are in the same row or column, and whether you used parentheses properly if you are nesting formulas. If there's a problem, /// E-Z Pieces beeps at you and waits for you to correct the mistake.

Using Labels

"Labels" are entries with no numeric value. They usually identify numeric information and are used mostly for column and row headings.

All entries that start with letters are labels. Labels can also start with numbers or special characters, even spaces. For example, suppose you are numbering your column headings from 1 through 10 across the top of the worksheet. Because these numbers look like values to /// E-Z Pieces, you have to identify these numbers as labels.

To identify as labels entries that don't start with letters, first type "quote". That's the signal to /// E-Z Pieces that you are starting a label. The "quote" does not become part of the label; it's just understood by /// E-Z Pieces as a label-signal.

If a label is too long to fit in one cell, /// E-Z Pieces automatically divides it among adjacent non-numeric, unprotected cells.

/// E-Z Pieces Tips

To get a "repeated label," such as "-----" or "=====", simply hold down the key until the cell is full. The cell indicator will say "(Label) Repeated--" or "(Label) Repeated-=". When you widen a column, /// E-Z Pieces adds more characters.

The cell indicator provides information about labels, as Table 10-4 illustrates. It tells that the entry is a label rather than a value and provides information about special cell layouts.

To get this label	Type this information	And the cell indicator shows
Jan 1 84	Jan 1 84	(Label) Jan 1 84
Date:	Date:	(Label) Date:
1	1	(Label) 1
-----	-----	(Label) -----
Feb	Feb	(Label, Layout-R) Feb

Table 10-4.
How Labels Go In Cells

Using Values

Values include numbers, pointers, functions, and formulas. This section provides details about each kind.

Numbers

Numbers are the first kind of value. 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 10-5 shows. The cell indicator tells that the number is a value, rather than a label, and provides information about special cell layouts.

For the value in the cell	Where the cell indicator displays the number	The cell layout is
"1250.00"	"(Value) 1250"	The worksheet standard, fixed with 2 decimal places
"\$136.00"	"(Value, Layout-D2) 136"	Cell format, dollars with 2 decimal places
"-4478.3"	"(Value, Layout-F1) -4478.32"	Cell format, fixed with 1 decimal place

Table 10-5.
How Numbers Go In Cells

Pointers

Pointers are the second type of /// E-Z Pieces value. Pointers specify, or point to, other cells in the worksheet. They tell /// E-Z Pieces to put the value in the pointed-to cell into the current cell. /// E-Z Pieces takes the value exactly from the pointed-to cell, so that the current cell contains the same value as the point-to cell.

Pointers must begin with a plus sign (+) or a minus sign (-), which is how /// E-Z Pieces knows you're not typing a label. Following the plus 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 10-6 shows. It tells that the pointer is a value, rather than a label, and displays the pointer.

For the value in the cell	Where the cell indicator displays the number	The cell layout is
"1250.00"	"(Value) +B6"	Worksheet standard, fixed with 2 decimal places
"\$136.00"	"(Value, Layout-D2) +J30"	Cell format, dollars with 2 decimal places
"-4478.3"	"(Value, Layout-F1) C47"	Cell format, fixed with 1 decimal place

Table 10-6.
How Pointers Go In Cells

Functions

"Functions" are the third type of value. They 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:"

(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. The @SUM function, just like all other functions, lets you say a lot in a little.

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."

"@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

(argument)

Table 10-7 shows the possible types of 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, such as (A36...A39) or (A48...D48)
List	A list of single values or ranges separated by commas, such as (D45, X19, 135) or (A36...A39, A48...D48)

Table 10-7.
Arguments for Functions

Table 10-8 lists the kinds of functions /// E-Z Pieces provides. They're all described in the remainder of this section.

Kind of Function	Possibilities
Arithmetic	@ABS, @AVG, @CHOOSE, @COUNT, @ERROR, @INT, @LOOKUP, @MAX, @MIN, @SQRT, @SUM
Financial	@IRR, @NPV
Logical	@IF

Table 10-8.
Kinds of Functions

Arithmetic Functions

Some arithmetic functions perform calculations on a value, some on a list, some with no argument, and some by selecting alternatives. Each type is described separately.

On a Value

The functions in Table 10-9 perform calculations on a single value:

Function	Result
@ABS (value)	Absolute value of the argument
@INT (value)	Integer portion of the argument
@SQRT (value)	Square root of the argument

Table 10-9.
Arithmetic Functions With a Single-Value Argument

On a List

The functions in Table 10-10 perform calculations on a list of values.

Function	Result
@AVG (list)	Arithmetic mean of the values in the list. The result is equivalent to @SUM (list) divided by @COUNT (list). The maximum number of elements in the list is 255.
@COUNT (list)	Number of non-blank entries in the list. The maximum number of elements in the list is 255.
@MAX (list)	The largest value in the list
@MIN (list)	The smallest value in the list
@SUM (list)	The sum of all values in the list

Table 10-10.
Arithmetic Functions With a List Argument

Without Arguments

@NA and @ERROR perform calculations without arguments.

Type @NA in cells where you know you need a value but it's not available yet. When /// E-Z Pieces calculates values that refer to cells that contain @NA, the result is "NA". That helps you keep track of values you need to type in yet.

@ERROR causes "ERROR" to be displayed at the location where it is entered and all locations that refer to it.

By Selecting Alternatives

@CHOOSE and @LOOKUP can be used to select alternatives for calculations.

@CHOOSE takes one of the values in its list of arguments using the first element of 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 in 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 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 looks 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 corresponding 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 10-6 shows an example of a @LOOKUP function.

First table

Second table

Search value

The value of @LOOKUP(C12,A4...E4) is 70.

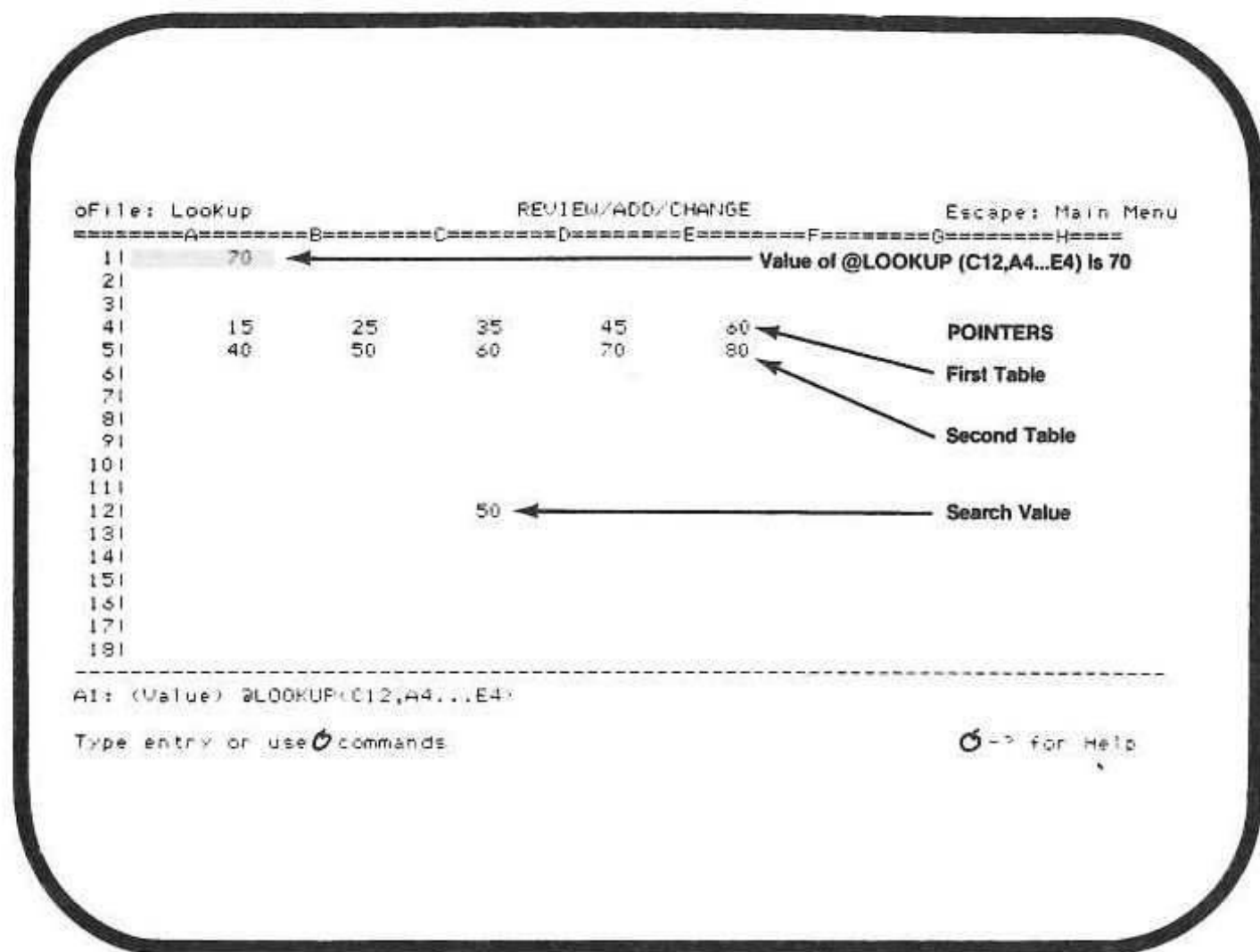


Figure 10-6.
Lookup Table

Financial Functions

The functions in Table 10-11 perform specialized financial functions.

Function	Result
@IRR(amount of investment, range)	Internal Rate of Return based on an initial investment and a range of even or uneven cash flows. You must supply both arguments.
@NPV(interest rate, range)	Net Present Value of a series of even or uneven payments (the range argument)

Table 10-11.
Financial Functions

@IRR returns an interest rate at which a discounted series of payments equals an initial investment. The amount of investment is either a cell or a value. The range is the range of cells that contain payments.

Different formulas are used to calculate the internal rate of return, which means /// E-Z Pieces may return a different answer than that returned by a financial calculator.

@NPV calculates the Net Present Value of future cash flows. 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.

Logical Function: @IF

Here are several samples 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 10-12 lists the logical operators you can use in the expression and their values.

Operator	Value
<	TRUE if the first value in the expression is less than the second. FALSE If it's not.
>	TRUE is first value is greater than second value. FALSE if it's not.
=	TRUE if first value equals second value. FALSE if it doesn't.

Table 10-12.
Logical Operators

Table 10-13 shows how the values of the logical expression are evaluated.

Value of First Argument	Evaluates to
TRUE	Value of second argument
FALSE	Value of third argument
NA	NA
Not logical or ERROR	ERROR

Table 10-13.
Evaluations for @IF

Formulas

Formulas are the fourth type of value. Formulas are mathematical statements that calculate numbers. They are stored in worksheet cells, and then during recalculation (automatic or manual), the value of the formula is calculated. The worksheet may be “zoomed in” to display formulas by pressing “OPEN-APPLE”-“Z”.

Formulas can consist of two or more of the following:

- Numbers
- Arithmetic operators (+ - * / ^)
- Pointers (+A6 or +B17)
- Functions

Figure 10-7 shows how a formula works.

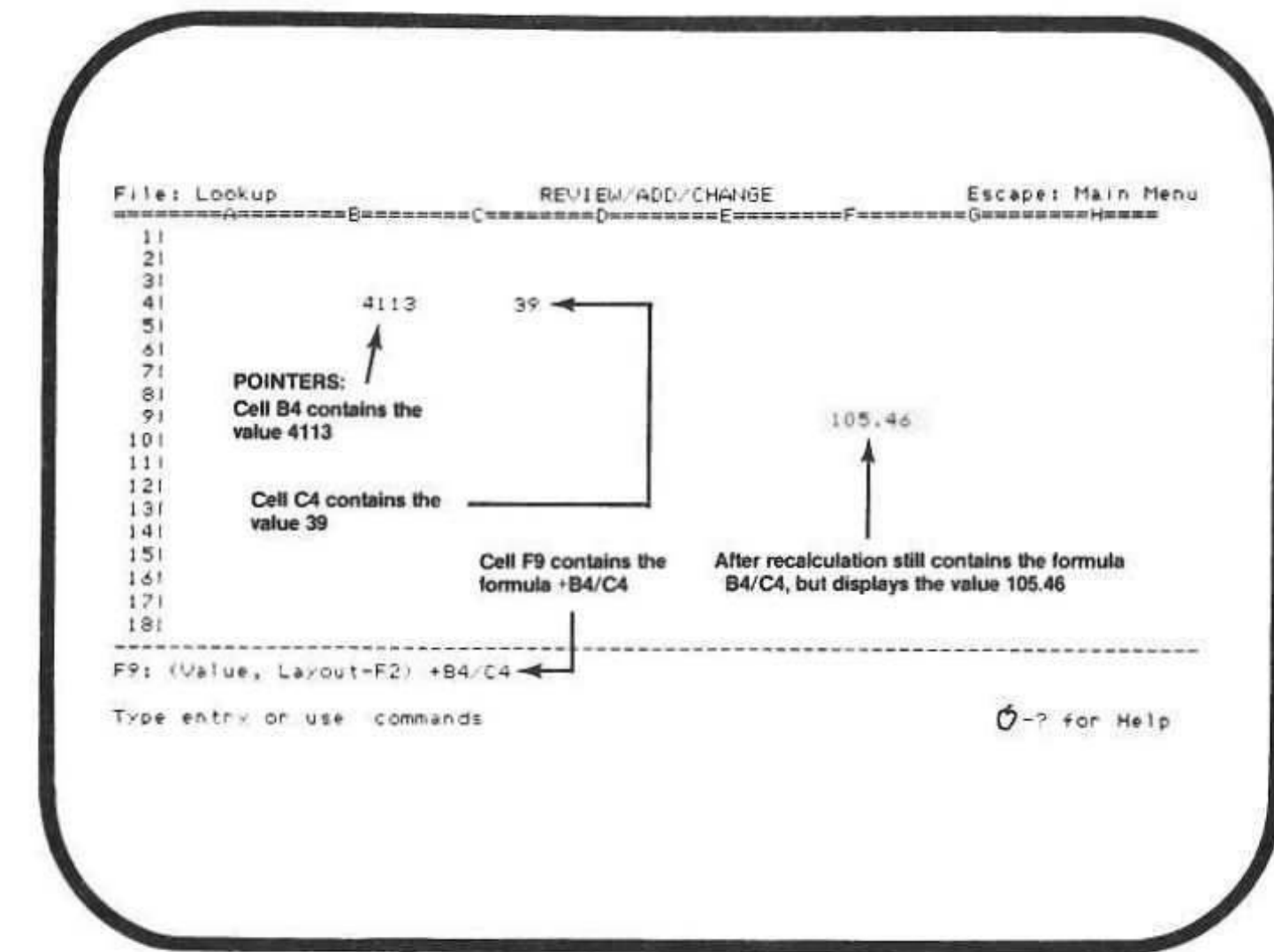


Figure 10-7.
How a Formula Works

Formulas must begin with a plus sign (+), a minus sign (-), a decimal, the digits 0-9, a left parentheses “(”, or the “at” sign (@). The cell indicator provides information about formulas, as Table 10-14 shows. The cell indicator tells that the formula is a value and displays the formula.

For the value in the cell	Where the cell indicator displays the formula	The cell layout is
“1250.00”	“(Value) +B6*C4”	Worksheet standard, fixed with 2 decimal places
“\$136.00”	“(Value, Layout-D2) +J30-300”	Cell format, dollars with 2 decimal places
“-4478.3”	“(Value, Layout-F1) (A5-B7)”	Cell format, fixed with 1 decimal place

Table 10-14.
How Formulas Go In Cells

Moving the Cursor Within A Worksheet

You can move the cursor cell by cell through a worksheet 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:

Move the cursor from cell to cell across rows or up and down columns

"RIGHT-ARROW", "LEFT-ARROW", "UP-ARROW", "DOWN-ARROW"

Holding the arrow key down moves the worksheet, so you can see other parts of it.

Move the cursor from cell to cell to the right and to the left

"TAB" and "OPEN-APPLE"-
"TAB"

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

"OPEN-APPLE"-
"RIGHT-ARROW" or "LEFT-ARROW"

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

"OPEN-APPLE"-
"UP-ARROW" or "DOWN-ARROW"

Use /// E-Z Pieces Ruler to jump the cursor proportionally through sections of the worksheet

"OPEN-APPLE"-
"1" through "OPEN-APPLE"-
"9"

Move the cursor to a specific cell

"OPEN-APPLE"-
"F"

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

"OPEN-APPLE"-
"J" after you have split the screen by using OPEN-APPLE AND "W".

NOTE:

See "Using /// E-Z Pieces' Ruler" in Chapter 2 for information about how the Ruler works.

Working with Cell Layouts

When you work with worksheet standard values, you specify how all cells in the worksheet should be displayed. But you can override these standard values for only some cells in the worksheet—the cells in the row or those in two columns, for example. These overriding specifications are called the "cell layout". You specify cell layout with the "OPEN-APPLE"-
"L" command (for Layout), discussed in this section.

Cell layout specifications are for the "value formats", "label formats", "column widths," and "protection".

NOTE:

See "Working with Worksheet Standard Values" for more information about standard values.

Cell layouts are illustrated in the Winter Grades worksheet in Figure 10-8. The numbers refer to the numbers in the text.

Students	Score Test 1	Score Test 2	Score Test 3	Score Test 4	Average
Avenir, George	98	95	88	94	94%
Balder, Marsha	88	87	92	85	88%
Cleveland, Mark	77	83	80	67	77%
Edwards, Bret	83	80	85	84	83%
Hegley, Elaine	85	88	87	88	87%
Jenned, Jack	77	80	79	84	80%
Lofter, Laura	99	98	99	95	98%
Matthrews, Orem	91	90	89	92	91%
Normans, Cuz	66	70	74	80	72%
Prince, Penny	77	68	66	75	69%
Serenski, Bob	81	83	80	85	82%
Winthrop, Nigel	98	95	99	98	97%
Class Average	85.00	84.08	84.83	85.58	85%

Figure 10-8.
Cell Layouts

1. Standard values specify that columns are nine characters wide, labels are left justified, and values are fixed decimal format with no decimal places.
2. These values are in percentage layout. Their cell formats take precedence over the standard value for values.
3. These values are in fixed decimal format with two decimal places. Their cell formats take precedence over the standard value for values.

The cell layouts you provide for a group of cells affects 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 and cells with labels do not get the specification *unless* you specify them with the "OPEN-APPLE"-*L* Protection *Entry* or *Block* option. So some new values you type are *not* displayed according to the specification, but according to the worksheet standard value instead.

This same principal 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 "OPEN-APPLE"-*L* Protection *Entry* or *Block* option.

The cell indicator displays the cell layout if it is different from the worksheet standard values. For example, if the worksheet 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 the next section.

Value Formats

Six value formats are available as worksheet standard values—Fixed, Dollars, Commas, Percent, Appropriate, and Standard. Table 10-15 describes them.

Fixed	Description	Example
Fixed	Contains a fixed number of decimal places,0-7	163 -137.00
Commas	Provides commas between thousands. Negative amounts are in parentheses.	1,345.09
Dollars	Same as commas except with a dollar sign before each amount.	(4.66) \$113.58 \$1,345.09 (\$4.66) \$1.16
Percent	A percentage with a specified number of decimal places (0-7).	1235.7% -4.25%
Appropriate	Appropriate means that /// E-Z Pieces does its best to display numbers exactly as you type them in. 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 worksheet standard values.	

Table 10-15.
Values for Values Layouts

Appropriate is /// E-Z Pieces best guess for worksheet standard values for values.

If the number does not fit in the width you have 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: "#####". Widen the column if necessary.

Label Formats

Four label formats are available as worksheet standard values—Left Justified, Right Justified, and Centered. Table 10-16 describes them.

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 worksheet standard.		

10-16.

Values for Labels Layout

Left justified is /// E-Z Pieces' best guess for worksheet standard values for labels.

Column Widths

You can change the width of one or more columns, if you want. Columns can be from 2 to 75 characters wide.

Protection

"OPEN-APPLE"-“L” allows you to specify which cells should be protected and how.

- No changes allowed
- Only labels can be typed
- Only values can be typed
- All changes should be allowed

Protection that you specify with "OPEN-APPLE"-“L” is automatically enforced if you haven't changed the worksheet standard value for protection to *no* protection. But protection you specify with "OPEN-APPLE"-“L” takes effect only on cells that already have entries unless you use the "OPEN-APPLE"-“L” Protection Entry or Block option. Table 10-17 shows the possibilities for different settings for "OPEN-APPLE"-“V” and “V” and "OPEN-APPLE"-“L”.

When "OPEN-APPLE"-“V” equals yes or no, cells are protected in certain ways:

"OPEN-APPLE"-“L” options	Yes	No
No changes	Complete protection	No protection
Labels only	Only labels can be typed	No protection
Values only	Only values can be typed	No protection
Allow changes	No protection	No protection

Table-17
Possibilities for Cell Protection

Checking Cell Layouts

You can see 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 "OPEN-APPLE"-“L”.
2. Choose "Entry", "Rows", "Columns", or "Block".

If you choose:	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".

4. **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 “OPEN-APPLE”-“RIGHT-ARROW” or “LEFT-ARROW” to change the column widths. Press “ESCAPE” when you’re through.
- “Protection” Choose “No changes”, “Labels only”, “Values only”, or “Allow changes”

Viewing Your Worksheet

Most often you view your worksheet in the Review/Add/Change display you get when you first get the file. You can view the worksheet in several different ways, however, ways that sometimes make it easier for you to see what you want to see.

For example, you can split the worksheet in two, either into two side-by-side windows or a top and bottom window. Then when you change a value in one part, it’s easy to see the effect of the change in another part.

You can also fix the titles area in place on the display and then use the cursor to move the rest of the worksheet. That makes it easy for you to keep track of what numbers apply to what titles.

Setting and Removing a Fixed Titles Area

/// E-Z Pieces lets you set in place a fixed titles area at the top left of the display, or both. Figure 10-9 shows a worksheet with a fixed top titles area. After you fix a titles area, you can use the cursor to view the rest of the worksheet. 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 worksheet.

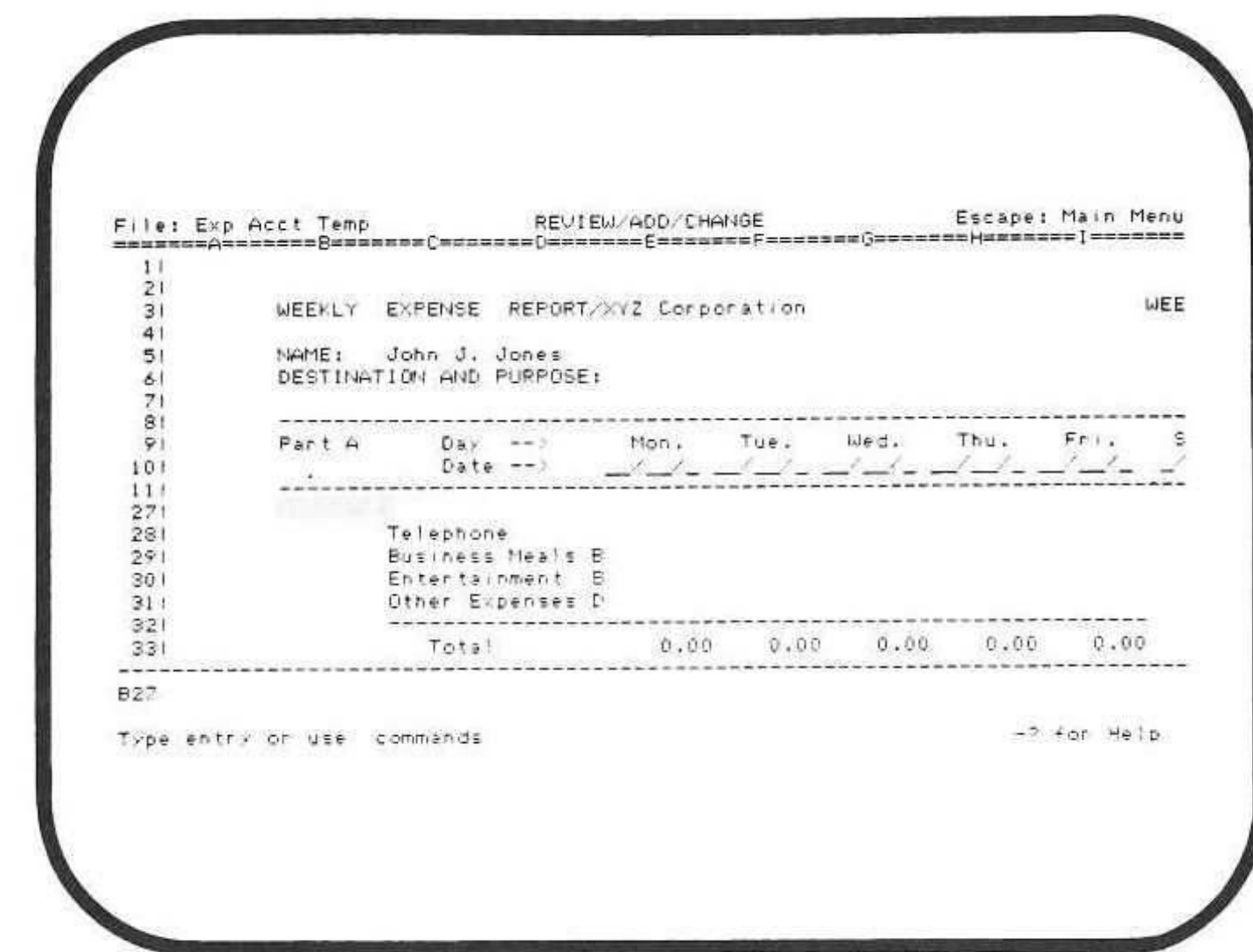


Figure 10-9.
Worksheet With Fixed Top Titles Area

To set a fixed titles area in place:

1. Put the cursor in a cell on
 - The top row below the fixed titles area if the area you’re fixing is on top
 - The column to the right of the fixed titles area if the area you’re fixing is on the left. If you are fixing titles area at the top and on the left, you should put the cursor in the cell that marks the outside corner of the non-fixed area.
2. Press “OPEN-APPLE”-“T” (for “Titles”).
3. Choose “Top”, “Left side”, or “Both”.

/// E-Z Pieces Tips

You can use all the cursor movement keystrokes to move the cursor in the unfixed area. But you can’t move the cursor into the fixed titles area.

Here’s how to remove the fixed titles area:

1. Press “OPEN-APPLE”-“T”.
2. To confirm your selection of removing the titles area, press “RETURN”.

/// E-Z Pieces splits the worksheet into the windows you requested. The cursor stays in the cell where it was in step 1.

Moving the Cursor to the Other Window

1. Press "OPEN-APPLE"-“J” (for Jump).

/// E-Z Pieces moves the cursor to the corresponding cell in the other window.

Synchronizing the Two Windows

After you split the worksheet into windows, the windows move independently of each other. That is, you can use the cursor movement keystrokes in the part of the worksheet where the cursor is and the other part of the worksheet doesn't move. You can however, move both parts of the worksheet 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 "OPEN-APPLE"-“W”.)
2. Press "OPEN-APPLE"-“W” a second time.
3. Choose "Synchronized".

Now whatever cursor movement keystrokes you use in one part of the worksheet have the same effect in both parts.

Whenever you press "OPEN-APPLE"-“W” when you have the worksheet 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 Worksheet to One Window

To restore the worksheet to one window:

1. Press "OPEN-APPLE"-“W”.
2. Choose "One".

/// E-Z Pieces restores the worksheet to one window, and the information is displayed with the worksheet standard values of the window where the cursor was last.

Blanking Areas of the Worksheet

/// E-Z Pieces allows you to blank areas of the worksheet, 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 "OPEN-APPLE"-“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".

/// E-Z Pieces Tips

A blanked cell referred to by a formula is considered to contain a 0.

Cells can't be blanked when you have used the "OPEN-APPLE"-“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 worksheet:

1. Press "OPEN-APPLE"-“D”.
2. Choose "Rows" or "Columns".
3. Move the cursor to highlight the rows or columns you want to delete. Then press "RETURN".

WARNING

/// E-Z Pieces 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, /// E-Z Pieces 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. Deleting rows or columns can have implications on your calculations, therefore.

When rows or columns are deleted, the part of the worksheet on the bottom or on the right is closed up. Closed up rows are renumbered and closed up columns are relettered. /// E-Z Pieces reworks formulas to take this renumbering and relettering into account so the formulas refer to cells they originally referred to.

Inserting Rows or Columns

Here's how to insert blank rows or columns into your worksheet, up to a maximum of 9:

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 "OPEN-APPLE"-“I” (for Insert).
3. Choose "Rows" or "Columns".
4. Type the number of blank rows or columns you want to insert and press "RETURN".

/// E-Z Pieces Tips

/// E-Z Pieces 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 proper cells.

The cells in the rows or columns you insert have worksheet standards. There are two limitations on inserting rows and columns:

1. You can't insert rows or columns that would push existing information past the worksheet limits. For example, you can't insert 10 rows anywhere unless rows 990 through 999 are empty.
2. 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 Worksheet

/// E-Z Pieces allows you to move up to 250 rows or 125 columns from one place in a worksheet to another:

1. Place the cursor on a cell in the column or row or one of the columns or rows you want moved.
2. Press "OPEN-APPLE"-“M”.
3. Choose "Columns" or "Rows".
4. Choose "Within Worksheet".

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".

/// E-Z Pieces Tips

A significant amount of movement happens during a Move:

- *First, /// E-Z Pieces 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 proper cells.*
-

Copying Information

/// E-Z Pieces copy features makes it easy for you to create sophisticated worksheets 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 copied-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 10-19 show the possible combinations of copied-from and copied-to cells.

Copy-From Cell is B2.
Copy-To Cell is C2.

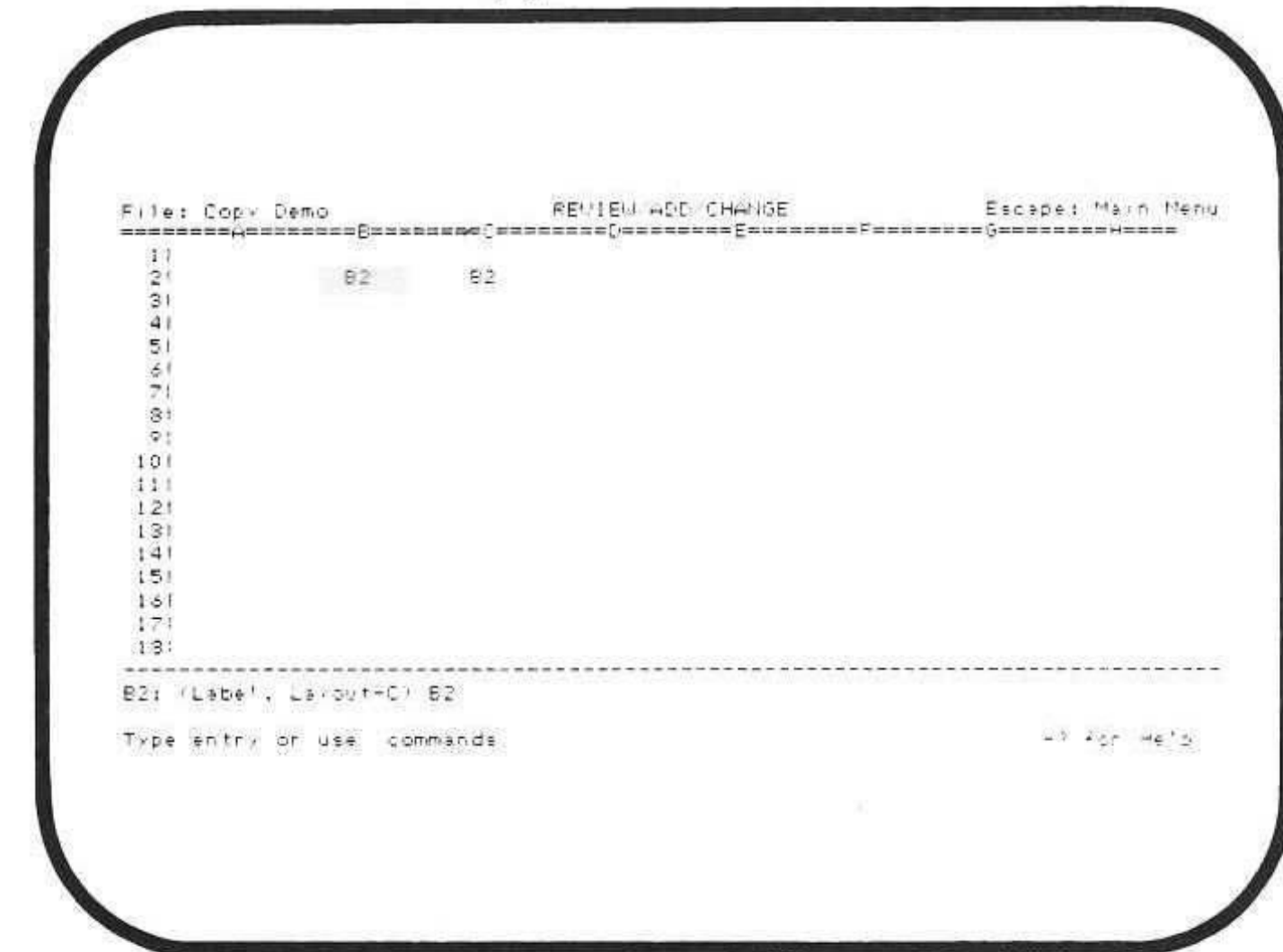


Figure 10-12
Copying One Cell to Another

Copy-From Cell is A1.
Copy-To Cells are B1 through E1.

```

File: Copy Demo          REVIEW/ADD/CHANGE          Escape: Main Menu
-----C-----E-----F-----H-----
11  A1  A1  A1  A1  A1
21
31
41
51
61
71
81
91
101
111
121
131
141
151
161
171
181
-----
Alt: (Label), Layout-C: A1
Type entry or use commands          -? for Help
  
```

Figure 10-13.
Copying One Cell to A Row of Cells

Copy-From Cell is A1
Copy-To Cells are C2 through C5.

```

File: Copy Demo          REVIEW/ADD/CHANGE          Escape: Main Menu
-----C-----E-----F-----H-----
11  A1
21
31          A1
41          A1
51          A1
61
71
81
91
101
111
121
131
141
151
161
171
181
-----
Alt: (Label), Layout-C: A1
Type entry or use commands          -? for Help
  
```

Figure 10-14.
Copying One Cell to a Column of Cells

Copy-From Cell is A1.
Copy-To Cells are A2 through A5.

```

File: Copy Demo          REVIEW/ADD/CHANGE          Escape: Main Menu
-----C-----E-----F-----H-----
11  A1
21  A1
31  A1
41  A1
51  A1
61
71
81
91
101
111
121
131
141
151
161
171
181
-----
Alt: (Label), Layout-C: A1
Type entry or use commands          -? for Help
  
```

Figure 10-15.
Copying One Cell to a Range of Cells

Copy-From Cells are A1 through A5.
Copy-To Cells are B1 through B5.

```

File: Copy Demo          REVIEW/ADD/CHANGE          Escape: Main Menu
-----C-----E-----F-----H-----
11  A1  A1
21  A2  A2
31  A3  A3
41  A4  A4
51  A5  A5
61
71
81
91
101
111
121
131
141
151
161
171
181
-----
Alt: (Label), Layout-C: A1
Type entry or use commands          -? for Help
  
```

Figure 10-16.
Copying a Column

Copy-From Cells are A1 through A5.
Copy-To Cells are B1 through B5, C1 through C5, D1 through D5.

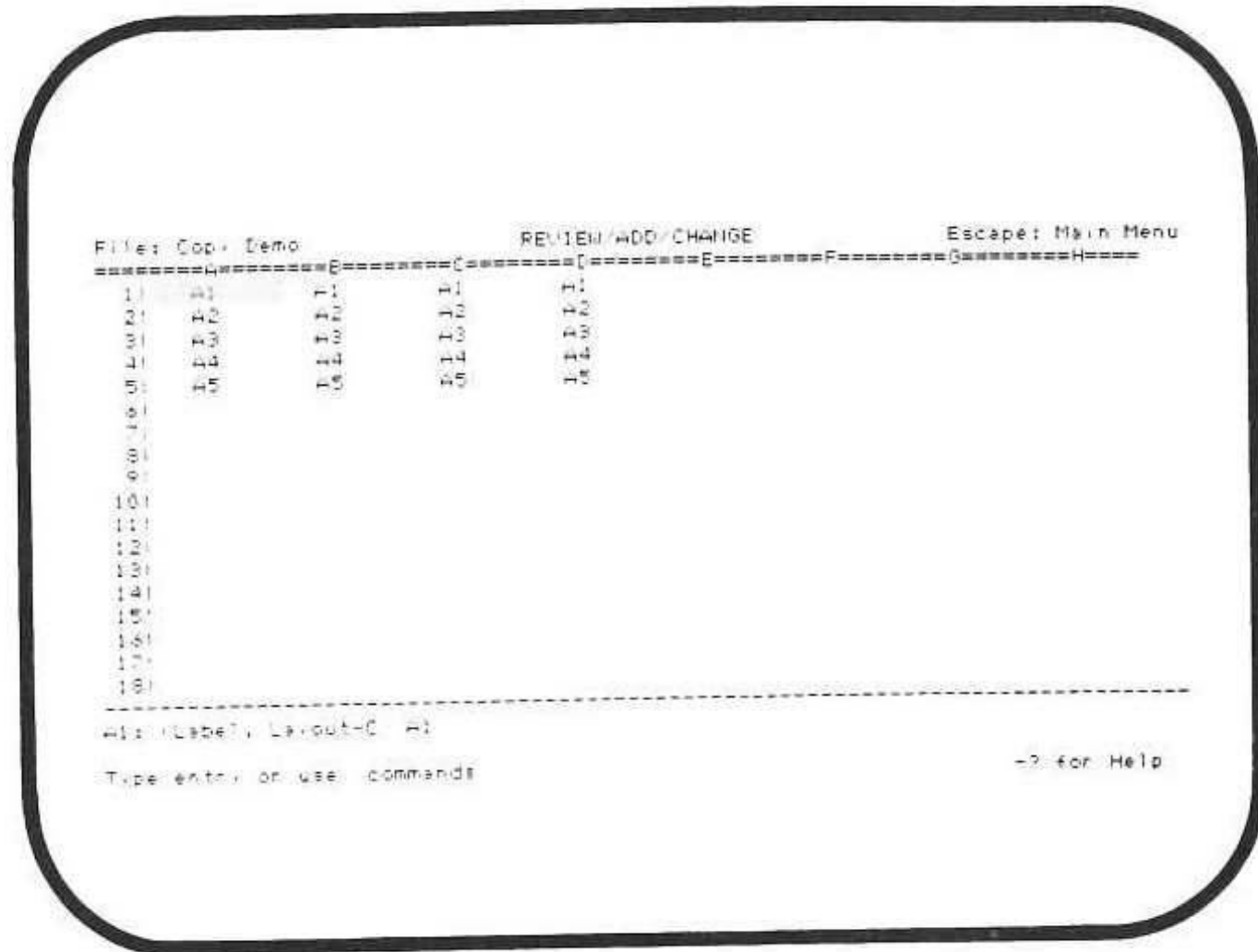


Figure 10-17.
Copying a Column Several Times

Copy-From Cells are A1 through C1.
Copy-To Cells are B3 through D3.

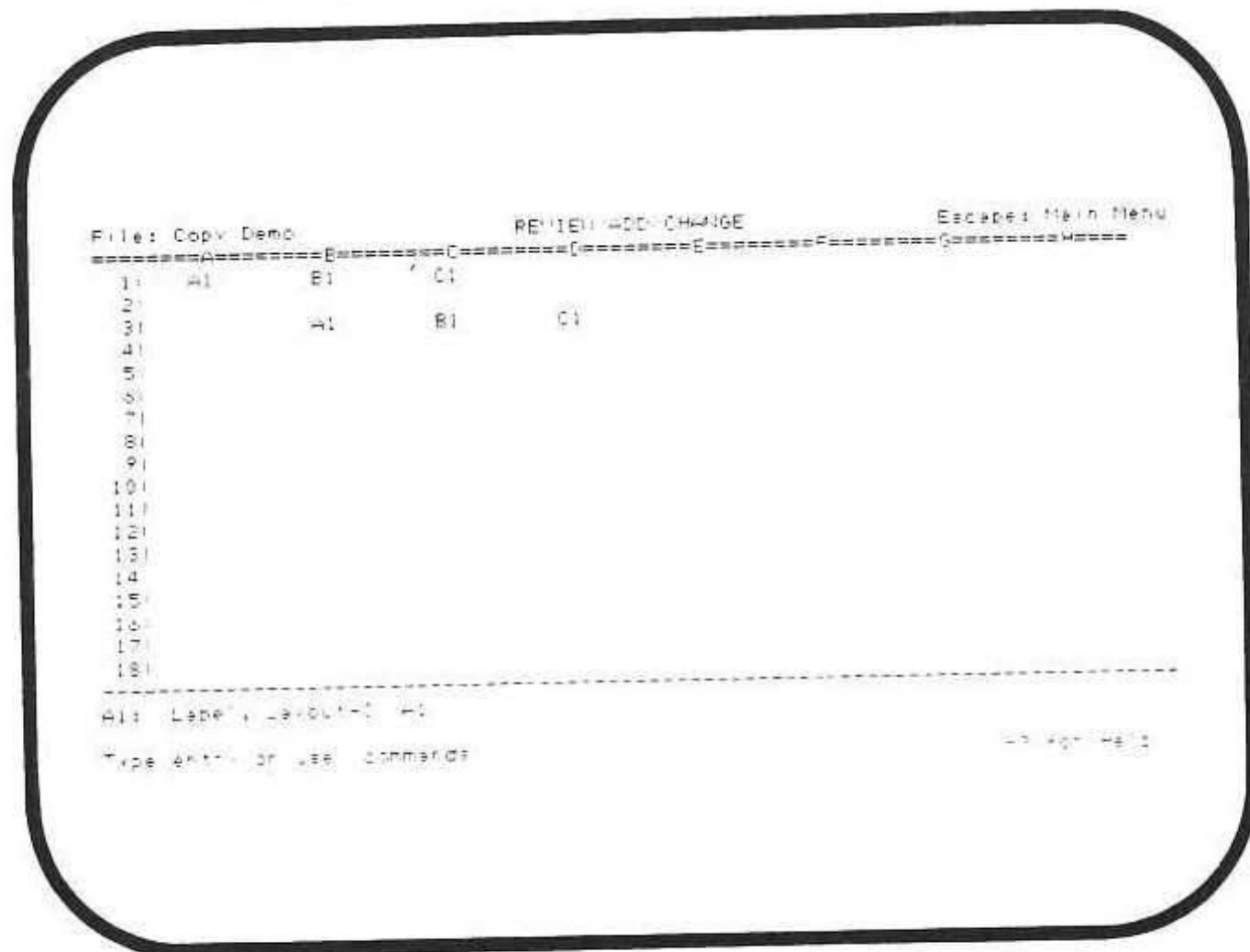


Figure 10-18.
Copying a Row

Copy-From Cells are A1 through C1.
Copy-To Cells are C3 through E3, C4 through E4, and C5 through E5.

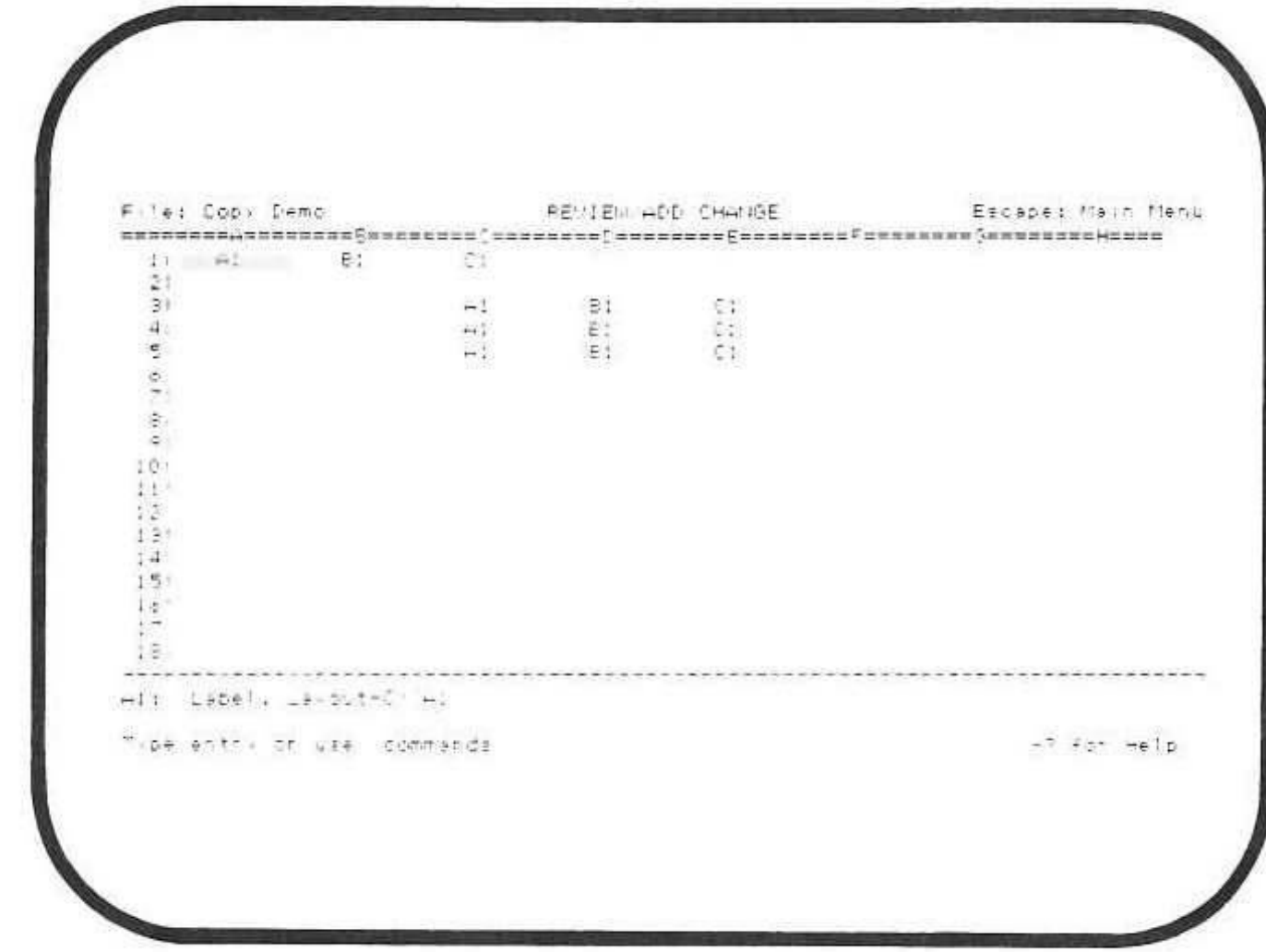


Figure 10-19.
Copying a Row Several Times

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 10-20 illustrates such a copy.

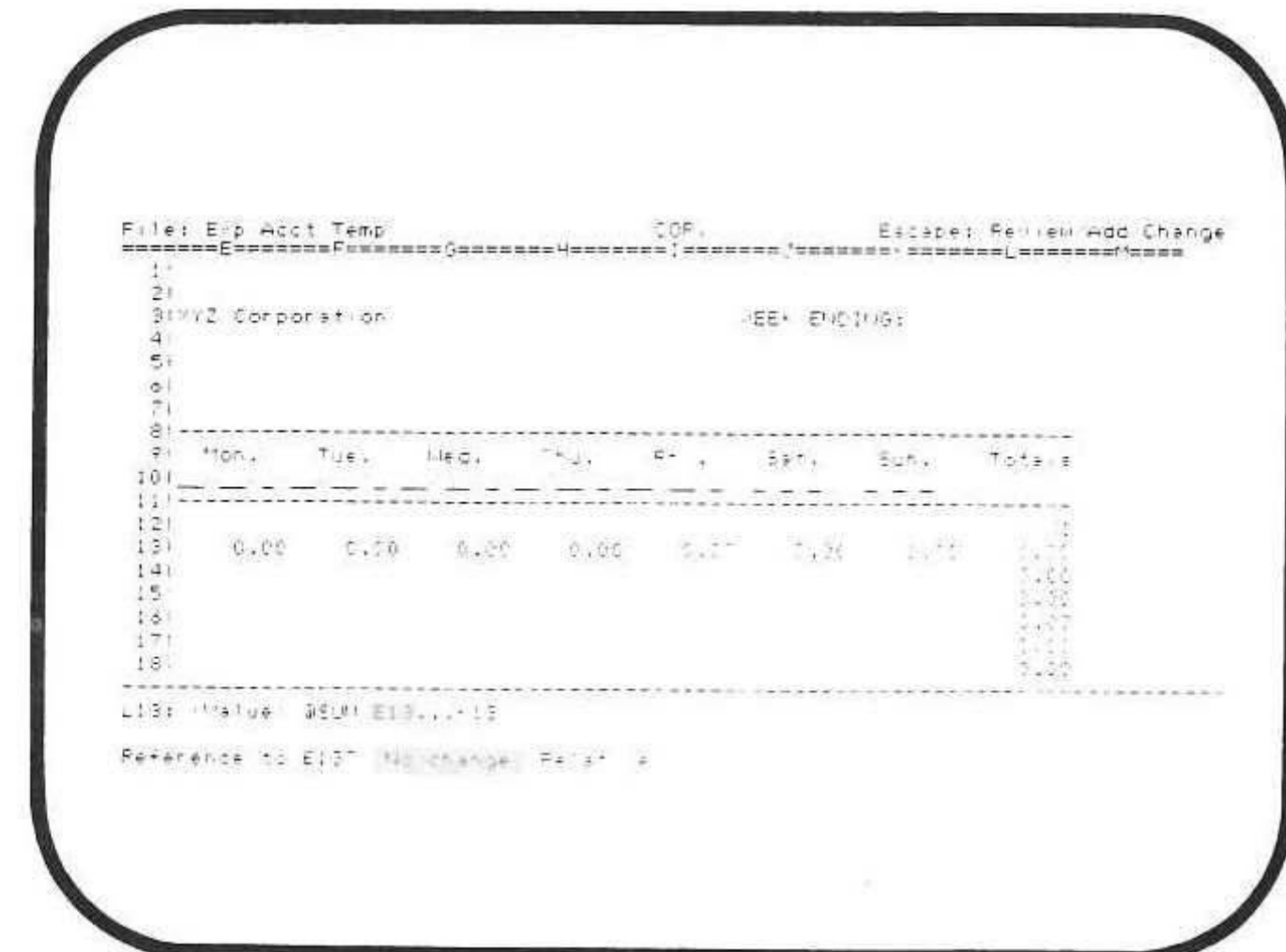


Figure 10-20.
An Exact Copy

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 copied-to cell. This kind of copy is called a relative copy. Figure 10-21 illustrates such a copy.

	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.	Totals
1								0
2								0.00
3								0.00
4								0.00
5								0.00
6								0.00
7								0.00
8								0.00
9								0.00
10								0.00
11								0.00
12								0.00
13								0.00
14								0.00
15								0.00
16								0.00
17								0.00
18								0.00

Figure 10-21.
A Relative Copy

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 "OPEN-APPLE"- "C".
3. Choose "Within worksheet".
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.

6. If you're making one copy, press "RETURN". If you're making several copies, press ".". Then use the arrow keys to highlight the other copy-to cells. Then press "RETURN".
7. /// E-Z Pieces then tells you the contents of each of the copy-from cells and asks you if you want to make an exact copy of each reference to another cell. /// E-Z Pieces highlights the referenced cells in the entry line as you go. Choose "No change" or "Relative" for each cell referenced as /// E-Z Pieces highlights each one.

/// E-Z Pieces Tips

For quick copying, type "N" or "R" in step 7, above.

/// E-Z Pieces copies labels with no questions asked.

Calculating New Values

Your worksheet standard value may provide for automatic recalculation whenever you type in a new value, or it may provide for manual recalculation. Then /// E-Z Pieces recalculates new values only when you give the sign. (Automatic recalculation is /// E-Z Pieces' best guess for when you'll want to recalculate.)

Here's how to give the sign:

1. Press "OPEN-APPLE"- "K".

/// E-Z Pieces Tips

The "OPEN-APPLE"- "V" (standard Values) command lets you specify manual or automatic frequency of recalculation and appropriate, rows, or columns order of recalculation. See "Working with Worksheet Standard Values."

Actually, /// E-Z Pieces recalculates all formulas in the worksheet during recalculation. That means the ones it has already done as well as the ones you have just provided new values for. Because /// E-Z Pieces has to keep recalculating old values, automatic recalculation may slow you down a bit. (/// E-Z Pieces 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 or if your worksheet is large.

Sometimes /// E-Z Pieces can't make a calculation, either because a referenced cell has been deleted or because a formula doesn't make sense. If so, /// E-Z Pieces displays "ERROR" in cells where it can't calculate.

Arranging Information in the Worksheet

/// E-Z Pieces lets you arrange, or sort, rows in worksheet 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 "OPEN-APPLE"- "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.

/// E-Z Pieces Tips

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.

/// E-Z Pieces does not distinguish between upper- and lowercase letters when it arranges.

Finding a Cell or Specific Information

/// E-Z Pieces 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 /// E-Z Pieces 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 /// E-Z Pieces what you want to find, /// E-Z Pieces move the cursor to the first occurrence of what you specify.

To find a cell or specific information:

1. Put the cursor anywhere in the worksheet where you want /// E-Z Pieces to begin searching.
2. Press "OPEN-APPLE"- "F".
3. Choose "Repeat last", "Coordinates", or "Text". If you choose "Repeat last", /// E-Z Pieces searches for the last text you specified.
4. If you chose "Coordinates", /// E-Z Pieces asks you to provide the coordinates of the cell you want. Type the coordinates, such as "A19" or "B12" and press "RETURN".
5. If you choose "Text", /// E-Z Pieces 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.

/// E-Z Pieces does not differentiate between upper- 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	/// E-Z Pieces finds:
Income	Income NetIncome Net Incomes: INCOME
Gas	Ford-gas Gas & Electric Gasoline gasoline

/// E-Z Pieces Tips

/// E-Z Pieces searches for information across rows and then down the worksheet.

Changing the Name of Your File

Here's how to change the name of your file:

1. Press "OPEN-APPLE"-**"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 upper- and lowercase letters, numbers, spaces, and periods. Then press "RETURN".

/// E-Z Pieces Tips

/// E-Z Pieces 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.

Chapter 11

Reporting in the Spreadsheet

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The Spreadsheet's "printer options", which are specifications about your report, communicate information to your printer about how reports should look. Each worksheet 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 worksheet, certain rows or columns, or a block of information anywhere in the worksheet.

If you choose to print all the information, /// E-Z Pieces sets the boundaries for the report as the area of the worksheet 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 /// E-Z Pieces exactly what information to include *when you print*.

Determining the Width of Your Report

Your report can't be any wider than the number of characters allowed per line according to the printer options for the worksheet and the information about your printer that you specify using Other Activities Menu option 7, "Specify information about your printer(s)".

NOTE:

See Chapter 13 for information about /// E-Z Pieces and your printer.

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 'OPEN-APPLE'-'P'.
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 ESCAPE to return to Review/Add/Change so you can replan your report. If it's not, continue printing steps.

NOTE:

Chapter 13 contains complete instructions for printing a Spreadsheet report.

Using Printer Options

Here's the Open Apple command that lets you work with printer options:

Indicate that you want to work with printer options

Press OPEN-APPLE and "O" from Review/Add/Change.

Return to Review/Add/Change after you have finished with the printer options

Press ESCAPE.

After you indicate you want to work with printer options, /// E-Z Pieces presents the Printer Options display, which looks like the display illustrated in Figure 11-1.

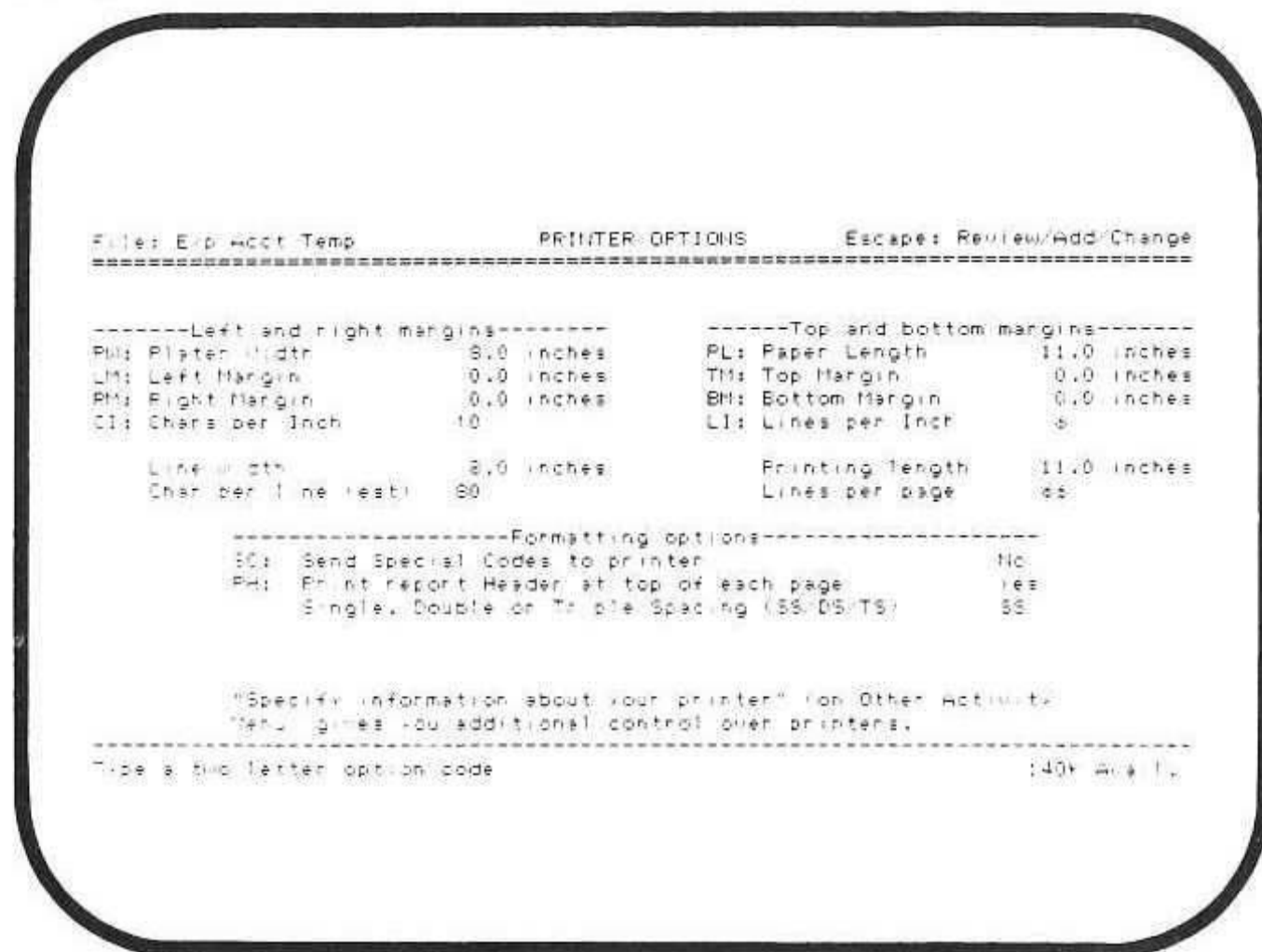


Figure 11-1.
Printer Options for Spreadsheet Reports

Left and Right Margin Options

Table 11-1 describes left and right margin options.

The Print 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)".

Best guess = 8.0 inches

The maximum you can use is 13.2 inches.

"Left margin (LM)"

The width of the left margin in inches

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

Best guess = 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.

Best guess = 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.

Best guess = 10 characters per inch

Table 11-1.
Left and Right Margin Options for Spreadsheet Reports

When you change any of the above values, // E-Z Pieces 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
= <u>Line width</u>	=	5.5 inches
x Chars per inch	x	12 characters per inch
= Chars 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.

The Printer Option:

"Paper length (PL)"

Controls

The vertical measurement of the paper you are using, in inches

Best guess = 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

Best guess = 0.0 inches. This best guess accommodates /// E-Z Pieces users who have sheet feed printers (printers with no tractor). If you have one of these printers, you should leave the best guess 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

Best guess = 1.0 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

Best guess = 6

You can use 6 or 8.

Table 11-2.
Top and Bottom Margin Options for Spreadsheet Reports

When you change any of the above values, /// E-Z Pieces 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
x	lines per inch	x	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.

The Printer Option:

"Send Special Codes to Printer (SC)"

Controls

Use this code if you want your printer to use a 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".
Best guess = "no"

"Print Report Header at top of each page (PH)"

If you change the option to "yes", /// E-Z Pieces asks for the control characters.

Type the control characters and type "^" when you have finished.

If you change this option to "yes", you must include control codes for characters per inch.

The report header consists of the file name and the date. If you don't print a report header, only information from the worksheet is printed.

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

Best guess = "no"

Table 11-3.
Other Formatting Options for Spreadsheet Reports

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".

/// E-Z Pieces automatically changes the value to its opposite.

Determining Spacing in Reports

You may specify whether you want your report to be single, double, or triple spaced. /// E-Z Pieces' best guess 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

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Cut and Paste With Data Base Information	12-3
Moving or Copying Data Base Records to Another Data Base File	12-3
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“Cut and paste” in a home or office situation 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.

/// E-Z Pieces 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”, which is a /// E-Z Pieces 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.

NOTE:

The “clipboard” is a part of the computer’s memory that holds cut and paste information.

You transfer (“cut”) information from a /// E-Z Pieces file to the clipboard. And you transfer (“paste”) the information from the clipboard to another /// E-Z Pieces file.

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.

Or

- 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. The callouts refer to the numbers in the text.

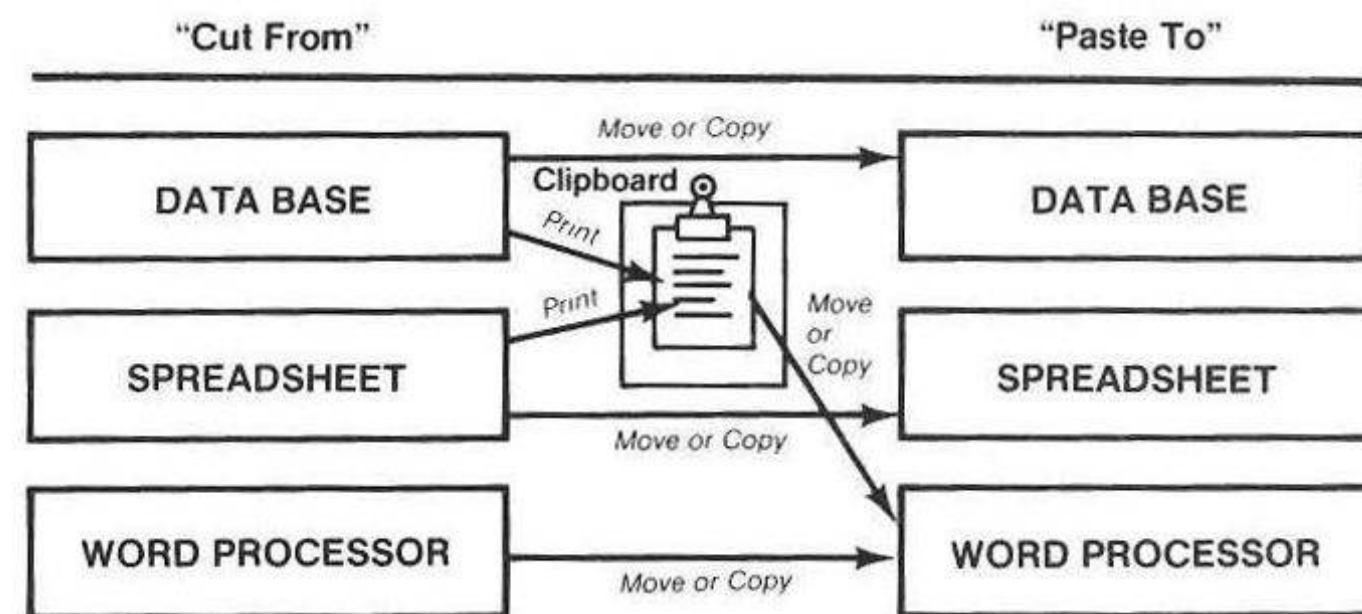


Figure 12-1.
Cutting and Pasting

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.

Work you do with files on the Desktop in no way disturbs the contents of the clipboard. Only these activities change the contents of the clipboard:

- Moving information to the clipboard, which erases what was there previously
- Copying information to the clipboard, which erases what was there previously
- Moving information from the clipboard, which erases what you move after you move it
- Quitting /// E-Z Pieces, which 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

Moving or Copying Data Base Records to Another Data Base File

To move or copy records 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 'OPEN-APPLE'-'M' to Move or 'OPEN-APPLE'-'C' 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 to the clipboard.
6. Press 'OPEN-APPLE'-'Q' 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 'OPEN-APPLE'-'M' to Move or 'OPEN-APPLE'-'C' to Copy.
10. Choose "From clipboard (paste)". At this point, /// E-Z Pieces moves or copies the records from the clipboard.

/// E-Z Pieces Tips

If you want to move only specific records, choose them with 'OPEN-APPLE'-'F' or by formulating Record Selection Rules ('OPEN-APPLE'-'R'). Then use "OPEN-APPLE"-'M' or "C" to move or copy them.

Moving or copying records from one Data Base file to another allows you to merge two files. /// E-Z Pieces 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 but the blank one. The throw away the original file. Ingenious! When you merge files, however, pay attention to the maximum records per file limitation

The files you transfer records between should match each other in numbers of categories. Left over categories will be dropped.

NOTE:

See Data Base File Guidelines on page 3-5.

Printing a Report to the Clipboard for 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. (Follow instructions in Chapter 2 to do so.)
2. Press 'OPEN-APPLE'-'P' 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". /// E-Z Pieces displays a message that tells you the report has been put on the clipboard.
5. Press 'OPEN-APPLE'-'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 'OPEN-APPLE'-'M' if you want to move the information into the document, or 'OPEN-APPLE'-'C' if you want to copy it.
8. Choose "From clipboard (Paste)" in response to "Move?" or "Copy?".

/// E-Z Pieces 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.

/// E-Z Pieces Tips

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.

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" screen. If the page is wide enough when you print, however, the lines will unwrap.

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 have included in one Word Processor document would be more appropriate in an other or in both. /// E-Z Pieces' 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 'OPEN-APPLE'"-"M" to Move or 'OPEN-APPLE'"-"C" 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 'OPEN-APPLE'"-"Q" 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 'OPEN-APPLE'"-"M" to Move or 'OPEN-APPLE'"-"C" to Copy.
9. Choose "From clipboard (paste)". At this point /// E-Z Pieces moves or copies the records from the clipboard into the document.

/// E-Z Pieces Tips

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
- Print a Spreadsheet report to the clipboard and then move or copy it to a Word Processor document

Moving or Copying Spreadsheet Information to Another Spreadsheet File

Here's how to move or copy information 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 'OPEN-APPLE'"-"M" to Move or 'OPEN-APPLE'"-"C" 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 'OPEN-APPLE'"-"Q" 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 'OPEN-APPLE'"-"M" to Move or 'OPEN-APPLE'"-"C" to Copy.

9. Choose "From clipboard (paste)". At this point, /// E-Z Pieces 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 'OPEN-APPLE'-'P' 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. /// E-Z Pieces displays a message that tells you the report has been put on the clipboard.
7. Press 'OPEN-APPLE'-'Q' to get the Desktop Index. Then choose the Word Processor document you want.
8. Move the cursor to the place where you want to insert the Spreadsheet report.
9. Press 'OPEN-APPLE'-'M' if you want to move the information into the document, or 'OPEN-APPLE'-'C' if you want to copy it.
10. Choose "From clipboard (Paste)".

/// E-Z Pieces instantly transfers the formatted report, which includes data but not formulas, into the specified place in the Word Processor document.

/// E-Z Pieces Tips

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 75 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

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/// E-Z Pieces is flexible in its ability to print in different ways and to different devices. It's also flexible in its ability to communicate with different printers. This chapter tells all you need to know to make use of that flexibility.

Methods of Printing

You are probably used to thinking of printing reports on printers. In addition to that method of printing, however, /// E-Z Pieces can “print” formatted reports, files, and parts of files onto flexible disks or ProFile. Each of /// E-Z Pieces’ three software tools has its own methods of printing. All the printing methods are available when you print, as discussed in “Printing” in this chapter, except printing a copy of the display, which is available anytime.

Figure 13-1 shows the different ways you can use /// E-Z Pieces to print. The callouts refer to the numbers in the text.

1. The Data Base, the Word Processor, and the Spreadsheet print reports to a printer.
2. All three software tools print a formatted report on a disk.
3. All three software tools print text (ASCII) files.
4. The Data Base and the Spreadsheet print formatted reports on the clipboard.
5. The Data Base and the Spreadsheet print DIF files.
6. The Data Base prints formatted reports on the screen.
7. You can always print a copy of the display on a printer.

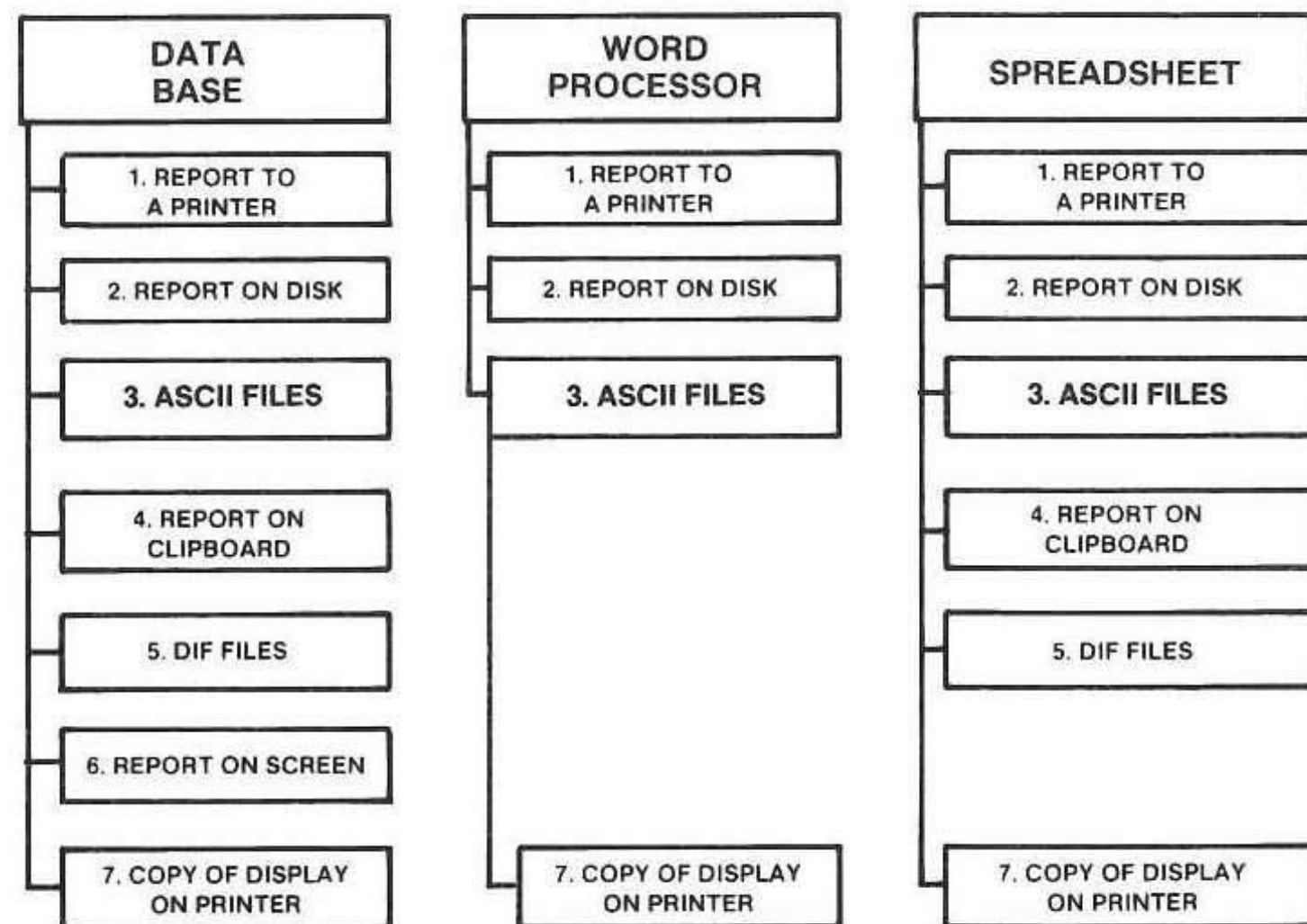


Figure 13-1.
Different Ways /// E-Z Pieces Prints

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 software tool you’re using. You also set the printer options to communicate the right information to the printer—margins, spacing, etc. When you print, you specify the printer you want to print to.

Printing to Disk

Sometimes you want to *create* a report, but you’re not able to *print* it at the same time. Perhaps the printer isn’t available. Or perhaps you are creating a report with the Apple computer in your office and you want to use the Apple computer in the next office to print the report.

Instead of making a hard copy of a report, as you do when you print to a printer, you can print the report on a disk. When the report is printed on the disk, it gets all the correct formatting and printer codes just as if it were being printed on the printer. After you print the report, /// E-Z Pieces can no longer use it. You use programs such as the Pascal Filer or your system utilities to *transfer* the report to a printer.

To make use of this 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 report will have the proper printing codes. Then, when you print to disk, you choose this printer and supply the pathname for the report you are printing.

You must still save your file as a /// E-Z Pieces file after you print to disk. When you print the report on a disk, the report becomes a file, so you must assign it a file name.

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. 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.

You must still save your file as a /// E-Z Pieces file after you print to a text file. When you print a text file, the report becomes a file, so you must assign it a filename.

Printing to a Clipboard

After you format a Data Base or Spreadsheet report, you can print it to a 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 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 disk, the report becomes a file, so you must assign it a filename. You must still save your file as a /// E-Z Pieces file 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 “OPEN-APPLE”-“H”. The copy is printed on the printer designated for it.

NOTE:

See “Changing the Display Printer” later in this chapter.

About Printers

The /// E-Z Pieces program contains information about certain printers, and you know about your own printer situation. In order to print with /// E-Z Pieces, you must communicate to /// E-Z Pieces what you know about your printer so /// E-Z Pieces can link up your information with the information it has. /// E-Z Pieces allows you to have up to three printers on your own list of printers.

Identify your printer situation according to the following four possible situations:

1. You have an Apple Dot Matrix Printer (DMP) and no other printer. The Apple DMP is /// E-Z Pieces’ “default printer”, which is the printer /// E-Z Pieces thinks you’ll use. If you have an Apple DMP and no other, you need read no further in this section. You’re set to print.
2. You don’t have an Apple DMP but you have another printer on /// E-Z Pieces’ list:
 - Apple Imagewriter
 - Apple Daisy Wheel Printer
 - Apple Silentype
 - Epson MX Series
 - Epson MX/Graftrax Series
 - Epson RX Series
 - Epson FX Series
 - Qume Sprint 5
 - Qume Sprint 11

If you don’t have an Apple DMP but you have one of these other printers, you must remove the Apple DMP as /// E-Z Pieces’ default printer and add the printer you have. You also specify your printer as the one’ where screen contents should print. See

- “Adding a Printer”
 - “Removing a Printer”
 - “Changing the Display Printer”
3. If you have an Apple DMP *and* one of the other printers on the list, you must tell /// E-Z Pieces about the other printer and make sure the printer specified for printing screen contents is the correct one.
 - “Adding a Printer”
 - “Changing the Display Printer”

4. If your printer isn't on /// E-Z Pieces' list, you can still use it for /// E-Z Pieces reports by using the custom printer option from /// E-Z Pieces' list. See

- "Adding a Printer"
- "Changing the Display Printer"

NOTE:

The "default printer" is the printer where /// E-Z Pieces thinks you'll print.

Specifying Information About Your Printer

When you specify information about your printer, you

- Add a printer to the list of printers you're using
- Remove a printer from the list
- Change specifications about a printer
- Change the display printer

This section tells how.

Adding a Printer

You can add printers to the list of printers you're using until /// E-Z Pieces knows about three of your printers. To add a printer:

1. Choose "Other Activities" from the list of Main Menu options.
2. Choose "Specify information about your printer(s)".
3. Choose "Add a printer (maximum of 3)".
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.
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 device driver for your printer.

NOTE:

See your Apple /// Owner's Manual and Appendix A of this manual for more information about device drivers.

7. If necessary, change specifications listed in Table 13-1. (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?". /// E-Z Pieces automatically changes the value to its opposite.

To change specification 4, type "4". Then type the new value for platen width. Then press "RETURN".

To change specification 5 (for Custom Printer only), type "5". Then select which printer characteristic you wish to describe to /// E-Z Pieces. After selecting the specific characteristic from the menu, you will enter the control characters exactly as they must be sent to your printer. Refer to the Operator's Manual for your printer for a table of control characters. To terminate entering the control character sequence, enter a caret ("^").

You may now define another printout feature to /// E-Z Pieces or return to the specification selection menu by pressing "ESCAPE".

NOTE:

For more information on the characteristics of your printer that you will want to define to /// E-Z Pieces, see the sections on "Controlling Horizontal Spacing", "Controlling Print Density", "Controlling Vertical Spacing", and "Using Special Printing Techniques" in Chapter 8 of this manual.

Specification	Explanation
"1. Needs line feed after each RETURN"	Some printers automatically generate a linefeed after every carriage return; these printers do not need a linefeed from the program. Other printers require that the program generate the linefeed. 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 has been printed, /// E-Z Pieces needs to instruct your printer to go to the top of the next page. Some 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 Silen-type, do not have this capability and must print a number of blank lines to get to the next page.

“3. Stop at the end of a page”.

If you are printing on letterhead stationery or if you have a printer like the Silen-type that uses non-perforated 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 /// E-Z Pieces reports.

“5. Printer Codes”
(Custom Printer Only)

These are the control characters that define to your printer the meaning of printing characteristics such as print density, horizontal spacing, vertical spacing, and special printing techniques such as boldface, underlining, superscripts, and subscripts. The exact control characters for these characteristics may usually be found in the operator’s manual for your printer.

Table 13-1.
Specifications About Printers

8. To return to the Printer Information display, press “ESCAPE”.

Removing a Printer

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

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 "ESCAPE".

Changing the Display Printer

To change the printer where the display prints:

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

This section contains information you need to print Data Base reports, Word Processor documents, and Spreadsheet reports.

Printing Data Base Reports

After you have formatted a Data Base report and set its printer options, you can print it. To print the Data Base report:

1. Make sure you are at the Report Format display.
2. Press "OPEN-APPLE"- "P".
3. Choose the device where you want to print the report.
4. If your report has a header, /// E-Z Pieces 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 is the last date you typed for printing a report.
5. If you chose a printer, /// E-Z Pieces asks the number of copies you want. Type the number and press "RETURN".

6. 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 a disk, /// E-Z Pieces asks you for the pathname for the file you are printing. Type the pathname and press "RETURN".

NOTE:

Pathnames are discussed in this manual in Chapter 1 and in detail in the Apple /// Owner's Manual.

During printing, you can press "ESCAPE" 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 Word Processor Documents

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

To request printing:

1. Press "OPEN-APPLE"- "P".
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 "ESCAPE" to stop printing and return to Review/Add/Change. Or you can press SPACE once to stop printing and once again to restart it.

/// E-Z Pieces Tips

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 "ESCAPE".

This is good for printing 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 "OPEN-APPLE"-“O”.
3. Type "PE" and press "RETURN".
4. Press "ESCAPE".

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 "OPEN-APPLE"-“O”.
3. Type "PH" and press "RETURN".
4. Press "ESCAPE"

Finish the document and then print it.

Printing a Spreadsheet Report

After you have determined how much of the worksheet you are going to print and set printer options for a Spreadsheet report, you can print it:

1. Make sure you are at the "Review/Add/Change" display.
2. If you're not printing the whole worksheet, put the cursor in a cell that marks a corner of the area you are going to print.
3. Press "OPEN-APPLE"-“P”.
4. Choose "All", "Rows", "Columns", or "Block". "All" refers to all information, not all cells.
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 "ESCAPE" and go back and replan your report. Otherwise, choose the device where you want to print the report.
7. If you chose a printer, /// E-Z Pieces asks the number of copies you want. Type the number and press "RETURN".
8. If your report has a header, /// E-Z Pieces asks you to either 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.
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, /// E-Z Pieces asks you for the pathname for the file you are printing. Type the pathname and press "RETURN".

NOTE:

Pathnames are discussed in this manual in Chapter 1 and in detail in the SOS User's Manual.

During printing, you can press "ESCAPE" 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.

APPENDIX A

Using /// E-Z Pieces with a ProFile

/// E-Z Pieces may generally be used in two ways with a ProFile fixed disk storage device. You may either boot and operate the system using the diskettes supplied with this manual (or preferably with copies of them *that you have made for your own backup use*), and simply use the ProFile for data storage; or you may install the /// E-Z Pieces program files on the ProFile, and execute the system using a program switching system such as the Quark Catalyst™, or the Habanet™ System. This chapter explains both of these options.

Using the ProFile for /// E-Z Pieces Data Storage

There is no special procedure necessary to use a ProFile for storing /// E-Z Pieces data files. The ProFile device driver is already included on the "Boot Disk", and to store /// E-Z Pieces files on the ProFile, refer to the discussion in the section in Chapter 1 entitled "File Locations" and simply follow the procedures for "Creating a New Subdirectory", and "Saving Desktop Files to Disk" in Chapter 2.

NOTE:

A device driver is a file contained on the "Boot Disk" that is loaded into the computer's memory at startup time which defines the parameters of external devices that are connected to your Apple ///, and allows the system to communicate information to these devices.

For more information on device drivers, and how to install or change those you wish to use, see your Apple /// Owner's Guide and the Standard Device Drivers Manual, or ask your dealer for assistance.

Also check your Apple /// Owner's Guide for how to operate System Utilities, and make backup copies of all the disks included with this manual. Then store the originals in a safe place, in the event your working copies are destroyed or damaged.

Installing /// E-Z Pieces on ProFile

This section explains how to install the /// E-Z Pieces program files on the ProFile for use with systems such as the Quark Catalyst or Habanet systems. For other program switching systems, consult the manual for that system on how to install applications.

Using /// E-Z Pieces with Catalyst

To install /// E-Z Pieces for operation with Catalyst:

1. Use the Apple /// System Utilities to create a new subdirectory with space for 25 files called "/PRO/THREE.EP" (if the root directory of your Profile is "/PRO").
2. Select the Copy Files function of System Utilities and place the /// E-Z Pieces Boot Disk into the built in drive.
3. Respond to the prompt for the files to copy:
".d1/="
4. Enter the following for the prompt for where to copy the files:
"/PRO/THREE.EP/="
5. When the copy is complete, put the /// E-Z Pieces Program Disk into the internal drive and enter the following to the prompt for files to copy:
".d1/="
6. Enter the following for the prompt for where to copy the files:
"/PRO/THREE.EP/="
7. If you need the space, you may delete the following tow files from the directory /PRO/THREE.EP:
SOS.KERNEL
SOS.DRIVER

All of the /// E-Z Pieces program files necessary to operate under control of Catalyst are now on the ProFile.

To operate the system with Catalyst, you now need to boot the system with the Catalyst Boot Disk if you have not already done so. Then:

1. Select the "CATALYST EDIT" option from the main menu.
2. Select the "ADD PROGRAM" option and respond to the prompted items as follows:

- Display Name: "/// E-Z Pieces"
- Interpreter Path: "/PRO/THREE.EP/SOS.INTERP"
- Character Set Path: "RETURN" (for DEFAULT)
- Screen: "RETURN" (for NORMAL)
- Keyboard Path: "RETURN" (for DEFAULT)
- Initial Prefix: "/PRO/THREE.EP"
- Max Files Allowed Open: "0"
- Program Path: Blank

3. Exit the Add Program option, and select option 7, "Update Interpreter Load Address", and follow the instructions.
4. Upon completion, follow the instructions to exit the Catalyst Editor.
5. From the main Catalyst menu, select the number that you assigned to /// E-Z Pieces, and the program will begin executing normally.

Installing and Using /// E-Z Pieces with Habanet

To install /// E-Z Pieces for use with the Habanet Program Selector system:

1. Boot the system with the Habanet Boot Disk.
2. Using system utilities, copy all files on both the /// E-Z Pieces Boot and Program Disks to the subdirectory:
".PROFILE/HABANET/="
3. Return to the Habanet main menu, and select the Add Program option.
4. Respond to the prompts for the name of the program to be added.
5. When prompted, insert the /// E-Z Pieces Boot Disk into the built in drive, and press the space bar.
6. When the system is finished, you may return to the main menu of Habanet, and select /// E-Z Pieces for execution.

NOTE:

If you need the space, you may delete the files:

SOS.INTERP
SOS.KERNEL
SOS.DRIVER

from the directory: "/PRO/HABANET"

More Information

For more information, consult the operators' manuals for both the Quark Catalyst and Habanet Systems concerning any problems or questions you may have encountered.

Having installed /// E-Z Pieces on your ProFile, you will now be able to enjoy the increased performance and convenience features that the ProFile provides along with the Catalyst and Habanet Systems.

APPENDIX B

Sending /// E-Z Pieces Files Over Phone Lines

It's easy to send /// E-Z Pieces files over the telephone lines or to another computer directly using Apple Access /// or other telecommunications program. This appendix tells how.

Three Types of Files

Three types of /// E-Z Pieces files can be sent. They are

1. ASCII files created by the Word Processor
2. /// E-Z Pieces files created by the Word Processor or the Data Base
3. DIF files created by the Spreadsheet or Data Base.

An Example

The following is an example of sending a /// E-Z Pieces file as a text (ASCII) file. The file being sent is a Word Processor file, but first must be converted:

1. Press "OPEN-APPLE"- "P" from Review/Add/Change.
2. Tell /// E-Z Pieces where you want to print from.
3. At the Print Menu, choose "A text (ASCII) file on disk".
4. Assign it a pathname
5. Using Access /// to send the file as you would any ASCII file, using the pathname assigned.

/// E-Z Pieces Files

You may, of course, send /// E-Z Pieces files over the phone lines. However, the receiver must use /// E-Z Pieces in order to read your files.

DIF Files

You may also send DIF files. DIF files are a VisiCalc standard and the Spreadsheet creates them. The procedure you follow is the same as that for creating ASCII files from the Word Processor.

NOTE:

A telecommunications program should not care what type of file you are sending. The receiver, however, must know what type of file it is getting.

Error Checking

Some telecommunications programs offer error checking. Access ///, 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.

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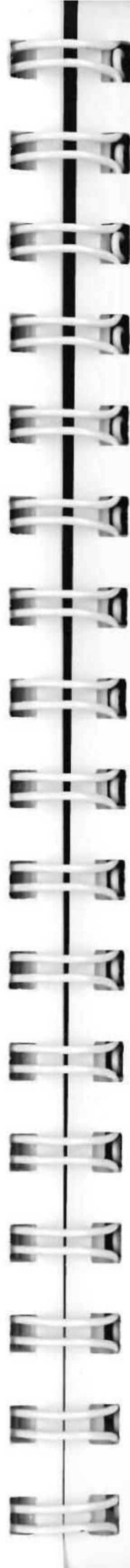
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/// E-Z Pieces™



SAMPLE FILES

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