

# WordWizard™

## Text Processing System

# User's Manual

**Processor Technology  
Corporation**

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7100 Johnson Industrial Drive  
Pleasanton, CA 94566  
Telephone (415) 829-2600

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First Edition, Second Printing, February 1979  
Manual Part No. 727211  
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## IMPORTANT NOTICES

The WordWizard programs were written in the language "C" by J. Donald Thomson of Basic Computer Group Ltd., specifically for Sol Systems. An earlier version of the software was released by Basic Computer Group under the name "Word Processing Series III." Portions of the copyrighted manual which accompanied that version have been used in this manual, with the permission of Basic Computer Group Ltd, 1548 West 8th Avenue, Vancouver, British Columbia, V6J 4R8, (604) 736-7474.

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This manual was written and drafts printed using WordWizard. Final text was transmitted to a 'computerized' phototypesetting service for composition.



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# SECTION 1

## INTRODUCTION

### 1.1 YOU AND YOUR WORDWIZARD™

“Look at the time! It’s almost noon and — oh, a mistake. I’ll have to type the whole page over”

*WordWizard*

No you won’t. I remember every word you typed. Just type over the error and go on.

“Oh no. I’ve been spelling ‘receipt’ wrong for the entire afternoon.”

*WordWizard*

Don’t worry. Just instruct me to correct it everywhere in the document. I’ll even show you where it is.

“Here I am on the ninth page of a ten-page report and I’m supposed to add a paragraph on page two.”

*WordWizard:*

Let me handle it! Go ahead and add the paragraph. I’ll paginate the whole report for you.

“All these letters are alike except for a few lines. I’ll have to type the same thing over and over.”

*WordWizard:*

This is my forte! I’ll remember the first letter you type, so you can just change it a little for each of the other letters.

You and your WordWizard can do it! You can handle a wide variety of situations in which words are typed, moved, removed, added, changed, or rearranged. You can:

- Print letters, reports, and manuscripts at 2400 words per minute (with SolPrinter 3).
- Revise text without retyping.
- Automatically correct a repeated mistake throughout a document.
- Move or copy passages to another location.
- Merge two or more documents.
- Pull material from one document and insert it in another.
- Keep master letters on hand and insert appropriate names, addresses or phrases when it’s time to send a letter out.
- Create manuals and books with headings, footings, figures, and tables.
- Alternate between printers without leaving WordWizard.

## **1.2 WHAT YOU NEED TO START**

### **1.2.1 Equipment**

The basic equipment you need is

- 1) A Sol<sup>®</sup> Terminal Computer
- 2) A Video Monitor (display screen)
- 3) A Helios II Disk Memory System
- 4) A SolPrinter<sup>®</sup>

The Sol Terminal Computer is the piece of equipment that resembles a typewriter.

The Video Monitor is the piece of equipment that resembles a television set.

The Helios II Disk Memory System is the large piece of equipment with the two vertical slots in its front panel. It is also called a "disk drive."

The SolPrinter is the piece of equipment that looks like a large, heavy typewriter without a keyboard.

There are many different configurations of this basic equipment and how you connect your equipment is a function of the configuration you are using. Appendix 3 provides detailed information about the different equipment and tells you how to set switches and connect the equipment for your configuration.

When the equipment is connected, it makes up a small, general-purpose computer system that is capable of word processing and a lot more. The WordWizard disks turn it into an electronic typing system. There are other disks you can get from your dealer if you want to use the equipment for record-keeping, accounting, and scientific uses.

### **1.2.2 Supplies**

The supplies required are

- 1) The WordWizard System Disk
- 2) A WordWizard Document Disk
- 3) Several Blank Disks
- 4) Paper for the Printer
- 5) Two keyboard labels printed with LOAD and MODE functions

A disk is an object that looks like a very thin 45-size record in a black sleeve. It actually consists of a supple disk similar to a 45-size record and a square covering that is never removed. The WordWizard System Disk is distinguishable by its copper-colored label. The WordWizard Document Disk is distinguishable by its white label.

The WordWizard System Disk is very important. Without it, you do not have an electronic typing system. Store the System Disk and the Document Disk you received with the system in a safe place away from dust, smoke, spills, and the like. (Your first "Hands On" experience with the system will be to make backup copies of these two disks.) Disks are very fragile; never touch the part of a disk that is visible through the openings in the square covering.

Blank disks (or "floppy disks") are available for a few dollars each. Get plenty — at least five or ten for starting out.

It is a good idea to get continuous form printer paper for practice and for rough copy, even if you plan to print final documents on individual sheets of paper.

You should have two keyboard labels printed with LOAD and MODE functions. They look like this:



Stick the labels on the metal surface just above the Sol keyboard. Align the long label over the typewriter keyboard and the short one over the 15-key pad. For the long label, LOAD and MODE should be over the ESCAPE key, and RIGHT MARGIN RELEASE over the 0 key. For the short label, JUSTIFY OFF and JUSTIFY ON should be over the ÷ key of the 15-key pad.

The keyboard labels will help you remember commands used to set up your typing space and modify your documents. It is very important to keep them over the keyboard. If they are missing, ask your Processor Technology dealer for some.

The only manual you need at this point is this guide. The other literature you received with your system provides more detailed reference. If you want to learn more about the system at any time, start by reading the *Helios II User's Manual*.

### 1.3 A WORD ABOUT ELECTRONIC TYPING

The fundamental difference between electronic typing and typing is that as you type words on an electronic typing system, they are remembered rather than just printed on a piece of paper. These remembered words can then be changed, reorganized, made to fit wide or narrow paper, or manipulated in any way you choose before they are printed on paper at a very high speed.

When you are working on a typewriter, any change in text requires retyping and you can only print text by typing that text. Working with WordWizard, however, you can change or print text by giving a one- or two-keystroke command.

In general, using an electronic typing system involves four major processes:

- 1) You type the text of your document on a keyboard much like the keyboard on a typewriter;
- 2) You edit the text — make corrections and changes, rearrange paragraphs, insert new material — by examining the document on the video display screen and telling the system what changes you want to make and where you want to make them;
- 3) The system stores the text as you type it — first in the “memory” of the computer, and then on a disk; and
- 4) You instruct the system to print your document on your printer (or on whichever of your printers is more suitable for the task).

### **1.3.1 The Video Display Screen**

As you type words on your WordWizard electronic typing system, they will appear on the screen. The screen is your visual aid for working a manuscript into its finished form. The screen lets you see sixteen 64-character lines of your manuscript at any given time. This doesn't mean your manuscript is only 16 lines long or 64 characters wide. It means there is a 16-line by 64-character "window" that you can move up and down or back and forth to see all parts of your manuscript.

The solid block that you see on the screen is called the cursor. It marks the current typing position. As you type, the cursor moves to the right and each new character appears where the cursor was before you pressed the key. If you put the cursor over a line you have already typed and begin typing, the characters in the line will be replaced by the characters being typed. This feature is like the one available on the new typewriters that allow you to back up over some characters, erase them, and replace them with new characters.

You can move the cursor with the arrow keys or with certain commands described later. You can put the cursor anywhere in the document and add characters at that point, or, if there are already characters there, you can type over them, replacing old text with new.

While you are working on your document and viewing it on the screen, you can use the cursor and LOAD and MODE commands that will be described later to add, alter, rearrange, change margins, etc. and get the text into its final form. When you print the document, it will appear as it did on the screen (excepting the effect of print-control statements, described later).

### **1.3.2 How WordWizard Remembers**

WordWizard has two ways to remember what you type: just as you can remember words in your brain or write them on a piece of paper, WordWizard can remember words in its memory or write them on a disk. WordWizard's memory is on printed circuits located inside the Sol Terminal Computer. A disk resides outside the computer; it is inserted into the disk drive only while the system is actually in use.

There is a big difference between WordWizard's memory and yours. When you turn off the system, WordWizard forgets everything you told it during the work session. WordWizard's memory provides only short-term storage.

Disks, on the other hand, provide long-term storage. When a document has been recorded on a disk, it normally stays there until you change or remove it using the electronic typing system. (It is also possible to lose information by damaging a disk — by letting it get wet or dusty, for example — or through an accidental system failure.)

Another big difference between WordWizard's memory and disks is that memory can hold only about one page, or 7040 characters, of information (about one single-spaced typewriter page) while a Document Disk can hold up to 110 pages. Thus, WordWizard's memory is short-term and small while disk storage is long-term and large.

WordWizard's memory and disk storage are both used by the system as you type a document. The system saves information in memory as you type, then automatically stores it on a disk as soon as memory is full. In Section 2 you'll learn more about how WordWizard uses its memory and disks to store words as you type them.

## **1.4 A GUIDE TO THE GUIDE**

This guide teaches you electronic typing using the WordWizard. You will learn gradually and practice what you learn as you work your way through the guide. When you finish, you can use the guide for reference. The Table of Contents will help you find information quickly.

The remainder of the manual is organized as follows:



In *Section 2* you'll begin working with WordWizard and learning a little about its capabilities.

In *Section 3* you'll learn about safety — how to treat your disks, how to keep from losing information, and how to protect your documents with backups. This information is important because neither a person nor an electronic typewriter is infallible, and you should know how to protect yourself against accidents.

In *Section 4* you'll learn how to create and revise documents, and how to solve a number of common typing problems.

In *Section 5* you'll begin merging documents and find out the many ways merging can be used (making form letters, for example).

In *Section 6* you'll begin working with the printer. Once you have finished reading that section, you will be able to produce typed copies of letters, manuals, and reports.

In *Section 7* you'll read about the statements used to print finished reports and manuals with headings, footings, footnotes, etc. These statements give you complete control over the size, shape, and format of each page.

Many times throughout this guide, we suggest "Hands On" experience. When you get to a "Hands On," turn on your equipment and follow the instructions.

On the last page of this guide you will find a form entitled "READER COMMENTS." You are invited to participate in the development of this guide by mailing us any comments or suggestions you might have.

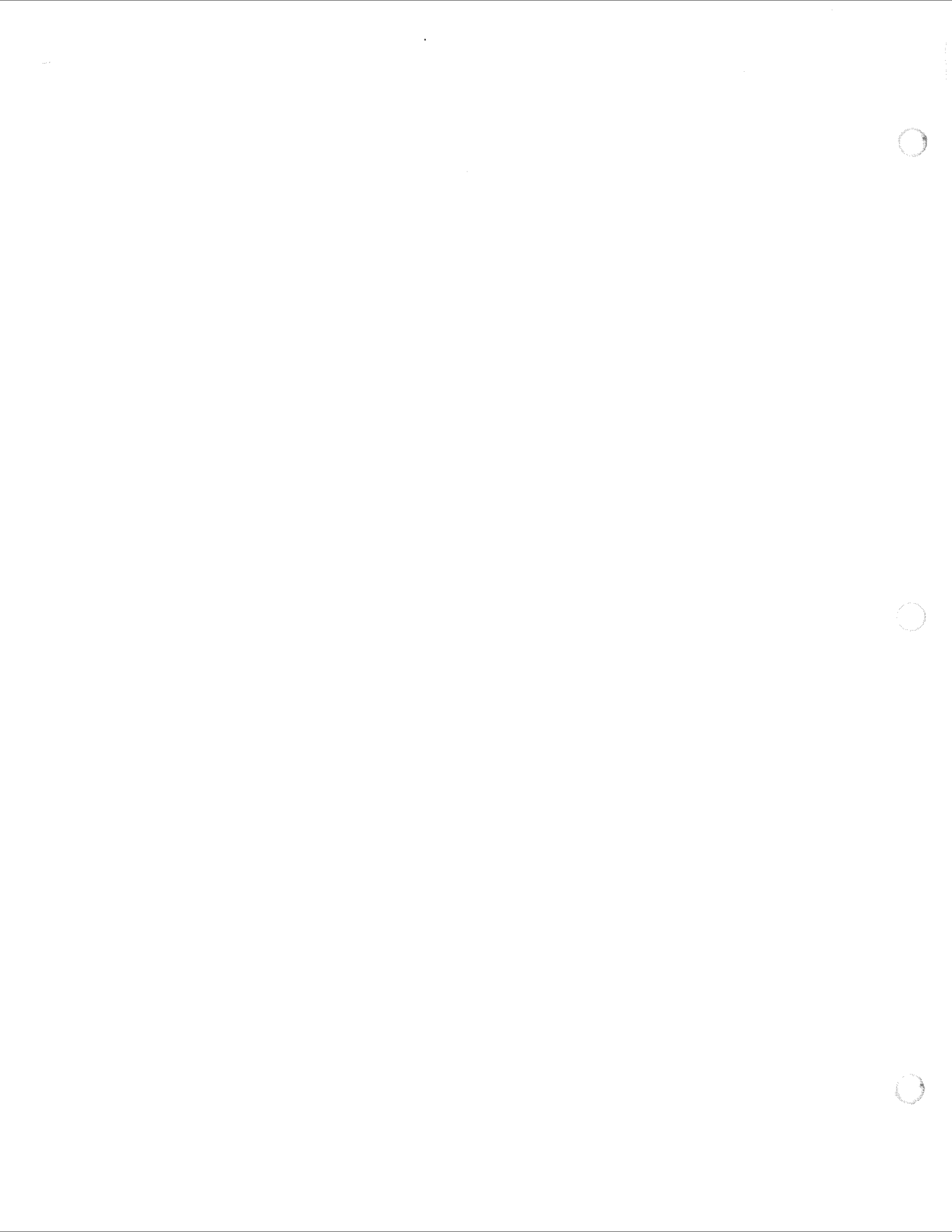
## 1.5 TERMS AND CONVENTIONS

Sometimes a symbol can replace a paragraph of explanation. Symbols are particularly useful in examples or in descriptions of what to do in a "Hands On" experience. The symbols used in this guide are:

<b>Symbol</b>	<b>Meaning</b>
<i>RETURN</i>	Press the RETURN key.
⌈	The line ends with a RETURN.

There are certain conventions for referring to types of disks in the guide. They are:

<i>New disk</i>	A blank disk that has no information or formatting on it.
<i>Empty document disk</i>	Not a blank disk as bought from the manufacturer, but a disk formatted by the system to contain documents. If it has no documents on it, it is called empty.
<i>Scratch disk</i>	A new disk, or any disk containing expendable information.



## SECTION 2

### GETTING ACQUAINTED WITH WORDWIZARD

#### 2.1 HOW TO TURN THE WordWizard ON

The front of the Helios has a key switch to apply power. Usually the other equipment is plugged into the back of the Helios so that the key switch is a "master power switch."

The key can be removed whether it is in the on or off position. It is a good idea to remove it while you're using the system, so that power is locked on. If someone turns off the power while you're working on a document, part of the document will disappear, and the disks themselves may be damaged.

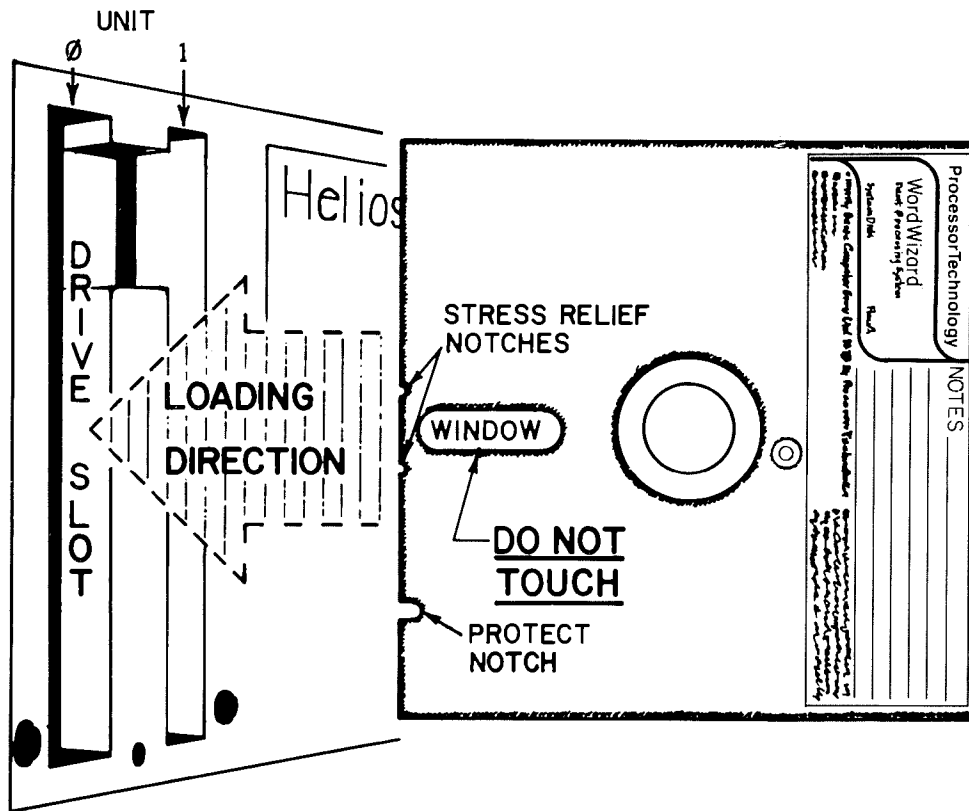
If the Sol is plugged into the Helios, it should come on when the Helios does. If the Sol doesn't start when you turn the key, check the back of the Sol to see that the red "on" button is pushed in. Neither the Sol nor the Helios requires any warm-up.

The video monitor has a power switch you must touch to turn the screen on or off. Unlike the Sol, the video monitor doesn't come on automatically when you turn the Helios key. You must touch the power switch each time you turn the system on. The monitor will take a few seconds to warm up. The Contrast and Bright knobs under the power switch can be adjusted to make text on the screen more readable.

The screen may display white characters on a black background or black on white. If you want the current setting switched, tell your authorized service person.

On the left of the Helios are two slots for floppy disks. The left-hand slot, called unit 0, is reserved for the WordWizard System Disk. The right-hand slot, called unit 1, is reserved for WordWizard Document Disks.

To insert a disk, orient it so that the label is in the upper left corner and push it into the slot. Push it all the way in.



When you want to take the disk out, simply push the black "eject" button beside the slot containing the disk, and a motor inside will partially eject the disk.

#### CAUTION

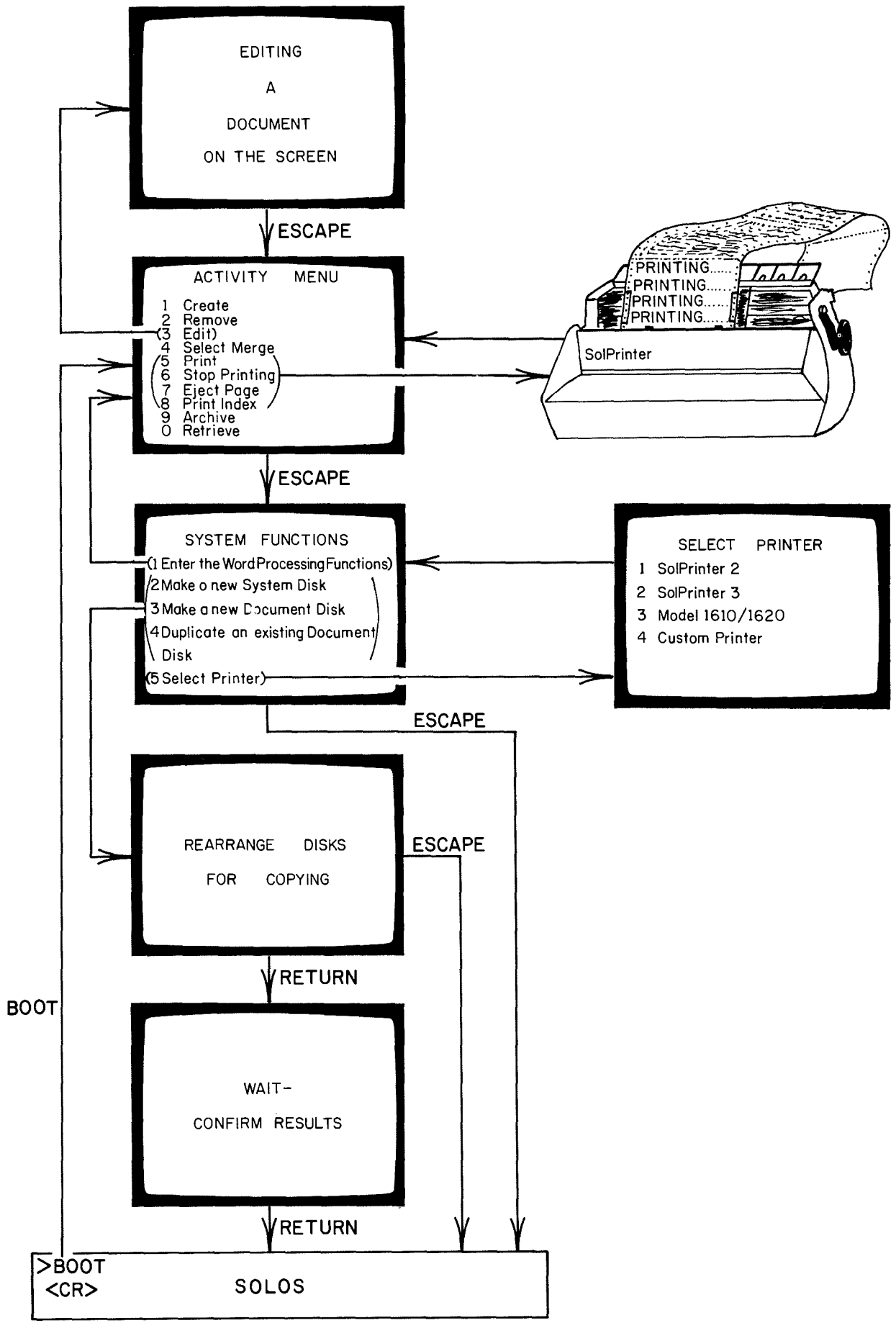
*Be very careful not to eject or change disks during a Word Wizard session (unless an operation specifically calls for a change of disks). You can lose or scramble your documents if WordWizard tries to get (read) or put (write) information on a disk and the disk is not there because you have ejected it or put another disk in its place.*

## 2.2 THE MENU, IF YOU PLEASE

WordWizard presents you with menus to choose from at critical points during a work session. The Activity Menu displays all the activities that are available for preparing particular documents. The System Function Menu displays all the available system activities (like preparing and copying whole disks). The Select Printer Menu displays all possible printer selections.

The diagram on the opposite page shows how the different menus are related to each other and to operations being performed. It might help to refer to the diagram from time to time as you read the rest of this guide.

Think of WordWizard as divided into work areas; each of those areas is represented by a box on the diagram. "SOLOS" is the name of the area where the starting prompt (>) appears. The lines with arrows show means of getting from one menu or area to another. For example the arrow from the Activity Menu to the top screen picture shows that if you type a 3 to select the Edit Activity, you will see a document to edit. The word ESCAPE and RETURN next to an arrow mean that by typing the ESCAPE or RETURN key you can move from one area to another. The



cursor must be present on the screen before any of the transitions can be made.

Notice that if you want to turn off the system, you should press ESCAPE repeatedly until the prompt appears, then remove the disks, and then turn the key switch to the off position.

### 2.2.1 The Activity Menu

When you start up the WordWizard, it displays some information about your documents and a list of activities. For example:

```
Basic Computer Group, Ltd. / Processor Technology Corp.  
WordWizard 4.0 (MOD 0)  
Documents on the Document Disk  
CHARACTER-SET      LIBRARY      W.W.LIB      W.W.MANUAL
```

#### Activity Menu

```
1. Create          5. Print          9. Archive  
2. Remove         6. Stop Printing 0. Retrieve  
3. Edit           7. Eject Page    S. Screen Print  
4. Select Merge   8. Print Index
```

Select Activity: 85 pages left on disk.

The documents listed above the activities are names of documents stored on the Document Disk you are currently using. This list is called the index of documents. Document names can be up to 15 characters long and can contain letters or numbers in any order, and some other special characters like period and hyphen, but not spaces. Letters will always be uppercase. The document names are arranged alphabetically and numerically. "A" comes before "B," "1" before "2," and numbers come before letters. (For example, DOC1 is listed before DOC2 or DOCA). There can be as many as 20 document names in the index. If you have not written any documents, there will be no names in the list.

The document index is automatically updated as you add to or delete documents from your Document Disk.

The right part of the last line, "85 pages left on disk" in this example, tells approximately how much room you have left on your Document Disk. If you have an empty Document Disk, the message will be, "110 pages left on disk." A page in this context is not the amount of text that will appear on a page when your document is printed, and it is not the amount of text on the screen. It is about the amount of text that you would could put on an 8-1/2 x 11" sheet of paper with a pica typewriter. You can use all 110 pages for one giant document or you can create many short documents. How you use the space is up to you. The number of "pages left on disk" can vary somewhat even if you do not add or delete text. Do not worry if the numbers shown in the examples in this manual are not the same as the ones you see on your own screen.

The Activity Menu is a list of commands that you can use to work with your documents. The activities you can select are:

1. *Create* — Add a document name to the index of documents.
2. *Remove* — Remove a document from the Document Disk, releasing space for other documents.
3. *Edit* — Display a document on the screen, allowing it to be examined, altered, etc.

4. *Select Merge* — Select a document from which passages will be taken for insertion into another document.
5. *Print* — Print a document on the SolPrinter.
6. *Stop Printing* — Stop printing the document.
7. *Eject Page* — Advance the paper in the printer.
8. *Print Index* — Print on the SolPrinter the list of documents on the Document Disk.
9. *Archive* — Make a copy of a document and save it on the System Disk.
10. *Retrieve* — Write onto the Document Disk a copy of the document most recently saved with the Archive activity; that is, retrieve the archive document.

These commands are explained in much more detail in the pages and sections that follow.

If you make a mistake while giving any of these commands or typing a requested document name, you can correct it as follows:

- Press the ESCAPE key to start over
- Use the DEL key to delete a character
- Use the left arrow to back up and type over the error.

### **2.2.2 The System Functions Menu**

Any time the Activity Menu is on the screen and the cursor is present, you can get to the System Functions by pressing the ESCAPE key. The System Functions Menu is a list of system activities you can perform. The menu appears on the screen as follows:

```
Basic Computer Group, Ltd. / Processor Technology Corp.  
WordWizard 4.0 (MOD 0)  
System Functions:
```

1. Enter the Word Processing Function
2. Make a new System Disk
3. Make a new Document Disk
4. Duplicate an existing Document Disk
5. Select Printer.

Select Function:

When the System Functions Menu is on the screen, you can safely remove or exchange Document Disks. The only other time you can remove a Document Disk is when the prompt (>) appears on the screen. (It's safe to remove a System Disk only when the system prompt (>) appears on the screen or during the function called Duplicate an Existing Document Disk.)

To select a System Function, type the number of the function. If you type anything except 1 through 5, the entry is ignored. If you type a number between 1 and 5 and it is a mistake or you decide not to continue, press ESCAPE to return to the System Functions Menu.

If you press ESCAPE while the System Functions Menu is on the screen, you will return to the starting prompt (>) and must give the BOOT command if you want to restart the WordWizard.

The System Functions are:

1. *Enter the Word Processing Function* —

This function causes a return to the Activity Menu.

2. *Make a new System Disk* —

This function lets you make a copy of the System Disk. Remember that Processor Technology software is copyrighted. Duplicates are for your use, for maintenance and backup only. Copies should not be given away or sold.

3. *Make a new Document Disk* —

This function prepares a blank or scratch disk so that it can contain documents. You can also use it to erase all documents from an old Document Disk.

4. *Duplicate an Existing Document Disk* —

This function makes an exact copy of the contents of an existing Document Disk onto a blank or scratch disk.

5. *Select Printer* —

If you use more than one printer, or if you change printers, use this function to specify which printer you're using. Once you select a printer, WordWizard remembers (even when you turn the power off). Use this function only if there is a change in printers. (Read more about this function in Section 6.)

## 2.3 MAKE YOUR WORKING DISKS

Your first experience with WordWizard will be to make a copy of your most important disks — the WordWizard System Disk and the Document Disk you received with the system.

### Hands On — Copy the Wordwizard System Disk

First, connect your equipment and turn it on by turning the key in the disk drive. (If you don't know how to connect your particular configuration, see Appendix 3.) Press the power button at the back of the Sol Terminal Computer, if necessary, and turn the video monitor on. A prompt (>) should appear on the screen.

Insert the System Disk in unit 0 of the disk drive (remember, unit 0 is the leftmost slot in the disk drive), and insert your Document Disk in unit 1.

Type **BOOT** (all capital letters) and then press the **RETURN** key:

```
BOOT    RETURN
```

Information about the versions of WordWizard and other programs being used appears on the screen. Then WordWizard displays:

```
Basic Computer Group Ltd. / Processor Technology Corp.  
WordWizard 4.0 (MOD 0)  
Documents on the Document Disk  
CHARACTER-SET    LIBRARY    W.W.LIB    W.W.MANUAL
```

Activity Menu:

```
1. Create          5. Print          9. Archive  
2. Remove         6. Stop Printing 0. Retrieve  
3. Edit           7. Eject Page  
4. Select Merge   8. Print Index
```

```
Select Activity:          85 pages left on disk.
```



This is the Activity Menu. The "activities" on the menu are those related to the typing, revising, and printing of particular documents. Now, however, the task is to make a copy of the System Disk. Functions unrelated to the preparation of particular documents are called System Functions.

Press the ESCAPE key to get to the System Functions Menu. WordWizard displays:

```
Basic Computer Group, Ltd. / Processor Technology Corp.  
WordWizard 4.0 (MOD 0)  
System Functions:
```

1. Enter the Word Processing Function
2. Make a new System Disk.
3. Make a new Document Disk.
4. Duplicate an existing Document Disk
5. Select Printer.

Select Function:

Since you want to make an exact copy of the System Disk, select function 2. Type

2

WordWizard then instructs you as follows:

```
Insert a scratch disk in drive 1,  
then press RETURN (or ESCAPE to abort).
```

Insert in unit 1 a disk that does not contain information that you want to save. Then press the RETURN key. (If there were some reason not to continue, you could press ESCAPE.)

Copying the System Disk takes at least 10 minutes. WordWizard tells you what is going on as the copy is made:

```
Erase Drive No. 1  
Copy Unit 0 to Unit 1  
Copy Complete  
Verify Disks  
Disks 0 and 1 are identical
```

If you don't get the "disks are identical" message, there is a problem and you should call your authorized service person.

When the copy is complete, WordWizard tells you to press the RETURN key. This action completes the operation. Take the new System Disk out and label it with the extra System Disk label provided. Make sure the label is placed near the top edge of the disk, as on the original disk, so that the small round hole is not covered. The disk you have made is your working System Disk. Store the original in a safe place. Copies you make are for backup use only.

The Document Disk you received with the system contains a library of information that can be used for merging with other documents, the source document for the first section of this guide, and other useful information. You can use this Document Disk for getting acquainted with WordWizard, and so can other people who will learn WordWizard after you. Because you might make mistakes while you practice, the original Document Disk should be saved in its original form. The next exercise is to make a copy of the Document Disk you received with the system.

## Hands On — Copy an Existing Document Disk

As in the previous "Hands On," insert the System Disk (your working System Disk this time) in unit 0 and the Document Disk in unit 1. Then type BOOT and press the RETURN key.

WordWizard displays:

```
Basic Computer Group Ltd. / Processor Technology Corp.  
WordWizard 4.0 (MOD 0)  
Documents on the Document Disk  
CHARACTER-SET LIBRARY W.W.LIB W.W.MANUAL
```

Activity Menu:

- |                 |                  |             |
|-----------------|------------------|-------------|
| 1. Create       | 5. Print         | 9. Archive  |
| 2. Remove       | 6. Stop Printing | 0. Retrieve |
| 3. Edit         | 7. Eject Page    |             |
| 4. Select Merge | 8. Print Index   |             |

Select Activity: 85 pages left on disk.

Again, press ESCAPE to leave the Activity Menu and go to the System Functions. WordWizard then displays:

```
Basic Computer Group, Ltd. / Processor Technology Corp.  
WordWizard 4.0 (MOD 0)  
System Functions:
```

1. Enter the Word Processing Function
2. Make a new System Disk.
3. Make a new Document Disk.
4. Duplicate an existing Document Disk
5. Select Printer.

Select Function:

This time you want function 4, "Duplicate an existing Document Disk." Type

4

WordWizard instructs you as follows:

```
Remove System disk from drive 0.  
Insert Document Disk to be duplicated in drive 0.  
Insert a scratch disk in drive 1,  
then press RETURN (or ESCAPE to abort)
```

Be very sure you insert the Document Disk you received with the system in unit 0, not unit 1. If you put it in the wrong unit, its data will be destroyed. Insert the scratch disk in unit 1 and press RETURN.

Copying the disk will take about 8 minutes. As the system works, it tells you what is going on:

```
Erase Drive No. 1
Copy Unit 0 to Unit 1
Copy complete
Verify Disks
Disks 0 and 1 are identical
```

If you don't get the "disks are identical" message, there is a problem and you should call your authorized service person.

When the copy is complete, WordWizard tells you to press the RETURN key. This action completes the operation. Take the Document Disk from unit 1, label it, and store the original in a safe place.

Next you will need some empty Document Disks. The "Hands On" below shows how to create empty Document Disks. As mentioned in Section 1, empty Document Disks are not new disks as received from the manufacturer. They have been formatted to contain WordWizard documents.

### **Hands On — Make Some Document Disks**

Turn on your equipment just as you did in the previous "Hands On." Insert your working System Disk in unit 0 and the copy of the Document Disk you received with the system in unit 1. Then type:

```
BOOT      RETURN
```

The Activity Menu will appear on the screen just as it did before. Press the ESCAPE key to get the System Functions on the screen:

```
System Functions:
1. Enter the Word Processing Function
2. Make a new System Disk.
3. Make a new Document Disk.
4. Duplicate an existing Document Disk
5. Select Printer.

Select Function:
```

Since you want to make a new Document Disk, select function 3. Type:

```
3
```

WordWizard then instructs you as follows:

```
Insert a scratch disk in drive 1,
then press RETURN (or ESCAPE to abort).
```

Remove your Document Disk from unit 1 and insert a scratch disk. Then press RETURN. WordWizard begins creating an empty Document Disk and tells you what's going on while it works:

```
Format Drive No. 1
Data load complete on Drive 1
```

After about 10 minutes it says, "If there are any errors, phone your authorized service person. Press RETURN to continue operation." If there were no error messages displayed on the screen, press the RETURN key. WordWizard displays a table of files it is copying and then returns to the > prompt. Take the disk from unit 1 and label it, then create several more Document Disks in the same way.

## 2.4 THE Sol KEYBOARD

Now that you've worked with the Sol keyboard, you've seen that most of it is like the keyboard on an ordinary typewriter. There are letters, numbers, and the standard symbols, such as " and %. These keys, as well as the SHIFT key and TAB key, have the same meaning that they have on an ordinary typewriter.

The space bar works differently than on an ordinary typewriter in one respect. If the cursor is at the beginning or somewhere in the middle of a typed line, pressing the space bar causes the character under the cursor to be replaced with a space. You can't just "space over" existing text. To move the cursor around in your text without replacing characters, use the arrow keys to the left and right of the space bar.

Now, look at the rest of the keyboard.



Notice the 15-key pad to the right. This pad is just a convenience for numerical entries. The numbers and mathematical symbols have exactly the same function that they have on on the typewriter keyboard. In a sense, they are duplicate keys.

The keys that remain to be explained are:

*On the left*

ESCAPE  
BREAK  
CTRL  
UPPER CASE  
LOCAL up arrow left arrow

*On the right*

RETURN LINE FEED LOAD  
DEL REPEAT CTRL  
MODE SELECT  
right arrow down arrow  
HOME CURSOR CLEAR

There is no need to worry about:

BREAK CTRL LINE FEED

They are not used with the WordWizard.

### **ESCAPE**

The ESCAPE key has many uses. One use has already been demonstrated: if you press ESCAPE while the Activity Menu is on the screen, you get the System Functions on the screen. When you press ESCAPE in response to a question, it means "no." When you press the ESCAPE key at any other time, it means stop whatever is going on right now. You can often use it to halt a long operation that you don't want completed. Pressing ESCAPE repeatedly will get you back to the starting prompt (>). The different uses of ESCAPE will be explained throughout this guide.

### **RETURN**

When you press this key in response to a question, it means "yes." Also, whenever WordWizard requests a document name, you must press the RETURN key after typing the name. In this context it means "please."

When you are entering text, typing the RETURN key moves the cursor to the beginning of the next line, forcing a line end and leaving a special character at the right of the screen. We will call that character "inverted L". It is not used at the end of each line. Ending a line with a RETURN means "this is the end of the paragraph" or "this line is not part of a paragraph." The uses of the RETURN key will be explained throughout this guide.

As you do the "Hands On" exercises, be sure not to type RETURN to end lines other than the last line of a paragraph. Be sure you do type RETURN on the last line, and on all blank lines and lines that are not part of paragraphs. Many of the exercises will not work properly if you don't follow this rule.

### **DEL**

The DEL key deletes characters. If you are selecting activities from a menu or answering questions, pressing the DEL key deletes the character under the cursor, and moves the cursor to the right. Sometimes this function is called "destructive backspace." You can press the DEL key repeatedly to delete as many characters as you wish.

When you are typing or editing a document, pressing the DEL key causes the character under the cursor to be deleted and the text to the right of the cursor (and on the same line) to be moved to the left. By pressing the DEL key over and over, you can delete all the characters up to, but not past, the end of the line.

The DEL key can't be used to remove the inverted L character. Only the CLEAR key can be used for that purpose.

### **CLEAR**

Pressing the CLEAR key deletes everything from the cursor to the end of the line, including an inverted L, if the line has one. To remove only the inverted L, move the cursor farther to the right than any character, and then type the CLEAR key.

### **Cursor Keys: HOME CURSOR and the Four Arrow Keys**

These keys control the cursor while you are adding to or modifying a document. You can use the cursor keys to move the cursor anywhere on the screen or to move the screenful of your document that is visible (the "window") up, down, or sideways. The functions of the cursor keys are:

#### **HOME CURSOR**

Sends the cursor to the upper left corner of the screen when pressed twice. When pressed before any of the arrow keys, it sends the cursor to the edge of the screen in the direction of the arrow.

<i>Up arrow</i>	Moves the cursor up one line. If the cursor is in the top line of the screen, it moves the "window" up one line in your document. If the cursor is at the top of the document, typing the up arrow adds a blank "comment" line to your document.
<i>Down arrow</i>	Moves the cursor down one line. If the cursor is in the bottom line of the screen, it moves the "window" down one line in your document. If the cursor is at the bottom line of the document, typing the down arrow adds a blank "comment" line to your document.
<i>Left arrow</i>	Moves the cursor one column to the left. If the cursor is at the left margin, it moves the cursor to the end of the previous line.
<i>Right arrow</i>	Moves the cursor one column to the right. If the cursor is at the right margin, it moves the cursor to the beginning of the next line. If the cursor is at the rightmost column of the screen but not at the right margin, it moves the "window" one half screen width to the right.

## **REPEAT**

Instead of pressing a key again and again, you can press it and the REPEAT key simultaneously. This action repeats the key until you release REPEAT. Some electric typewriters let you repeat certain keys by holding them down firmly. WordWizard lets you repeat any *key* by pressing that key and REPEAT at the same time.

The REPEAT key is used most frequently with the arrow keys. For example, if you want to go back two or three pages in your document, the fastest way may be to press the up arrow and REPEAT together until you reach the desired line. But don't go past the ends of the document this way or you will add extra lines you don't want.

## **UPPER CASE**

The UPPER CASE key is not the same as the SHIFT key. The UPPER CASE key converts lowercase letters to uppercase, but it does not shift nonalphabetic characters. For example:

UPPERCASE g is G, but  
UPPERCASE 4 is 4, not \$.

## **MODE SELECT**

Look at the keyboard labels over your keyboard. The second line begins with the word MODE. The commands in that line are activated by the MODE SELECT key. You will use the MODE SELECT key with the keys in the top row of the keyboard to perform functions like setting margins and deleting lines.

To perform the MODE commands, you must press and release the MODE SELECT key, then press the appropriate key in the top row. For example, the MODE command DELETE LINE is aligned just above the 6 key. So, to delete a line, you press and release the MODE SELECT key, and then press the 6 key. If you change your mind and don't want a MODE command after you have already typed the MODE key, just type it again to cancel the command.

See Section 4 for a more complete explanation of the MODE commands.

## **LOAD**

The first line on the keyboard labels begins with the word LOAD. The commands in that line are activated by the LOAD key. You will use the LOAD key with the keys in the top row of the keyboard to perform functions like clearing tabs and moving blocks of text.

To perform the LOAD commands, you must press and release the LOAD key, then press a key in the top row of the keyboard. For example, the command TAB CLEAR is aligned above the \* key of the 15-key pad. So, to set a tab, you must press and release the LOAD key, then press the "-" (minus) key of the pad. If you change your mind and don't want a LOAD command after you have already typed the LOAD key, just type it again to cancel the command.

See Section 4 for a more complete explanation of the LOAD commands.

## LOCAL

The only time you need to worry about the LOCAL key is during printing. If you're using a SolPrinter 3 or a Diablo 1610/1620 or any other printer connected to the Serial Port of the Sol, the LOCAL key must be off during printing. If the light is on, press the key to turn it off.

### 2.4.1 Printed Characters Differ from Keyboard Representations

You might expect that when you print a document, all the characters will be the same as they appeared on the keyboard and the screen. In fact, all the letter and number keys will be the same. Other characters will differ, however, depending on the printer and print wheel in use. Print wheels differ somewhat in the special characters they offer, and you should consider how your document will be printed before you start typing. Some of the characters that might not be printed just as they appear on the keyboard are:

¢ ' ' ` < > { } [ ] \ |

## 2.5 STARTING OUT

In this section you'll have your first experience preparing a document with WordWizard.

### 2.5.1 Entering Text

The first step in preparing a document is to type the desired text on the keyboard.

#### Hands On — Type Your First Document

Turn on your equipment. Insert the System Disk in unit 0 and one of the empty Document Disks in unit 1. Then type

BOOT      *RETURN*

The Activity Menu should appear on your screen.

Type 1 to create a document. When WordWizard asks for a name, type any name you choose up to 15 characters long, and then press the RETURN key. Notice that the document now appears in the index of documents at the top of the screen.

Type 2 to remove the document just created. Give the name exactly as you did before. Notice that you must confirm that you really want it erased by pressing the RETURN key. If you did not want to erase it, you would press the ESCAPE key. (RETURN means "yes," ESCAPE means "no.")

Type 3 to edit a document. Type TEST for the document name, and then press RETURN. (If you make a mistake, press the ESCAPE key and try again.) This action causes an empty document called TEST to be created and its name to be added to the index. All the lines in TEST now start with two dots and end with an inverted L.

Now, start typing this paragraph. If you hear a click from the Helios, pause for a second. Start typing at the left edge of the screen, typing over the dots at the beginning of the line. Do not end the lines with carriage returns as you normally would. Just keep typing as if the line never ended. The cursor automatically moves to the next line when you come to the end of a line. Notice that the lines are all the same length and are even on the right. WordWizard makes them even by adding extra spaces between words. (Press the RETURN key at the end of the paragraph and press it again to leave a blank line between paragraphs.)

The form, or visual appearance, of the paragraph you have typed is the default form; that is, the system automatically sets the margins at columns 1 and 63, and justifies the text. You can change the form to suit yourself (this process will be described later).

If you make a mistake while typing, use the arrow keys to move the cursor to the spot where you made the mistake, and type over the existing text.

Now, press the ESCAPE key to save the document and return to the Activity Menu. WordWizard writes what you have typed on the Document Disk in unit 1.

### HINT

*If you have a compound word or expression that should never be broken at the end of a line, you can make sure it is treated as one word by separating the parts with tildes (~-shifted ^) instead of blanks. For example, XYZ Company is never split between Z and Company if they are separated by a tilde. The tilde character prints as a blank.*

Before you start typing words in a new document, each line of the document begins with two dots and ends with an inverted L. The two dots in columns 1 and 2 cause the line to be ignored when you print your document.

Any line that begins with two dots is a comment line. That is, you can include messages to yourself or other people by starting the message line with two dots in columns 1 and 2, and the comment will not affect your document when you print it. One use for comments is to tell yourself or other people working on a document where the text begins and ends. For example:

*Column 1*

```
|
..start                               ʀ
    (Text of document)                ʀ
..end                                  ʀ
```

The inverted L that appears at the right of the screen on some lines indicates that the line ends with a RETURN. This information is important because any line that does not end with a RETURN is treated as part of a paragraph. The significance of this fact will become clear when you read Section 4.

### 2.5.2 How to Get Around in Your Documents

When you are working on a document as in the previous "Hands On," you can use the four arrow keys to move the cursor anywhere in the document and change what you originally typed.

You can also use the arrow keys to *scroll* up and down, to see parts of your document that are "above" or "below" the screen; or you can scroll left and right, to see parts of your document that are to the left or right of the screen. If you scroll to the top or bottom of the document, typing the up or down arrow again will extend your document by adding another line to it.

The primary way to get around in your typing space is to move the cursor wherever you want to go. You can accelerate the motion of the cursor across the screen by using the HOME CURSOR key. Pressing HOME CURSOR twice moves the cursor to the upper left-hand corner of the screen. Pressing HOME CURSOR and then an arrow key moves the cursor to the edge of the screen in that direction. For example, if the cursor is in the middle of the screen, pressing HOME CURSOR and then down arrow moves the cursor to the middle of the bottom line.



You can move the cursor up until the lines of text start to move down the screen (scroll down). You can move the cursor down until the lines of text start to move up the screen (scroll up). If the right margin is set beyond column 63, you can scroll the text to the left and then scroll back again.

### Hands On - Scrolling

Use the same disks you were using in the previous "Hands On." Get the Activity Menu on the screen by typing `BOOT RETURN` at the starting prompt (`>`) or 1 at the System Functions Menu. Then type

```
3
TEST    RETURN
```

The text you typed earlier should appear on the screen. Use the down arrow to move to the end, then type paragraphs from this page until the first paragraph you typed disappears off the top of the screen. End each paragraph by pressing the RETURN key twice: once to end the paragraph and once to leave a blank line between paragraphs. WordWizard indicates a line ends with a RETURN by displaying an inverted L at the right of the screen. Be sure you have an inverted L after each paragraph.

Now, use the up arrow to get the first paragraph back on the screen. Move the cursor to the top line and press the up arrow again. A line is added at the top of the screen and bottom line disappears from the bottom of the screen. This procedure is called *scrolling*. You can scroll all the way to the top of your text and keep going. (If you do, you will be adding blank lines to the top of your document.)

Use the REPEAT key with the up arrow (pressed simultaneously) to scroll to the top line of text. Then use the REPEAT key with the down arrow to scroll to the bottom line. Another way to scroll rapidly is to press the MODE SELECT key, then the up arrow or down arrow. This scrolling is automatic and continues until you reach the end of the document or manually stop it. Press the space bar to stop scrolling.

Scroll to the bottom of your document, then release the right margin. To do this, press and release the MODE SELECT key, then press 0 (under RIGHT MARGIN RELEASE). Type this paragraph and watch what happens when you get to the edge of the screen. Don't worry. Just keep typing. End the paragraph by pressing the RETURN key twice.

You have typed a 128-column-wide paragraph using a 64-column screen. To view it, use the left arrow and right arrow (with the REPEAT key for rapid scrolling). Use the right arrow to move the cursor to the right edge of the screen and keep moving it. What happened? The window moved over 32 columns. Now you can see columns 33 through 95 of your paragraph. Again, move the cursor off the screen at the right. Again, the window moved over 32 columns, and you can see columns 65 to 128. In like manner, you can scroll to the left using the left arrow.

Press ESCAPE to save the document as revised. Notice that you have fewer pages of storage left on the disk in unit 1 after adding paragraphs to your TEST document.

There are ways to speed up scrolling through your document:

- Use the REPEAT key with an arrow key until you reach the desired spot.
- Press and release MODE SELECT and then press an arrow key. Scrolling will continue until you press the space bar.

To jump immediately to the beginning or end of your document, use the JUMP TO START and JUMP TO END commands. These are LOAD and MODE commands, which are discussed in Section 4. To give the JUMP TO START command, press and release the MODE SELECT key, then press the - key of the 15-key pad. To give the JUMP TO END command, press and release the LOAD key, then press the - key. JUMP TO END is particularly convenient when you want to continue typing a document after an earlier edit session.

When automatic scrolling stops at the end of your document, or when you JUMP TO START or JUMP TO END, you may find extra empty lines that you don't want. You probably added these lines by typing the up or down arrows when you were at an end of the document. You can use the DELETE LINE command described in Section 4 to get rid of them.

## **2.6 HOW YOUR DOCUMENTS ARE SAVED**

### **2.6.1 Memory and Disks**

While you are writing or revising a document (that is, after you've given the 3. EDIT command), the text of that document is saved in two places: part of it is saved in memory and part is saved on the disk in unit 1. As mentioned before, the part saved on disk is safer than that stored in memory.

When you start to type a new document, everything you type is saved in memory until there is no more room. At that point, you'll hear a click and see the lights on the disk drive change as the text is written on the disk in unit 1. As you continue typing, the most recently-typed text is saved in memory. If you removed the Document Disk while editing a document, you would lose several screenfuls (from 0 to 7000 characters) of the text you typed last, but the rest would be saved on disk.

If you are working in the middle of a document, most of the document is safely stored on the disk, *but not the part you're working on*. That part is saved in memory *only* and includes what you can see, plus another one or two screenfuls surrounding it. You are risking up to a page of text in short-term memory while your work. This risk is an argument for keeping copies of recent work.

#### **NOTE**

*If you are a fast typist, you can lose text by entering too much information while WordWizard is writing on disk. When you hear the Helios clicking, pause and let it finish before you continue typing.*

When you finish typing or revising a document and press ESCAPE, the entire document (as revised) is saved on disk.

### **2.6.2 Copying Documents**

There are several reasons you might want to copy a document. Copying documents as part of a backup system will be discussed at length in Section 3. There are other reasons to make copies of individual documents — you might want to put a particular document on another disk to send to someone else, you might want two copies of the same document on a disk so you can print one while editing the other, or you might want to change the name of the document.

The Archive and Retrieve Activities allow you to copy individual documents and put them on the same disk or another disk, or to change their names. The Archive activity copies a document from the Document Disk to an "archive" on the System Disk; the Retrieve activity copies a document from the archive to the Document Disk.

## Hands On — Save an Archive Copy of a Document

If you are not at the starting prompt (>), press the ESCAPE key repeatedly until you get there. Place the System Disk in unit 0 and the Document Disk containing TEST in unit 1. Type

BOOT      RETURN

WordWizard displays the Activity Menu:

Basic Computer Group Ltd. / Processor Technology Corp.  
WordWizard 4.0 (MOD 0)  
Documents on the Document Disk

### Activity Menu

- |                 |                  |             |
|-----------------|------------------|-------------|
| 1. Create       | 5. Print         | 9. Archive  |
| 2. Remove       | 6. Stop Printing | 0. Retrieve |
| 3. Edit         | 7. Eject Page    |             |
| 4. Select Merge | 8. Print Index   |             |

Select Activity:                      108 pages left on disk.

Give the 9. Archive command to save the document TEST on the System Disk. Type

9  
TEST      RETURN

It takes several seconds for WordWizard to write a copy of TEST on the System Disk. When the copy is complete, the cursor is displayed again.

Now you have two copies of TEST: one on the Document Disk and one in the archive on the System Disk.

## CAUTION

*You can save only one archive document on the System Disk at a time. If you select the Archive activity a second time, the new archive document will overwrite the old one.*

You can use the Archive activity to move documents from a document disk when the disk is getting too full and you don't want to start another one. When there are only a few pages left on disk, you must make this decision: either move documents by archiving, removing, and then retrieving them to another disk (Retrieve is described below) or start a new Document Disk.

The archive document can be retrieved with the Retrieve activity. When you retrieve a document from the the System Disk, you can name it anything you choose. Thus, you can rename a document by archiving it and then retrieving it under another name. After a document has been retrieved, it is still in the archive and can be retrieved to another disk. It can also be retrieved again to the same disk and given a different name, so that two copies of the same document will exist on one disk.

If you retrieve a document and give an existing name (for example, if you archive TEST and then retrieve it to the same disk, assigning it the name TEST), the archive document will be inserted at the beginning of the document already on the Document Diskette, giving you two copies of the text of TEST in one document. There will be more about this feature in Section 5.

### **Hands On – Retrieve the Archive Copy Onto Another Document Disk**

If you are still in WordWizard from the last “Hands On,” press ESCAPE repeatedly until the system prompt (>) appears. (You are about to change disks, and this should only be done at the level of the system prompt or when a System Function instructs you to change disks.)

Remove the Document Disk containing TEST. Replace it with another empty Document Disk.

Give the BOOT command to get the Activity Menu on the screen.

Then, to select the Retrieve activity and specify a new document name (TEST2), type

```
0  
TEST2    RETURN
```

When WordWizard finishes writing the archive document on unit 1, the Activity Menu reappears.

Now you have three copies of the same document: TEST on the first Document Disk, the archive copy on the System Disk, and TEST2 on the second Document Disk.

## SECTION 3

### DOCUMENT SECURITY

#### 3.1 A FRIENDLY WORD OF ADVICE

Your Word Wizard System is hard-working, hardy, and reliable. At the same time, it consists of some highly-advanced electronic apparatus and should be treated with the same respect as a very fine stereo system. Here are some guidelines for troublefree operation:

- Keep fingers, hair, cloth and metal objects, as well as tissues, jewelry, paper clips, etc., out of the equipment and away from exposed disks.
- *Always take the disks out of the Helios before you turn off the disk drive!* Turning off the disk drive while disks are inside is like turning off your stereo when a record is playing; you can damage the disks and cause stored information to be lost.
- Never set any liquids (coffee, soft drinks, etc.) on or near the system.
- Avoid smoking near the system or dropping ashes on the system. Ashes and smoke particles can cause malfunctions in the Sol or the Helios. Ashes and smoke particles on the disks can interfere with the storage and retrieval of information.
- Never remove the System Disk while working on your document.
- Make a practice of backing up your disks *often* (at least once a day), so that you will always have a copy of your documents in case of a mistake or accident.

#### 3.2 YOUR DISKETTES

Look at one of your disks. A disk is a magnetic platter that revolves inside a square case. The disk is visible through slots on both sides of the case and at the center. The slot is where the disk drive makes contact with the disk as it spins it to find data. Be careful not to touch the disk through this slot.

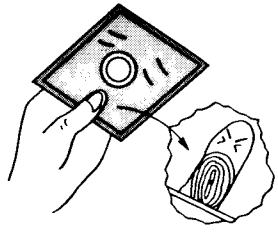
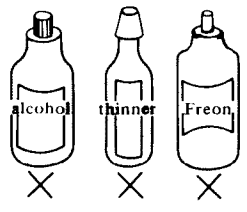
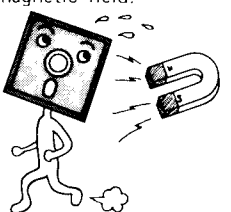
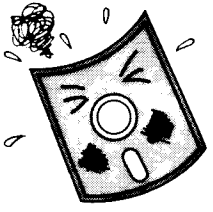
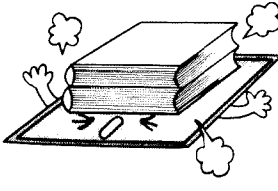
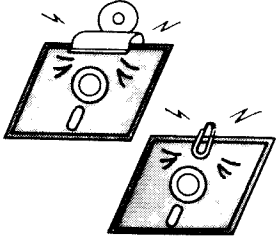
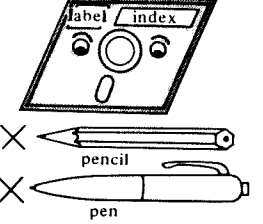
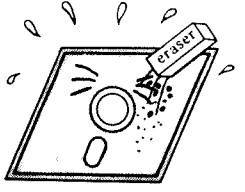
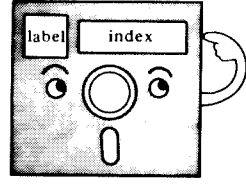
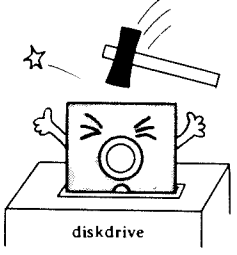
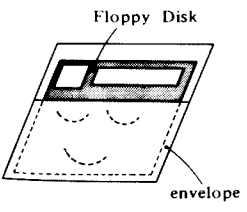
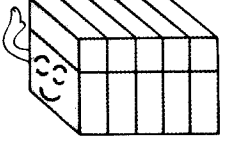
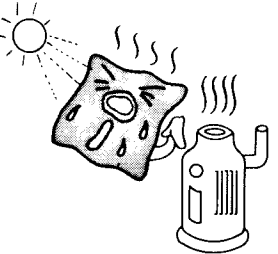
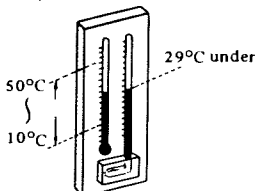
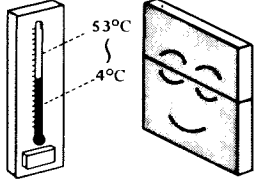
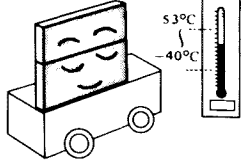
Disks are sometimes called "floppy disks" because they are so thin and bend so easily. A floppy disk is like a cross between a recording tape and a phonograph record. Like tape, it can be recorded and played back at will, erased, and re-recorded. Like a phonograph record, it has information stored in "tracks"; the Helios can "play" a particular selection from the disk into the computer by moving an arm like the tone arm of a record player.

As explained earlier, a disk provides long-term storage for your documents. Long-term — not permanent — because information can be lost or removed from a disk in various ways:

- You can erase old documents to make room for new.
- You can use the WordWizard to change a document.
- You can physically damage a disk and lose all or part of what's recorded on it.
- If the power goes off while the disk is in the disk drive, you can damage it and lose text recorded on it.
- If anything goes wrong while you're changing or adding to a document, you can lose whatever portion of the document is in memory. Text lost in this way will not be written back to the disk.
- A disk can wear out after a few months of heavy use.

# FLOPPY DISK HANDLING AND STORAGE

## Handling precautions to protect against possible failure

<p>1. Do not touch the disk surface. Easily contaminated, and causes errors.</p> 	<p>2. Do not use solutions: alcohol, thinner, Freon, to clean the disk.</p> 	<p>3. Do not use magnets or magnetized objects near the disk. Data can be lost from a disk when exposed to a magnetic field.</p> 	<p>4. Do not bend or fold the disk.</p> 
<p>5. Do not place heavy objects on the disk.</p> 	<p>6. Do not use rubber bands or paper clips on the disk.</p> 	<p>7. Do not write on a disk label with a pencil or a ball-point pen. Use a fiber-tip.</p> 	<p>8. Do not use erasers.</p> 
<p>9. Put I. D. labels in a right place, never use them in layers.</p> 	<p>10. Insert carefully, by grasping upper edge and placing it into the drive.</p> 	<p>11. Keep disk in its envelope.</p> 	<p>12. Store disk not for immediate use in their box, and set it up.</p> 
<p>13. Do not expose the disk to excessive heat or sunlight.</p> 	<p>14. Operating environment 10°C to 50°C (50°F to 122°F) 20% to 80% RH less than 29°C (Wet bulb temperature)</p> 	<p>15. Storage environment 4°C to 53°C (40°F to 127°F) 8% to 80% RH</p> 	<p>16. Transportation During transportation the disk shall be in its envelope, and in a protective box. Temperature: -40°C to 53°C (-40°F to 127°F) Relative humidity: 8% to 90% RH</p> 

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Moonachie, New Jersey

Disks are fragile and must be treated with respect. The figure on the opposite page shows how to handle your disks.

As you fill more and more disks with documents, you will want to keep track of what kind of information you keep on any given Document Disk. Using a felt-tip pen, you can write on the disk label any useful identifying information. (For example, you might mark a disk "Mailing Lists" and keep all your mailing lists on it.) It is important to use a felt pen, rather than any writing implement that requires you to apply pressure to the disk.

### **3.3 BACKUPS**

One of the purposes of this section is to convince you to make backups of all your work, and to explain how and when to make them. A backup is a copy of a document in progress or of an entire disk. It is important to keep backups, so that if you lose or damage a document or disk, you will not have lost your only copy.

People are not perfect and neither are computers. You can expect that you will make errors that result in the loss of text from your documents, and the Sol system or WordWizard itself may occasionally make an error. With proper training and discipline on your part, and proper care and maintenance of the equipment, such losses will be infrequent, and you will accomplish much useful work with no problems.

The WordWizard is based on the Sol Computer System, which, like any computer, is very complex and depends on the continued correct functioning of vast numbers of electronic and mechanical components. With modern technology, the reliability of each component is excellent, and millions of bits of information can be handled with no errors. Even so, the error rate cannot be reduced to zero.

WordWizard also has features to prevent you from destroying your work inadvertently. For example, it won't let you remove a document from the disk until you confirm your intent to do so. Also, WordWizard automatically stores your document as you type or revise it.

It is much more likely that you will make an error than that the system will. Allow room for errors. Don't get caught with a single copy representing hours and hours of work. Plan a program of making backups, and start training yourself to use the procedures that you devise. Remember that although the chances of a loss may be low, the consequences of loss may be serious. Suppose you had worked on a book for a year, and the disk you just erased contained your only copy....

Making copies of valuable information is one of the tasks the computer cannot handle for you. It cannot know how important the material it is processing happens to be, and it cannot decide how frequently to copy materials, because it doesn't know how much labor has been invested in the materials at any given time.

#### **3.3.1 The Risks**

Here is a list of some situations in which text is likely to be lost:

- 1) You mistakenly Remove (destroy) a document you wanted, by typing the wrong name, or by mistaking it for another document.
- 2) Someone ejects a disk in the middle of an operation.
- 3) You lose a disk, or it is stolen or destroyed.
- 4) You damage a disk by bending, heating, creasing, or spilling coffee on it.
- 5) A large fluctuation in power line voltage occurs, or power fails.
- 6) Someone accidentally turns the system off or knocks the power line plug out of the wall.

- 7) A discharge of static electricity (as when you shuffle over a carpet on a dry winter day) disturbs or damages the computer's circuitry.
- 8) Someone takes your Document Disk and writes other data on top of your documents.
- 9) Your equipment is not properly maintained by authorized service people.
- 10) The equipment has a malfunction.
- 11) You attempt some unusual and obscure operation for which the WordWizard was not designed, or cause some condition to occur that was not anticipated in the design.
- 12) Something freakish happens. For example, a newspaper falls over the back of the Helios on a very hot day, blocking off the fan intake, causing the Helios to overheat and warp your disk!

This list is not meant to scare you or to make you think that it is not safe to use WordWizard. Actually, events like those described are uncommon. But by knowing the dangers, you can avoid risks and make any particular loss almost inconsequential.

### **3.3.2 Insurance**

Making backups is like having a fire insurance policy on a house. You expect to live in the house for many years without a problem. But because you could not afford to lose the house, you have fire insurance. This insurance means that if the house does burn, you can count on getting back most of its value. For the insurance you make small monthly payments, but it is well worth the price because your risk is so much less.

The short periods of time you will devote to copying your documents and disks are analogous to the small monthly payments you make on your fire insurance. Having safe copies stored away means that instead of risking all the material in the document and the accumulated labor it represents, you risk only the material you have added (or the editing you have done) since the last backup. When a loss occurs, you copy the backup onto a working copy and reconstruct what had been added to the text since that backup was made.

### **3.3.3 Types of Backups**

There are several ways to make and store copies. Each way has its advantages and disadvantages, its costs, and a different security value. They are:

- 1) Make a copy of an existing document disk.
- 2) Copy a document onto the System Disk (Archive) and then Retrieve it onto another Document Disk.
- 3) Save two copies of a document on a Document Disk (Archive and Retrieve onto the same Document Disk).
- 4) Save a document on the System Disk (Archive).
- 5) Print the document.

Here's how these methods can be used:

- 1) You can make copies of all Document Disks at regular intervals using the System Function "Duplicate an existing Document Disk," described in Section 2.

For example, you might decide to copy a working disk onto a backup after every four hours of work on that disk. The bookkeeping for this method is simple — every disk has a name or number that you write on its label, LETTER-78 perhaps. Each backup disk has a similar name: LETTER-78-B for instance. The backups are stored in a locked file cabinet near the system. The cost of this method is about eight minutes of copying time per backup.



One problem with this method is that while the copy is being made, both disks are in the Helios and are therefore vulnerable. The solution is to keep two backups, so that at least one is outside the Helios at all times.

- 2) You can Archive a document (i.e., copy it onto the System Disk) and then Retrieve it from the System Disk onto a backup disk. For short documents, making copies this way may take fewer minutes than duplicating an entire Document Disk. But the method involves two steps instead of one, and you must either use the same name for the document on both disks or have a system of names for backups of the same document. Also, you must keep track of which backup documents are on which disks. Bookkeeping problems may arise.
- 3) You can Archive a document and Retrieve it onto the same Document Disk using another name. This method is handy when you need to refer frequently to a previous version of the document; it has the disadvantage that the document and its backup are on the same disk.
- 4) You can save an Archive copy on the System Disk as a backup. This method is not very secure because the System Disk is in the Helios at the same time as the Document Disk. Also, there can be only one backup document in the Archive, and it is overwritten any time you use the Archive operation again.

However, this method is useful for storing a document temporarily just before attempting some major operation, such as merging a great deal of text into the document.

- 5) Finally, you can keep a printed copy (or "hard copy") of every version of a document. If you lose a document and have not made backups, you can retype the document from the printout. Of course, this process is extremely time-consuming. You will have lost all dot commands and comments, and you must proof the typed material carefully against the printout. This procedure is clearly the least convenient way of backing up information.

Even if you do train yourself properly to work carefully and make four copies of everything at reasonable time intervals, you may be tempted to become more lax after working for a long time with no losses. Do not become lax! Suppose you had worked on a book for a year, and the disk you just erased was your only copy...

#### **3.3.4 Example of a Backup Plan**

While typing a document, you might use the following safety precautions:

- Whenever you pause to talk to someone or take a break, press ESCAPE to write the document on disk.
- Before breaks or lunch, copy the document onto a backup disk using Archive and Retrieve.
- At the end of the day duplicate the entire Document Disk onto a different backup disk.
- When a System or Document Disk has been used heavily for three months, copy it and throw out the original.

One of the most important precautions to take is also one of the most difficult: if you have just lost some text and think that something might be wrong with your system, DON'T insert your only backup into the drive and try again. Instead, call your dealer and ask for advice.



## SECTION 4

### TYPING AND REVISING DOCUMENTS

You have already had some experience typing documents in "Hands On - Type Your First Document." You may even have made some strikeouts to correct mistakes. Now it is time to add to your ability to type and revise (that is, to edit) documents.

#### 4.1. SUMMARY OF EDITING COMMANDS

Look at the strip of LOAD and MODE commands above the Sol keyboard. That strip lists almost everything you can do to a document after selecting the Edit activity.

Here is a brief summary of WordWizard's editing capabilities:

LEFT MARGIN RELEASE	Resets the left margin to column 1.
LEFT MARGIN SET	Sets the left margin at the current cursor position.
SEARCH	Searches the document for a given expression.
CONTINUE SEARCH	Continues searching for the expression given in the last SEARCH command.
REPLACE	Finds an expression and allows it to be replaced with another.
CONTINUE REPLACE	Continues searching for the expression given in the last REPLACE command and allows replacement.
COPY BLOCK	Makes a copy of one to 16 lines of text, and stores it for insertion somewhere else.
MOVE BLOCK	Removes one to 16 lines of text from where it appeared, and stores it for insertion somewhere else. Also deletes up to 16 lines.
INSERT BLOCK	Inserts a block of text previously set aside with the COPY BLOCK or MOVE BLOCK command.
CALL MERGE	Merges text from another document.
DELETE LINE	Deletes the line that has the cursor in it.
INSERT SPLIT	Opens a space so you can insert new text.
CLOSE PARAGRAPH	Closes all extra spaces and empty lines from the cursor to the end of the paragraph (that is, to the next inverted L), and reformats it using the current margins and justification.
RIGHT MARGIN SET	Sets the right margin to the current cursor position.
RIGHT MARGIN RELEASE	Resets the right margin to column 128.
TAB SET	Sets a tab stop at the current cursor position.
TAB CLEAR	Clears the tab stop at the current cursor position.
JUMP TO START	Moves the window to the first 16 lines of the document.
JUMP TO END	Moves the window to the last 16 lines of the document.
JUSTIFY ON	Causes justification of paragraphs that are subsequently typed or closed.
JUSTIFY OFF	Causes no justification of paragraphs that are subsequently typed or closed.

Each of these commands is given in two keystrokes. The first line on the strip above the keyboard begins with the word LOAD. The commands on that line are called the LOAD commands. To give a LOAD command, press and release the LOAD key, then press the

appropriate key on the top row of the keyboard. For example, to set a tab, press and release the LOAD key, then press the – key of the 15-key pad. To give the SEARCH command, press and release the LOAD key, then press 3.

The second line of the strip above the keyboard begins with the word MODE. The commands on that line are called the MODE commands. To give a MODE command, press and release the MODE SELECT key, then press the appropriate key on the top row of the keyboard. For example, to delete a line, press and release MODE SELECT, then press 6.

Notice that the same key can be used for a LOAD command and a MODE command. For example, pressing LOAD and then 3 gives the SEARCH command while pressing MODE SELECT and then 3 gives the CONTINUE SEARCH command.

#### NOTE

*The keys used in the LOAD and MODE commands are the unshifted keys at the top of the keyboard. Make sure the SHIFT LOCK light is not on when you give a command, or the command will have no effect. The UPPER CASE light can be on, however.*

This guide refers to the LOAD and MODE commands by the names appearing on the labels above the keyboard. Rather than tell you to give the MODE 8 command, we say, "give the CLOSE PARAGRAPH command." Just look at the label to determine which keys to press.

To cancel a LOAD or MODE command after you've already pressed LOAD or MODE SELECT, just press the key a second time.

#### 4.2 JUSTIFICATION OF TEXT

You saw in "Hands On - Type Your First Document" that lines of a paragraph are rearranged as you type them. Extra spaces are added between words to make all lines even at the right margin. This alignment is called justification. When you begin editing a document, any text you add (or any paragraph whose format you change) is justified automatically.

Sometimes you will want justification and sometimes not. The JUSTIFY ON and JUSTIFY OFF commands let you switch from justified to unjustified paragraphs and back again. ("Unjustified" means the same as "ragged right." The left margin is always justified.) When you change to unjustified style, paragraphs you typed earlier will not be affected. *Only* new paragraphs will be unjustified. Later in this section you will learn how to justify unjustified paragraphs and vice versa, using the CLOSE PARAGRAPH command.

#### Hands On – Justification Styles

If you aren't at the starting prompt (>), press the ESCAPE key repeatedly until you get there. Insert the System Disk in unit 0 and a Document Disk in unit 1, and then type:

```
BOOT RETURN
```

to get the Activity Menu on the screen.

Give the 3. *Edit* command: that is, type 3, then give the name of a document and press the RETURN key.

Type ". .start" at the left of the screen. This comment will help you remember where your document begins as you're scrolling through. Any line that begins with two dots in column 1 is a comment and does not appear when the document is printed.

Now begin typing this paragraph. Remember, don't press the RETURN key until the end of the paragraph. Notice how the text wraps around when it gets to the right margin and how the spacing between words is adjusted to make all lines even at the right. ¶

Give the JUSTIFY OFF command and type the same paragraph again. This time the paragraph is not justified. The words still wrap around to the next line when you get to the right margin, but the lines are not made even at the right.

Give the JUSTIFY ON command and type this paragraph. Notice that turning justify mode on or off affects only what is typed after the command is given. ¶

End your document with the comment ". .end"

Don't forget that the default justification style is justify *on*; that is, if you don't give the JUSTIFY OFF command when you begin to edit, any text you type is justified automatically. Therefore, if a particular document is to be unjustified, you must give the JUSTIFY OFF command every time you start editing it.

Usually even a justified document contains lines that should not be justified. For example, you wouldn't want to justify the last line of a paragraph, or any line whose format had to match that of surrounding lines. (Think of how a table would look if extra spaces were added between items on some of the lines.) To show that a line should not be justified, end the line with a *RETURN*. A line that ends with a *RETURN* (inverted L) is never justified.

Even if your document is unjustified, you should press *RETURN* to end any line whose format is important. Commands other than JUSTIFY ON and JUSTIFY OFF can be used to change the format of text. Those commands will be discussed in the rest of Section 4.

### 4.3 SETTING UP YOUR TYPING SPACE

You can set margins and tabs with WordWizard, much as you would on an ordinary typewriter. You haven't had to set them so far because you have used the default settings. When you select the Edit activity and specify any document, the left margin is already set at column 1, the left edge of the screen, and the right margin is set at column 63, the right edge of the screen (actually, the screen is 64-characters wide, but the last character position is reserved for the inverted L that represents a *RETURN*). There are no default tab stops.

In Section 4.2, above, you learned that if you want a document to be unjustified - that is, if you want the right margin to be "ragged" - you must give the JUSTIFY OFF command every time you edit the document. If you don't give the command, any text you add or any paragraph you alter will be justified, in compliance with the default justification style. Similarly, if you want a document to have margins at columns 10 and 80, tabs at columns 30 and 60, you have to set those margins and tabs whenever you edit the document. Otherwise, any text you add will have the default margins and no tabs.

#### 4.3.1 Setting Margins

##### Hands On — Setting Margins

With the System Disk in unit 0 and a Document Disk in unit 1, get the Activity Menu on the screen. Select the Edit activity and specify a new document name (e.g., MARGIN.TEST) by typing:

```
3  
MARGIN.TEST RETURN
```

Type ". .start" at the left of the screen and move the cursor down one line.

Set the right margin at column 30. To do this, move the cursor 29 spaces from the left of the screen, press and release MODE SELECT, then press 9 to give the RIGHT MARGIN SET command.

Now start typing this paragraph. Notice that you can't type past column 30. The words wrap around and continue on the next line. You can't move the cursor past column 30, either. ¶

Now release the right margin by pressing first MODE SELECT and then 0.

Type this paragraph. As you saw in "Hands On - Scrolling," you can type to column 128. When you come to the end of the screen, the window moves over so you can see the next 32 columns of your text. ⌈

Give the LEFT MARGIN RELEASE command (by pressing MODE SELECT and then 1), and then type ". .end" at the left of the screen.

Move the cursor to column 30 and set the right margin at 30 again. Then press the ESCAPE key to save what you've typed and return to the Activity Menu.

Let's edit MARGIN . TEST some more. Type

```
3  
MARGIN . TEST RETURN
```

Begin typing above your ". .end" line without setting margins. Notice that the right margin is now at 63, even though you set it to 30 just before you finished editing last time. The default margin settings are in effect every time you begin editing.

### 4.3.2 Typing Columns

If you want to prepare a document that is arranged in multiple columns, you can use WordWizard to create a long column that you can later cut and paste to make camera-ready copy. The best printer to use for this kind of work is the SolPrinter 2. (Section 6 describes how to print documents.)

Suppose you want to type copy for a single-column document to be printed on standard 8 1/2 by 11 paper. If you want one-inch margins on each side and are planning to print 10 characters per inch, type the copy as follows:

After giving the 3. Edit command, set your margins at columns 11 and 75 (or 1 and 65, or 6 and 70, depending on how you put the paper in the printer). This procedure will produce a 6 1/2 inch column of camera-ready copy.

#### NOTE

*If you use a forms tractor on your printer, it will affect the position of the paper in the printer and you should select your margins accordingly. For example, if the printing starts 1/2-inch from the left of the paper at column 1 and you want a one-inch left margin, set the left margin to column 6 for typing the document.*

Suppose you want to type copy for a two-column unjustified document with 3 1/4-inch columns that will be pasted side-by-side to form 6 3/4-inch lines. If you want to print 12 characters per inch, type the copy as follows:

After giving the 3. Edit command, give the JUSTIFY OFF command. Then set the margins at 13 and 51 (or 1 and 39, or 7 and 45, depending on how you put the paper in the printer). This procedure will produce 3 1/4-inch columns that can be pasted up side-by-side to produce camera-ready copy.

### 4.3.3 Setting and Using Tabs

The TAB key advances the typing position to the next tab stop, just as it does on an ordinary typewriter. There is one difference, however. In WordWizard, if there are no more tab stops on the current line, the TAB key advances the typing position to the first tab stop on the *next line*. This feature is very useful for typing tables or indented lines.

Unused lines in your typing space begin with comment dots and end with *RETURN* characters (inverted L's). When typing formatted text like outlines or tables, you will want each line to end with a *RETURN*, but you won't want comment dots at the beginning of each line. If you use the tab-to-next-line feature, the comment dots will remain and you'll have to delete them later. To avoid this inconvenience, set aside some lines with no characters except *RETURN*s before you type the table or outline. Just hold down the *RETURN* and *REPEAT* keys until enough space is cleared.

If you press the *TAB* key and there are no tab stops, the cursor simply moves down one line, as though you had typed a down arrow.

To set a tab stop, move the cursor to the appropriate column in any line and give the *TAB SET* command. To clear a tab stop, move the cursor to the position of that stop in a line and give the *TAB CLEAR* command.

### Hands On — Tabs

Get the Activity Menu on the screen. Give the 3. Edit command and type *TEST* as the document name.

Set tab stops at columns 4 and 7. To set the tab stops, move the cursor to column 4 and give the *TAB SET* command. Then move the cursor to column 7 and give the *TAB SET* command.

Clear at least six lines by holding down the *RETURN* and *REPEAT* keys.

In the cleared space, use the *TAB* key to type the outline shown below. At the end of each line, tab to column 4 of the next line instead of pressing the *RETURN* key.

Column 1

```
|
I. This is my main point           Γ
  A. This idea is secondary        Γ
  B. As is this one                 Γ
    1. Finally, I have lesser categories Γ
    2. To fall at the third level    Γ
```

### Hands On — Type a Table

Edit your *TEST* document again and type a wide table in it, using the figures shown below. Leave five spaces between columns.

First you'll have to widen the margins, because the table will be wider than the screen. The *RIGHT MARGIN RELEASE* command sets the right margin at column 128. Next set tabs at columns 1, 10, 19, 28, 37, 46, 55, 64, 73, and 82. Then type each row, using the *TAB* key to move to the correct column. At the end of the line, you can use either the *RETURN* key or the *TAB* key to move to the first column of the next line.

Figures for table:

14.61	15.66	17.48	19.01	20.83	23.18	24.84	23.16	28.00	30.50
3.78	4.81	4.88	2.95	11.04	2.74	21.22	11.28	21.39	21.54
1.49	8.51	1.55	7.60	4.67	5.34	4.82	3.85	9.92	21.03
17.25	15.81	11.00	9.32	10.21	9.81	12.01	17.99	8.99	9.75

In general, it is a good idea to end each line of a table with a *RETURN* (inverted L). When you've read Section 4.4.3, you'll understand why.

#### 4.3.4 Using "Rulers" to Remember Margins and Tabs

Every time you select the Edit activity, the margins are reset to 1 and 63. If you have particular margin settings to be used throughout a document, you should find a way to remind yourself of them. One way of reminding yourself is to put a comment at the top of a document, or anywhere that tabs must be reset.

A comment is any line that begins at column 1 with two periods:

```
..This is a comment.  
|  
Column 1
```

A comment has no effect on your document and is not printed when you print the document.

The following is an example of comments that remind the typist to set margins at columns 6 and 52: (The comments are indented for this illustration. They must start in column 1 in an actual document.)

```
..Margins  
..      1          2          3          4          5  
..345678901234567890123456789012345678901234567890123456  
..      L                                          R
```

Notice that the two rows of numbers can be used to identify columns on the screen. The numbers in the top row are in increments of ten, while those on the bottom row are in increments of one.

When you begin to work on the document, you need only move the cursor to L and give the LEFT MARGIN SET command, then move the cursor to R and give the RIGHT MARGIN SET command. If you wanted to set the right margin outside the default right margin setting (for example, at column 70), you would have to release the previous right margin, just as you would on a typewriter.

There are examples of memory joggers like this (we refer to them as "rulers") in the Library document, which is on the Document Disk you received with the system. After you learn how to merge documents, you can pull a ruler from the Library document and use it in your own document.

A handy way to remember special margin settings (such as are used for the NOTES and HINTS in this guide) is to set tabs at the positions of the left and right margins. To remember where to set the tabs, use a ruler at the top of your document. For example:

```
..tabs  
..      1          2          3 ... 6          7  
..3456789012345678901234567890 ... 01234567890  
..      *                          *
```

Then to change margins, just tab to column 10, set the left margin, tab to column 60, and set the right margin.

Here is a ruler for remembering margins and tabs; it shows that margins should be set at 5 and 55, and that tabs should be set at 10, 30, and 35.

```
..Margins and tabs  
..      1          2          3          4          5  
..34567890123456789012345678901234567890123456789012345678  
..  L      *                          *      *                          R
```



## 4.4 TIME FOR A CHANGE

Now that you know how to create a document using margins, tabs, and justification, and how to correct mistakes by moving the cursor to the error and typing over it, it's time to learn how to alter document in various other ways. You can change a document while you're typing it for the first time or any time later.

You can make changes in a document by deleting lines or characters, inserting more information, searching for an expression and changing it, or searching for an expression and replacing it with another expression.

While you are making changes in your document, you will notice that the format of the text often changes: extra spaces are left, text breaks off on one line and continues on another, etc. Don't worry about these gaps. They will all disappear when you use the **CLOSE PARAGRAPH** command, described in Section 4.4.3.

### 4.4.1 Deleting Lines or Characters

After you have given the 3. Edit command and named a document, you can delete any line in that document (it doesn't matter whether or not it ends with a **RETURN**) by placing the cursor anywhere on the line and giving the **DELETE LINE** command. The line is completely removed; it is not replaced by a blank line.

To delete a single character, put the cursor on the character and press the **DEL** key. No space is left when the character is deleted. You may use **DEL** repeatedly to delete any number of characters from the line that contains the cursor. As each character is removed, the rest of the line moves one space to the left to close up the gap.

To delete from the cursor to the end of the line, press the **CLEAR** key. If there is a **RETURN** (inverted L) at the end of the line, it is deleted as well. If you put the cursor on the first character of a line and press the **CLEAR** key, the entire line is deleted and a blank line remains. Thus "CLEAR the entire line" has a different effect from the **DELETE LINE** command.

Note that using the **CLEAR** key is the only way to get rid of an unwanted **RETURN** (inverted L) at the end of a line without getting rid of the whole line.

### 4.4.2 Inserting Text

There are several ways to insert text in a document. If you want to insert text between lines or paragraphs of an existing document, all you need to do is:

- 1) Place the cursor on the line above where you want to insert the text;
- 2) Press **RETURN** to create a blank line; and
- 3) Start typing.

As you continue to type, new lines will be created, and the text surrounding your insertion will be undisturbed.

If you want to type new text over old text, you can simply position the cursor over a character in the old text and "type over" the old text with new material.

If you want to insert text in the middle of a line or paragraph, you can move the cursor to the desired position and give the **INSERT SPLIT** command. That command splits the line on which the cursor is positioned: all characters to the left of the cursor move up one line, and all characters under the cursor and to the right stay where they were. Then you can type your insertion, a single character up to many paragraphs.

After you have inserted text in a paragraph, the paragraph is no longer continuous. There are spaces and gaps that must be eliminated to make the paragraph look right. To close everything up after a change that alters the form of the paragraph, move the cursor to a word in front of the gaps and give the **CLOSE PARAGRAPH** command. This command readjusts the format of all text from the cursor to the next **RETURN** character.

## Hands On – Inserting and Deleting

Give the 3. Edit command and give TEST as the document name.

Set the right margin at column 60, and give the JUSTIFY OFF command. Then type the following paragraph, so you can practice editing it:

```
The dollar steadied briefly on European currency exchanges
yesterday with news of prime interest rate increases by
some US banks, but it sagged again at the close.      [
```

Delete the second line. To do this, place the cursor anywhere in the line and give the DELETE LINE command. Next, place the cursor over the first character of the paragraph and replace it with lowercase t. Place the cursor over the first character again (now lowercase t) and give the INSERT SPLIT command. The cursor moves up one line and is in the correct position for an insertion. Now, type:

```
Yesterday, with news that some US banks had increased prime
interest rates,
```

Add one space after "rates," and then give the CLOSE PARAGRAPH command. There! All the gaps are closed up and the paragraph is continuous again.

Now move the cursor to the space before the second occurrence of the expression "some US banks," and press the DEL key repeatedly, deleting the first blank and the expression up to the final comma (leave it at the end of the word "exchanges").

The deletion leaves a gap after the comma. Leave the cursor on the comma and give the CLOSE PARAGRAPH command to close the gap. Your edited paragraph should look like this:

```
Yesterday, with news that some US banks had increased prime
interest rates, the dollar steadied briefly on European
currency exchanges, but it sagged again at the close.      [
```

### 4.4.3 The CLOSE PARAGRAPH Command

The CLOSE PARAGRAPH command does a lot more than clean up a paragraph after you've inserted or deleted text. It operates on all text from the cursor to the next inverted L, even text that is off the screen, and readjusts the format of the text as follows:

It changes the shape of the text to reflect the current margin and justification settings. Thus, if you have reset margin or justification settings since you typed the paragraph, the CLOSE PARAGRAPH command will change the format of the text to comply with the new settings.

It eliminates blank lines and extra spaces within the paragraph, leaving only those spaces required to separate words from one another, and any additional spaces related to justification. (If you are using the command to "unjustify" a justified paragraph, the extra spaces related to justification will also be eliminated. If, however, you are using the command to justify an unjustified paragraph, spaces related to justification will actually be added.)

Thus, you can use the CLOSE PARAGRAPH command to

- Remove excess spaces and blank lines from paragraphs.
- Change justified text to unjustified and vice versa.
- Change the margins for paragraphs.
- Indent the first line of a paragraph, or create a "hanging indentation."

In short, the CLOSE PARAGRAPH command gives you total control over the style and shape of your paragraphs.

Do not position the cursor over a space when you give the CLOSE PARAGRAPH command, unless you want that space deleted. CLOSE PARAGRAPH removes excess spaces starting from the current cursor position. If the cursor is over a space, that space will be removed. If you have a specific reason for positioning the cursor over a space that you do not want removed (e.g., you're changing a margin after the beginning of the paragraph), replace that space with a *tilde* (~ — shifted ^) before giving the CLOSE PARAGRAPH command. The tilde can also be used to keep a group of words or characters together on one line, even if the group contains spaces. Just replace each space with a tilde.

You can use the CLOSE PARAGRAPH command while altering paragraphs as you did in "Hands On - Inserting and Deleting." Or you can type paragraphs in any form and later use CLOSE PARAGRAPH to make them wider, narrower, justified, unjustified, block-style, or indented.

Before using this command to change the format of an entire paragraph, position the cursor over the first character of the paragraph or on an empty line above the paragraph. To change the format of part of a paragraph, just make sure the cursor is before any gaps.

### **Hands On — Using the CLOSE PARAGRAPH Command**

Give the 3. Edit command and type TEST as the document name.

Now type this paragraph. Before you change any default settings, the paragraph is in block form, has 63 characters per line, and is justified. Remember to press the RETURN key at the end of the paragraph. [

Change the style of the paragraph you just typed from justified to unjustified. To do this, give the JUSTIFY OFF command, then put the cursor over the first character in the paragraph (the N of Now) and give the CLOSE PARAGRAPH command. Now you have an unjustified paragraph.

Try changing the margins to 5 and 55. Place the cursor in column 5 and give the LEFT MARGIN SET command. Place the cursor in column 55 and give the RIGHT MARGIN SET command. After moving the left margin in, you can't place the cursor over the first character in the paragraph, so place it in column 5 of the preceding line. If the preceding line ends with an inverted L, press the RETURN key to put the cursor on line that does not end with an inverted L. Give the CLOSE PARAGRAPH command. Now the paragraph has been squeezed between columns 5 and 55.

It was important to place the cursor in column 5, rather than column 20 of the preceding line. If you had placed it in column 20, the paragraph would still be readjusted to fit between columns 5 and 55, but the first line would start in column 20.

To use the CLOSE PARAGRAPH command to indent the first line of a paragraph, position the cursor on the line above the paragraph and move it five spaces from the margin. (If there is no blank line above the paragraph, make one by typing a RETURN on the preceding line.) Now give the CLOSE PARAGRAPH command. The first line of the paragraph is now indented five spaces.

Another form for paragraphs is to indent all but the first line. For example, the first line starts in column 1 and all subsequent lines start in column 5. Start by resetting the left margin to column 1 (give the LEFT MARGIN RELEASE command). Move the cursor to column 1 of the first line and give the CLOSE PARAGRAPH command. Next, reset the left margin to column 5, place the cursor over the fifth character of the first line (the t of type), and give the CLOSE PARAGRAPH command again. This style (called "hanging indention") is very useful for definitions, notes, bibliographies, and the like.

The CLOSE PARAGRAPH command readjusts the format of all text from the cursor to the next inverted L, even text that is off the screen. Once you've worked with this command, you can see why it is so important to end each paragraph with a RETURN and to end each line that is not part of a paragraph with a RETURN. If you had a list or table whose lines did not end with RETURNS and you gave the CLOSE PARAGRAPH command above it, your list or table would turn into one large paragraph.

If you suspect that a CLOSE PARAGRAPH command is readjusting text beyond where you intended (i.e., if you realize you omitted a RETURN somewhere), you can stop the command by pressing the ESCAPE key. Even so, unless you noticed the problem right away, some of the text may have been readjusted.

#### 4.4.4 Search and Replace

One of the most tedious tasks for a person is one of the easiest tasks for WordWizard: finding a certain word or expression in page after page of text.

You might want to use this feature if:

- You discovered that "procedure" was misspelled throughout a document.
- Arnold Jones Co. changed its name to A.J., Inc.
- You wanted to use the same document over and over, just changing a prearranged symbol to a different name each time (e.g., changing "Dear Mr. \\" to "Dear Mr. Smith").
- You wanted to edit some text in the middle of your document, and you remembered that the words "Section 1" appeared somewhere near the passage that you wanted to edit.

The commands used for finding and changing expressions in the document are SEARCH, CONTINUE SEARCH, REPLACE, and CONTINUE REPLACE. The difference between SEARCH and REPLACE is that SEARCH simply finds the expression, while REPLACE finds the expression and replaces it with another expression (if you give the go-ahead). The CONTINUE SEARCH and CONTINUE REPLACE commands tell WordWizard to continue with the last search operation or the last replacement operation, respectively.

When you give the SEARCH or REPLACE command, WordWizard immediately asks the question:

```
search string?
```

After you've typed the word or expression you're looking for (and pressed RETURN), WordWizard begins to search your document.

WordWizard searches only within the current margins; by changing the margin settings before giving the SEARCH or REPLACE command, you can determine which columns will be included in the search. For example, if the margins are not set wide enough to include all columns you want searched, you should change the margin settings to widen the search space. If you want to search only certain columns, set the margins to include only those columns.

The SEARCH command searches for a given expression from the cursor to the end of the document. Thus if you want to search text before the current cursor position, you may need to scroll upward before initiating the search. To start the search at the beginning of your document, use the JUMP TO START command and then press the HOME CURSOR key twice.

If WordWizard finds the search string, the window of text that includes the expression will appear on the screen, and the cursor will mark the beginning of the expression. If your expression is not found at all, WordWizard will display the end of your document. As soon as the search stops, you are free to continue editing your document. If you want to stop the search while it is in progress, press the ESCAPE key.

A search string can be a word, a number, part of a sentence, or any expression up to 40 characters long. WordWizard will find that expression no matter how it occurs — even if it occurs as part of a longer word. Examples of search strings are:

```
quest
QUEST
ever.  If he goes
$13.22
_sample_    [the underlines represent spaces]
```

Note that WordWizard distinguishes between uppercase and lowercase letters. If you request a search for "quest," WordWizard will find the lowercase form only — it will not find "QUEST."

When you search for a string, consider the different ways all or part of that string might appear in the document. For example, imagine you are looking for the word "he." If you search for the string "he," WordWizard will find "the," "help," and "Thelma," as well as "he." If you include blanks in the search string (use " he "), you can avoid finding words that contain "he." However, you will miss "He" at the beginning of a sentence and "he." at the end of a sentence and should search for these separately.

You can also eliminate characters from the search string, so as to make the search more general. For example, to find variations in the misspelled word "dissappoint", search for "issapoint" and you will find "dissappoint", "Dissappoint", "dissappointing", etc.

Once the search string has been found, you can use the CONTINUE SEARCH command to find the next occurrence of the same expression. You can give that command any number of times to find all occurrences of an expression.

The search string given in the SEARCH command will be remembered throughout the editing session until you give another SEARCH command or a REPLACE command. Thus, you can do any amount of editing before giving the CONTINUE SEARCH command; WordWizard will remember the last SEARCH string.

### Hands On — A Sample Search

Give the 3. Edit command and type TEST as the document name. Then type the following letter:

```
Dear M\:  
  
Thank you for giving us the opportunity to interview you  
for the position of \.  Although we have filled the  
position, we will keep your resume on file and contact  
you if there are any vacancies in the next six months.  
  
Sincerely,
```

This is an example of a form letter you might save on a disk and use over and over.

Move the cursor to the top of your document, then give the SEARCH command. When WordWizard asks for the search string, type

```
\ RETURN
```

WordWizard finds the first \ and places the cursor over it. Type "s" over the backslash, then give the INSERT SPLIT command. Now finish the salutation by typing ". Parsons". Use the CLOSE PARAGRAPH command to close up the line.

Give the CONTINUE SEARCH command. When WordWizard finds the next \, type "L" over the backslash and give the INSERT SPLIT command. Then add "egal Assistant" and give the CLOSE PARAGRAPH command to remove gaps, with the cursor on the space past "Assistant".

The REPLACE command is almost exactly like the SEARCH command. The difference is that when the first occurrence of the expression is found, WordWizard asks you to supply a replacement for the expression.

REPLACE is intended for use with words or short phrases, not strings including word fragments. To avoid the addition of unwanted spaces, make sure that the characters just outside the search expression are spaces.

The interaction when you give the REPLACE command is:

*You:* (Press and release LOAD, then press 4.)  
*WordWizard:* search string?  
*You:* (Type the expression you're looking for, and then press RETURN. The first occurrence is found. There may be no click from the Helios.)  
*WordWizard:* replace string?  
*You:* (Type the replacement expression, and then press RETURN.)  
*WordWizard:* (Marks the expression with the cursor.)  
*You:* (Press the RETURN key to make the replacement, or the space bar if you don't want to replace the expression.)

If WordWizard does not find the string, it does not ask for a replacement. Instead, the end of your document appears on the screen, showing you where the search ended. You can stop the search at any time by typing the ESCAPE key.

As soon as WordWizard makes a replacement, it automatically closes the paragraph to readjust the text in case the replacement string was shorter or longer than the search string. For this reason it is better to use SEARCH than REPLACE when working with tables if the replace string is longer or shorter than the search string. The automatic CLOSE PARAGRAPH will use the current margin and justification settings. You can reset margins and justification before continuing if you anticipate text whose format should differ from current settings.

Sometimes the CLOSE PARAGRAPH performed by a REPLACE command does not format the text the way you intended. You should visually scan your text after a replacement and make any changes necessary before proceeding to the next task.

You can repeat the same REPLACE command without having to type the string and its replacement again: just give the CONTINUE REPLACE command. You can work "backwards" by scrolling or moving the cursor backwards before giving the CONTINUE REPLACE command. As with the SEARCH command, the search string and replace string specified for a REPLACE command are remembered until you give another REPLACE command or a SEARCH command, or until you return to the Activity Menu.

The REPLACE and CONTINUE REPLACE commands are very useful for correcting a consistently misspelled word or changing a name that appears again and again in a document.

## Hands On — A Sample REPLACE

Edit a new document and type the following paragraph, including the misspelled words:

The foriegn accounts have increased tenfold since the local currency began to drop relative to foriegn currency. [

To correct the misspelled words, move the cursor above the paragraph and give the REPLACE command. When it asks for the search string, type

```
foriegn RETURN
```

For the replace string, type

```
foreign RETURN
```

The cursor stops at the first occurrence of "foriegn." Press the RETURN key to make the change. Now give the CONTINUE REPLACE command. The next stop is in the second line. Again, press the RETURN key to make the change.

### 4.5 CUT AND PASTE, COMPUTER STYLE

Before word processing, the way to make large-scale revisions to a document was to cut passages from one place and paste them somewhere else, or retype or photocopy a passage to be repeated and paste it in a second place. In WordWizard, this mechanical approach has been replaced by three commands: MOVE BLOCK, COPY BLOCK, and INSERT BLOCK.

The MOVE BLOCK command removes a passage from the document and saves it to be inserted elsewhere in the same document. The COPY BLOCK command makes a copy of a passage and saves it to be inserted elsewhere in the same document. The INSERT BLOCK command inserts a passage set aside with MOVE BLOCK or COPY BLOCK.

Moving or copying a block involves four steps:

- 1) You must identify a block as the block to be moved;
- 2) You must give a command (MOVE BLOCK or COPY BLOCK) to save the block for later insertion;
- 3) You must show WordWizard where you want the block to be inserted;
- 4) You must give the command (INSERT BLOCK) to insert the block.

The block of text being moved or copied consists of one to 16 complete lines. To identify the block, move the text down on the screen using the up arrow and the REPEAT key until the last line on the screen is the last line you want moved or copied. Without scrolling, put the cursor anywhere on the first line of the block. Use the MOVE BLOCK or COPY BLOCK command to save the block for later insertion.

Position the cursor anywhere on the line *above* where you want the block to be inserted. Then give the INSERT BLOCK command to insert the block. The block is inserted just as it appeared when moved or copied; that is, you can't put the cursor in the middle of the line and have the block start there if it originally started in column 1.

If you want to move more than sixteen lines, you must repeat the whole operation again and again until all the text you want moved has been handled. There is an easier way to handle large changes like this. It is described in Section 5, Merging.

## Hands On – Moving and Copying Blocks

Use the 3. Edit command to edit a new document; then type the following:

A block of text is simply a group of lines beginning with the cursor line and ending at the bottom of the screen. [

To move a block of text, move the cursor up on the screen until the last line of the passage is at the bottom of the screen. Then put the cursor on the beginning line of the passage and give the MOVE BLOCK command. [

Now move the second paragraph to the bottom of the screen, including a blank line under the last paragraph so the passage will end with a blank line after it has been moved. Place the cursor in the first line (To move a ...), and give the BLOCK MOVE command. Notice that the paragraph disappears from its old position. Move the cursor to the line above the first paragraph you typed and give the INSERT BLOCK command. You have exchanged the two paragraphs.

Now let's practice copying. Type a line of dollar signs at the bottom of the screen (press \$ and REPEAT). Place the cursor in the line and give the COPY BLOCK command. This time the text does *not* disappear from the screen. Move the cursor down one line and give the INSERT BLOCK command. Move the cursor down again and give the INSERT BLOCK command again. You can make as many copies of a block as you wish.

### WARNING

*The MOVE BLOCK command removes a block of text and stores it only until the next MOVE BLOCK or COPY BLOCK command. Be sure to insert a moved block before you give a second MOVE BLOCK or COPY BLOCK command; otherwise you will lose it.*

The warning above should give you a hint about how to get rid of a large block of unwanted text. Instead of deleting it line by line, use the MOVE BLOCK command to remove it, and never re-insert it.



## SECTION 5

### MERGING

Do you ever wish you could just snap your fingers and make a page or paragraph you typed earlier suddenly appear in the document you're typing now? Perhaps you type a lot of proposals and the first few pages are the same for all of them. Or you want to include the same block of information in several different letters. Maybe the same form has to be filled in with several different sets of information.

All of these situations call for merging all or part of one document with another one. WordWizard lets you merge documents with just a little more effort than a snap of the fingers. There are two ways to merge documents in WordWizard: (1) you can *join* two complete documents, or (2) you can mark passages in one document, then insert them at chosen places in *another* document. We'll talk about the first method first.

#### 5.1 JOINING TWO OR MORE DOCUMENTS

In Section 2 you learned how to use the Archive Activity to save a document on the System Disk; you also learned to use the Retrieve Activity to copy a document from the Archive onto a Document Disk. In this section you'll see how to use those two activities to join two or more whole documents.

When you select the Retrieve Activity, WordWizard takes whatever document is in the archive and inserts the text of that document *AHEAD OF* whatever text exists in the destination document, i.e., the document whose name you specify after selecting Retrieve. If the destination document contained no text prior to the retrieval, the result of this procedure is that the archive document and the destination document are identical. If, however, the destination document contains text, the contents of the archive are added to the *BEGINNING* of that text. Thus, if you have two documents called A and B, and you want to combine them so that B follows A, you can archive A and then retrieve it, naming B as the destination document. At the conclusion of the operation, document B will contain the text of A, followed by the text that was in B before the merge.

This feature can be extremely useful. For example, if you have a standard first page for reports, you can save that page in a separate document called `FIRST.PAGE`. Then, when you have typed the body of any report, you can add `FIRST.PAGE` by moving it to the archive and then retrieving it, specifying the report document as the destination.

#### Hands On — Merging Whole Documents

Make two new documents named `PART1` and `PART2`. Make sure they are not identical and that you can distinguish between the text of `PART1` and `PART2`. Now go back to the Activity Menu and use a. the Archive activity to save a copy of `PART1` on the System Disk:

When the Activity Menu appears on the screen, press 9  
When the document name is requested, type `PART1` RETURN

The next step is to retrieve the archive copy onto `PART2`:

With the Activity Menu on the screen, press 0  
When the document name is requested, type `PART2` RETURN

When you use the Retrieve activity with an existing document name, the archive document is copied onto the specified document *AHEAD OF* any existing text. Thus, when you perform the steps outlined above, you cause the text of PART1 to precede the text of PART2 in the document named PART2.

Use the Edit activity to see that PART1 and PART2 are merged.

You can use the method described here to merge as many documents as you want. For example, if you have typed all the chapters of a book on separate documents, and want to merge them onto one large document for transmitting to others or for printing, you would proceed as follows (assuming the book has four chapters):

1. Archive CHAPTER4 and retrieve it into an empty document named BOOK.
2. Archive CHAPTER3 and retrieve it into BOOK (inserting it before CHAPTER4.)
3. Archive CHAPTER2 and retrieve it into BOOK (insert it before CHAPTER3.)
4. Archive CHAPTER1 and retrieve it into BOOK (inserting it before CHAPTER2.)

## **5.2 MERGING PARTS OF ONE DOCUMENT WITH ANOTHER**

There are many cases in which you may find it convenient to take lines or paragraphs from one document and insert them into another document. With WordWizard's Select Merge and Call Merge features, you can mark selections in one document and insert them in chosen locations in another document.

This capability has far-reaching implications. It means you can

- Pull text from old letters and reports.
- Keep libraries of useful paragraphs, letters, and forms to be drawn upon as needed.
- Keep a file of names and addresses that can be extracted for form letters.
- Store groups of standard print-control statements for use in similar statements.

There are several conditions that must exist before part of a document is pulled and inserted into another document.

- 1) There must be a merge document containing the passage or passages to be pulled. Those passages must be marked in a way that enables the WordWizard to recognize them.
- 2) Because you might have several documents from which you pull passages, there must be a way of telling WordWizard which document contains the passages to be pulled at any given time.
- 3) There must be a command that will cause a passage to be pulled, and a way of indicating where to insert the passage in the document being edited.

The procedure for satisfying these conditions is as follows:

- 1) Set up your merge document, as described below.
- 2) Use the Select Merge Activity to designate a merge document as the one from which passages should be pulled.
- 3) Edit the destination document, put the cursor on the line below place where you want to insert a passage, and give the CALL MERGE command, specifying how you marked the passage (see below).

When you give the CALL MERGE command, WordWizard will search the selected merge document for the specified passage and insert that passage *ABOVE* the line that has the cursor in it. (Remember that INSERT BLOCK inserts the passage *BELOW* the cursor line.)

### 5.2.1 The Merge Document

Before you can pull text from one document and insert it in another, you must (1) mark the passages to be pulled, and (2) mark the document as a merge document.

A merge document differs from another document in only one respect: it contains passages, called "*clauses*," that are intended for insertion into other documents. For example, you might have a merge document consisting of names and addresses of your clients, and another merge document containing paragraphs to be inserted into form letters.

To mark a "clause," precede its first line with a line consisting of a caret and a one- to forty-character clause name. It is a good idea always to use lowercase names, so that you don't have to remember whether you used upper- or lowercase. Follow the last line of the clause with a line consisting of two carets and no other text. The marker lines should begin in column 1 and end with inverted Ls. In the example below, "disclaimer" and "copyright" are the clause names.

Column 1

```
|
^disclaimer                                     |
The company is in no way responsible for loss or damage of   |
cars left on the lot overnight.                             |
^^                                                 |
^copyright                                       |
This manual and the programs it describes are copyrighted.   |
All rights are reserved.  No license to copy or duplicate    |
is granted with distribution or subsequent sale.             |
^^                                                 |
```

After marking merge passages in a document, you must select that document as a merge document before you can pull passages from it. The Select Merge activity allows you to select a specified document to be the merge document until you end the work session or go to the System Functions Menu.

The final step in merging passages from one document into another document is to edit the document that is to receive the passages and give the CALL MERGE command with the cursor positioned on the right lines. When you give the command, WordWizard immediately asks you to indicate which passage you want pulled and inserted; answer by typing the clause name. When you have typed the name, WordWizard searches the selected merge document for the marked passage, and inserts the text of that passage into the document being edited. The merge passage is always inserted *ABOVE* the line that has the cursor in it. If you have not selected a merge document, there will be no response when you give the CALL MERGE command. If you give the name of a clause that is not in the document (or if you misspell the name of a clause) after giving the CALL MERGE command, no text will be inserted.

A merge document need not consist entirely of merge clauses. In fact, you can make any document into a merge document by marking one or more clauses and then using the Select Merge Activity. If you need to change the order of large blocks of text within a document, dividing the document into clauses and merging those clauses, in order, into another document, is often the easiest way to proceed.

## CAUTION

*A merge clause must not contain any carets, except in the marker lines. If a passage you want to merge contains a caret, temporarily change the caret to some other character, and then change it back again after the merge has been completed.*

### Hands On — Merging Parts of Documents

Create a document named MYLIB and type the following text in it:

```
^example
This paragraph has been marked for merging with another
document.  [No inverted L on this line, please.]
^^
^close
                Sincerely,
                James T. Falkhoss
                President
                Amalgamated X
^^
```

Return to the Activity Menu and use the Select Merge activity to select this document as the merge document:

With the Activity Menu on the screen, press 4  
When a document name is requested, type MYLIB RETURN

Now, edit a new document. Type a short letter and move the cursor two lines down from the last line of the letter. Give the CALL MERGE command. When WordWizard requests the clause name, type

close RETURN (use lowercase)

There! WordWizard put the passage exactly where you said to put it.

What happens when you want to merge something into the middle of a paragraph? Let's try it. Move the cursor back into the body of your letter, placing it between two sentences. Give the INSERT SPLIT command; then move the cursor down to the beginning of the second sentence *without typing the RETURN key*. (CALL MERGE inserts the merge clause above the line the cursor is on) and give the CALL MERGE command. When WordWizard requests the clause name, type

example RETURN (use lowercase)

Now move the cursor to a word before the insertion and give the CLOSE PARAGRAPH command. (Notice that if you had ended the clause called "example" with a RETURN, the paragraph would not have closed correctly.)

### 5.2.2 The LIBRARY Document

The Document Disk you received with the system contains a merge document named LIBRARY. LIBRARY has examples of merge clauses that might be used for business applications.

Take a look at LIBRARY using the Edit activity. Notice that names and addresses are included in the document with form letters and useful clauses. In practice, you would not be likely to keep unrelated material in one merge document. The advantage of putting all related material in the same merge document is that you don't have to go back to the Activity Menu and select different merge documents while you work. The advantage of keeping unrelated material apart is that you can stay organized, keeping two mailing lists separate, for instance.

The clauses in the LIBRARY document are designed to help you practice one of the most common jobs in the business world: sending the same letter to each person whose name appears in a certain list.

#### Hands On - Another Example of Merging

Select the LIBRARY document as the merge document:

With the Activity Menu on the screen, press 4  
When a document name is requested, type LIBRARY RETURN

Now edit a new document named LETTERS. When you scanned through the LIBRARY document, you saw that it contained some name and address clauses called cust1, cust2, etc., and that the clauses were of the form:

```
Mr. J. Monroe           ⌈  
32 West Sixth St.      ⌈  
Adelle, Ca. 99999     ⌈  
                        ⌈  
                        ⌈  
Dear Mr. Monroe:      ⌈
```

Call the first name and address by giving the CALL MERGE command. When the clause name is requested, type

```
cust1 RETURN
```

Now place the cursor on the line under the salutation, give the CALL MERGE command, and give form1 as the clause name. You have one letter ready to print and mail!

Under the first form letter, type

```
.eject ⌈
```

starting in column 1. This statement tells the printer to go to the next page before it continues printing. You will learn all about the dot statements in Section 7.

Put the cursor under the .eject statement and give the CALL MERGE command. This time type cust2 for the clause name. Move the cursor under the salutation and give the CALL MERGE command. You can type form1 again if you want to use the letter, or you can select another letter from the LIBRARY document. End the letter with ".eject", as before.

Now you have two complete letters ready to print and mail. You can continue this way until all customers have been addressed or until you start to run out of space on the Document Disk.



## SECTION 6

### OPERATING THE PRINTER

#### 6.1 WHAT HAPPENS WHEN YOU PRINT

After creating a document in the WordWizard, you have a "memorized" copy of the text that you can view on the screen at any time. If you want a copy of that document on paper, print it with your printer. Your WordWizard system has one or more printers connected to the Sol so that information can be transmitted from the Document Disk, to the Sol, to the printer.

When you print a document on the printer, it appears just as it did when you scanned it on the screen, except that it is formatted to fit each page of paper. There are margins on all sides of each page, there is spacing at the end of each page so that no text appears on a page boundary, and each page is 11 inches long. These are default conditions for printing and can be changed using the Print-Control Statements described in Section 7.

#### 6.2 THE PRINTER

You can use any of the following printers with the WordWizard:

- SolPrinter 2
- SolPrinter 2E
- SolPrinter 3
- Diablo Model 1610/1620
- Custom Printer

The *SolPrinter 2* is a letter quality printer with a metal print wheel, appropriate for camera-ready copy or for business letters. It prints at speeds up to 540 words per minute.

The *SolPrinter 2E* is similar to the SolPrinter 2, but is a less expensive model using a plastic print wheel. It also prints up to 540 words per minute.

The *SolPrinter 3* is a high-speed printer (2400 words per minute). The characters are formed by imprinting a matrix of dots. This printer is appropriate for drafts that must be printed quickly, and for other non-critical volume work.

There are no lights, bells, knobs, or adjustments to make on the SolPrinter 2 or 2E — everything is controlled by commands within WordWizard. You are always ready to print if the printer is plugged into the Helios and set up properly. To use the SolPrinter 3, its "Power" and "Select" lights must be on. Leave the power switch on, so that it goes on and off with the Helios key switch. Every time you turn on the Helios, press the "Select" button to turn the light on.

The print quality of *Diablo Models 1610 and 1620* is similar to that of the SolPrinter 2E. The Diablo printers have operator controls that must be set before you begin printing. If you have a Diablo 1610 or 1620, see Appendix 4 for the correct switch settings.

A *custom printer* is a nonstandard printer that has been adapted to work with WordWizard. If you want to use a printer other than a SolPrinter or Diablo 1610/1620, your dealer must record a special program called a printer driver on your System Disk.

No matter which printer you're using, the following rules will help ensure trouble-free operation:

- Learn how to use the printer by reading its manual before starting.
- Set the printer on a table or typewriter stand separate from the rest of the equipment, to avoid the effects of vibration on you and the equipment.
- Always check paper, ribbon, and print wheel before printing.
- Leave the printer plugged into the Helios so its power will come on automatically.
- Never turn off the Sol or Helios while the printer has power. If you do, you risk damage to the printer.
- Never set any liquids on the printer.
- Keep fingers, hair, tissues, jewelry, paper clips, etc. away from the printer. The printer moves very quickly and could injure curious hands inside the cover.
- Never turn off the system or the printer while the printer is printing. Use the Stop Printing activity instead.

### 6.2.1 Print Wheels

The print wheels used with your SolPrinter 2 or 2E, or Diablo 1610/1620 have a function similar to that of typing fonts. You can exchange print wheels to get a different set of characters.

Thus, when you print documents typed on the Sol keyboard, you may have a few surprises when some characters appear on the paper. Special characters, that is, characters other than letters or numbers, may differ from one print wheel to the next.

Since there are always variations between the keyboard and print wheel characters, you must determine which characters on your print wheel (or wheels) correspond to which keys on the Sol keyboard. To do this, just print the document called CHARACTER-SET, supplied on the original Document Disk. That document contains a table of all the printing characters on the keyboard. Compare the printout with the symbols on the keytops and take note of the differences.

The plastic print wheels for the SolPrinter 2E or Diablo 1610/1620 have 96 characters like the Sol keyboard. Thus any character you can put into a document will be printed, although the printed representations of some characters may differ from the keyboard and screen representations.

Print wheels for the SolPrinter 2 are made with 88, 92, or 96 characters. A 96-character print wheel is supplied with the printer. If you used a 88- or 92-character print wheel, some characters on the keyboard could not be printed. Characters missing from the print wheel are printed as blanks, but it is recommended that the printer not be used in this way. Use only 96 character print wheels. When this manual went to print, the only 96 character print wheel available was a Titan 10 wheel (Part No. 311900-01), as supplied with the printer. New print wheels are constantly under development; contact your dealer regarding availability.

The SolPrinter 3 has a fixed dot matrix head instead of a print wheel. The characters on the matrix head match the Sol keyboard exactly.

### 6.2.2 Printer Paper

SolPrinters allow you to print on any kind of paper, whether it be standard typewriter paper, narrow checks, or continuous forms. The most convenient paper for practicing is *continuous forms* paper.

Continuous forms paper is any kind of printer paper that comes in a continuous piece rather than separate sheets. Continuous forms are usually *perforated* every 11 inches to form pages, with rows of holes on either side to engage with a forms tractor. Paper has two common widths, one that yields 8 1/2 inch wide sheets when "burst" apart, and one that is about as wide as the platen on the printer.



A *forms tractor* is a mechanism that fits on the top of the printer and keeps the paper positioned properly during printing. It has sprockets that fit into the holes along the side of the paper, and hold the paper in place. Use a forms tractor with continuous forms, or the paper will wander across the platen during printing, and the top and bottom margins will slowly shift.

### 6.3 SELECTING THE PRINTER

If you have one printer in your WordWizard system, you have to select the printer only once. From then on, WordWizard will remember your selection — even when you turn off the system because that selection is recorded on the System Disk. If you have more than one printer, you must make a new selection every time you want to switch printers.

#### Hands On — Select Printer

Get the Activity Menu on the screen, then press ESCAPE to get to the System Functions Menu. Choose System Function 5. Select Printer. As soon as you press 5, the Printer Menu will appear:

```
Basic Computer Group Ltd. / Processor Technology Corp.  
WordWizard 4.0 (MOD 0)  
Select Printer
```

1. SolPrinter 2 (letter quality)
2. SolPrinter 2E (letter quality)
3. SolPrinter 3 (high speed)
4. Model 1610/1620
5. Custom Printer

Select Printer:

Press the number corresponding to your printer (or to the printer you want to use next) and wait. After a short pause the System Functions Menu will reappear on the screen and you can continue.

### 6.4 THE PRINT ACTIVITY

You are almost ready to print your documents. All you have to do now is insert paper and ribbon into the printer. (See the manual that you got with your printer.) Set the perforation between sheets about one half inch above the print head or the top spoke of the print wheel. At this point, we won't worry about top and bottom margins or how far down on the page to start printing. These topics will be covered in the next section.

#### 6.4.1 The Printing Options

The Print activity is the fifth item on the Activity Menu. You can use the Print activity to print any document in your index. After you request the Print activity, the WordWizard requests the name of the document to be printed, and then displays the following information about how you intend to print the document:

1. Skip how many pages?
2. RETURN for sheet, ESCAPE for continuous forms:
3. RETURN to print dot commands, ESCAPE to omit:

These requests appear one at a time — when you respond to one, the next appears. Here is how to interpret them.

Skip how many pages?

You can begin printing at the beginning of any page (up to the hundredth) in a document. For example, if you had been printing a document and saw something you wanted to change on the third page, you could interrupt printing, make the change, request the Print activity again and continue printing from the top of the third page. In this case you would want to skip two pages, so your answer to the first question would be

2 RETURN

If you don't want to skip any pages — that is, if you want to begin printing at the beginning of the document, just answer this question by pressing the ESCAPE key.

The number you type has nothing to do with the page numbers you may be printing; it specifies only the number of pages to be skipped. For example, if you assigned the number 10 to the first page of your document and then answered the question "Skip...?" with the number 2, the first page to be printed would be numbered 12. (You'll learn about page numbering in Section 7.)

You will notice a pause before printing begins, whenever pages are skipped.

RETURN for sheet, ESCAPE for continuous forms:

If you are using single sheets of typing paper or are printing only one page and want the printer to stop at the end of the page, answer this question by pressing RETURN. If you are using continuous forms, answer this question by pressing ESCAPE, and printing will continue page after page until the document is finished (or until you select Stop Printing from the Activity Menu.

If you answer the question with RETURN, printing stops at the end of each page and the following message flashes on the screen:

Print next page?

If you want to continue to the next page, remove the printed sheet, insert a new sheet, and press RETURN. If you don't want the next page printed, press ESCAPE to return to the Activity Menu. This message will flash on the screen even if you are editing another document. The document you were editing will reappear once you have responded to the message.

RETURN to print dot commands, ESCAPE to omit:

Dot statements, described in Section 7, are statements inserted in your document to control the form in which it will be printed. Normally you will *not* want to print these statements, because they are not part of the document itself. To suppress printing of these statements (but not their effects), answer the question by pressing ESCAPE.

There may be occasions when you will want the statements to be printed for someone else's benefit or to check all the dot statements in a document to make sure they are correct. If this is the case, answer the question by pressing RETURN. The dot statements will be printed *and* their effects will be visible in the printout.

Once you make this third choice, printing will begin. Just after printing begins, the Activity Menu and cursor will appear, indicating that you can choose another activity while printing.

Given this background, you are ready to print a document.

## Hands On — Print a Document

First, get the Activity Menu on the screen. Make sure the printer is turned on. Then insert continuous forms paper under the platen. Roll the paper up until a perforation in the paper is about one-half inch above the print head, i.e., so that the first line printed will be one-half inch *below* the perforation.

Select the Print activity from the Activity Menu. When the document name is requested, type the name of a document you want to print and press RETURN. Press the ESCAPE key in answer to to each additional request:

Skip how many pages? *ESCAPE*  
RETURN for sheet, ESCAPE for continuous forms: *ESCAPE*  
RETURN to print dot commands, ESCAPE to omit: *ESCAPE*

WordWizard prints your whole document. Notice that the document appears as it did on the screen when you finished editing it the last time, except that now it is divided into pages.

If you want to interrupt printing, select the Stop Printing activity. *DO NOT* turn off the printer while it is printing.

If you try to print a document and nothing happens or the message "Printer not ready!" flashes on the screen, one of the following may be the problem:

- The printer's power is not on.
- The printer you selected is not the one connected to your Sol.
- A custom printer has been selected, but the printer driver is not on the System Disk, or the wrong driver is on the System Disk.
- You are using the SolPrinter 3 or another printer connected to the Serial Communication Interface, and the LOCAL light is on, inhibiting the printer.
- The printer is malfunctioning.
- The paper or ribbon is used up.
- The cover over the print head is off or ajar.

### 6.4.2 How to Interrupt Printing

There are three ways to interrupt printing once it has started. One way was pointed out in the preceding Hands On: select the Stop Printing activity from the Activity Menu. This action stops printing immediately and returns the Activity Menu to the screen.

A second way lets you interrupt printing momentarily and then resume. If you select the Create activity while a document is being printed, printing is suspended until you name a document. Instead of naming a document, press ESCAPE. Then printing continues. This method is useful when you want to pause long enough to adjust something on the printer (move the paper, change a ribbon, etc.), and then continue from where printing left off.

The third way to stop printing is to have WordWizard stop automatically at the end of each page. When you are asked to press "RETURN for sheet, ESCAPE for continuous forms:" answer by pressing RETURN. When the printer gets to the end of each page, it will ask, "Print next page?" This pause gives you the opportunity to take the printed sheet out, insert and position a new sheet, and press RETURN to continue printing. If you don't want to print the next page, press ESCAPE.

### CAUTION

*Do not interrupt printing by turning off power to the printer. Use one of the methods described below. Do not type ESCAPE during printing, or printing will stop and you won't be able to start it again.*

## Hands On — Printing on Single Sheets of Paper

In Section 5, you created the document LETTERS by merging clauses from the document LIBRARY. Now let's print the document you created.

Put a single sheet of standard typewriter paper in the printer. Roll it under the platen so that the first line printed will be one-half inch from the top of the page. Make sure the printer is turned on and set up correctly.

Put the System Disk in unit 0 and a the copy of the Document Disk containing LETTERS on unit 1. Get the Activity Menu on the screen.

Select the Print Activity and give the name LETTERS for the document to be printed.

After the first page has been printed, printing stops and the message, "Print next page?" flashes on the screen. Take the printed page out and insert a blank piece of paper, positioning it as you did before. Then press the RETURN key on the Sol to resume printing. Print as many pages as you choose. When you decide not to print the next page, answer the question, "Print next page?" by pressing the ESCAPE key.

### NOTE

*If you start printing with a page other than the first page and request that the printer pause after each page, you will get the message "Print next page?" even for the pages you intend to skip. Just answer the question by pressing RETURN for each of the pages you are skipping.*

### 6.4.3 You Can Do Two Things at Once

With WordWizard, you can start a document printing and continue with other jobs on the Activity Menu while it is printing. The other jobs must not involve the document being printed, however.

While printing one document, you request the following activities with other documents:

- Create another document
- Remove a document
- Edit another document
- Select a merge document
- Make an archive copy of another document
- Retrieve an archive copy

In most cases, WordWizard will pause in printing while it performs the requested activity. When you select the Edit Activity, however, WordWizard resumes printing while you revise or type your document. There is a pause in printing when it's time to read or write to disk which happens when you scroll, when the SEARCH or REPLACE command is in operation, or when WordWizard is waiting for information (for example, a document name.)

There is no reason to stop typing or editing a document because you're printing another document. If you want to keep working on the *same* document you're printing, make another copy of it under a different name, then print one copy while editing the other. During editing, the message "Print Next Page?" can appear. Just respond, and you will be able to go one editing.

## Hands On — Print and Edit at the Same Time

In this Hands On, you will print the first section of this manual while editing another document.

Put the System Disk in unit 0 and a copy of the Document Disk you received with the system in unit 1. Position continuous forms paper in the printer so that the print head is about one-half inch from the top.

Select the Print activity and give the document name `W.W.MANUAL`. Press the ESCAPE key in answer to each request:

```
Skip how many pages? ESCAPE
RETURN for sheet, ESCAPE for continuous forms: ESCAPE
RETURN to print dot commands, ESCAPE to omit: ESCAPE
```

While the first page is printing, select the Edit activity and give a new document name. Notice that printing is interrupted until you press the RETURN key after giving the document name.

Type the text of this Hands On in your new document. Then try some editing activities while the `W.W.MANUAL` document is being printed: search for the word "RETURN," change the margins and close a paragraph, etc. Notice that there is a pause in printing when your editing requires access to the Document Disk. When you are done, go to the Activity Menu and select the Stop Printing Activity.

### 6.4 OTHER PRINT ACTIVITIES

Two other items on the Activity Menu are related to printing. Besides printing documents, you can print the document index for the Document Disk currently in unit 1, and you can cause the printer to advance the paper to the next page.

To print the document index, select the Print Index Activity. To eject paper, select the Eject Page Activity. Sometimes you cannot remove the last page printed unless additional paper has been ejected.



## SECTION 7

### PRINT-CONTROL STATEMENTS

#### 7.1 SUMMARY

You know how to control the form of your text using margins, justification, and CLOSE PARAGRAPH. In addition to these LOAD and MODE commands that you can use to determine how your text will look on the screen and on the printed page, there are Print-Control Statements that let you determine further how your document will look when it is printed.

The Print-Control Statements let you determine such features of the page as: number of lines printed on each page, titles or footings for each page, when to eject a page and start a new one, etc. The statements are embedded in the text of your document, on lines separate from those that will actually be printed.

Print-Control Statements are meaningful only to the printer. They have no effect until a document is printed, and are normally not printed with the rest of the document.

#### 7.1.2 Format and Placement of Print-Control Statements

A Print-Control Statement begins with a period (dot) in column 1 followed by the text of the statement in lower case letters. The text below is printed as two single-spaced lines followed by two double-spaced lines:

*Column 1*

```
|  
.spacing 1      ⌈  
Line one       ⌈  
Line two       ⌈  
.spacing 2      ⌈  
Line three     ⌈  
Line four      ⌈
```

It is important that you begin a Print-Control statement in *column 1*; otherwise, the statement will be regarded as ordinary text. (Notice that a dot in column 1 is always a clue to WordWizard that a line is not a normal text line; a line starting with *one* dot is a Print-Control statement, and a line starting with *two* dots is a comment.)

Print-Control Statements may be inserted at any time during the creation or editing of a document. In fact, you don't need to insert them at all: there is a default format that will be used if there are no Print-Control Statements in your document. You have already seen the default format of a printed document. The documents you printed in Section 6, using no Print-Control Statements, were printed in the default format. The purpose of the Print-Control Statements is to enable you to change the appearance of the page to fit your own specifications.

In general, a Print-Control Statement will affect the printing of all text that appears BELOW it in the document. Because many statements set dimensions that apply to a whole document — for example, the length of a page, the vertical line spacing — it is customary to insert those statements at the beginning of the document to be printed. You can also include Print-Control

statements throughout a document to change the format or to perform special tasks like underlining, keeping a group of lines together on the same page, etc.

If you decide to use standard printing formats for like documents, you might want to keep lists of Print-Control Statements in a merge document.

### 7.1.3 How the Printed Page Is Organized

Before considering how individual Print-Control Statements work, it is important to understand how WordWizard defines the printed page.

The first distinction made by WordWizard is between a form and a page. A *form* is either a piece of paper or the distance between perforations on continuous forms paper. A *page* is a series of lines imposed on a form by a printer or typewriter. (Consider a page to be overlaid on a form, with the following specification: the top of the page and the top of the form coincide, but the page may be shorter than the form.)

A page consists of *lines*, usually a fixed number of lines for a given document. On a typewriter each line is 1/6" high. That dimension is called *vertical spacing*. Both a form and a page are definable in terms of a whole number of lines — that is, a form may consist of 66 lines, a page of 50 lines. (In that case, the page ends 16 lines short of the bottom of the form.)

The lines of a page can be divided into groups, as follows:

- 1) *header lines* — a group of lines including the *title* (or "running head") and possibly some blank lines;
- 2) *body of text* — a group of lines including the printed text, blank lines between paragraphs, and lines skipped on account of *spacing* (e.g., double-spacing);
- 3) *bottom lines* — a group of lines including the *footer* (for example, a page number and footing) and possibly some blank lines.

The distance between the end of the page and the end of the form (if such a difference exists) is the *bottom margin*. That margin is the amount of paper the printer ejects to reach the next *form* after printing a whole *page*.

When you print a document without Print-Control Statements, the printer leaves six blank lines at the top of the page and a one inch margin at the bottom. Fifty-four lines of single-spaced text are printed in between. There is no title at the top or footer at the bottom of a page. Ten characters are printed per inch, and each line is one sixth inch high, as on a typewriter. This format is suitable for simple letters and rough drafts.

The Print-Control Statements described in this section let you vary the definition of your page from that given above.

## 7.2 LIST OF PRINT-CONTROL STATEMENTS

The Print-Control Statements are summarized below. The letter *n* refers to a variable number that is part of the statement, and *nn* refers to the variable number of lines printed per page.

.center n	centers line about n
.as typed	cancel center



Statement	Effect	Default
.lines per page nn ⌈	Specifies that a page will consist of nn lines, some of which may be blank.	60
.header lines n ⌈	Specifies how many of the nn lines on a page are to be set aside for the title and blank lines.	6
.bottom lines n ⌈	Specifies how many of the nn lines on a page are to be set aside for the footer and blank lines.	None
.title " text and special symbols (# and  ) " ⌈	Causes the text within the quotation marks to appear at the top of each page. The   symbol causes subsequent text to be printed on the next line. The # symbol causes a page number 0 to 99 to be printed.	none
.footer " text and special symbols (# and  ) " ⌈	Causes the text within the quotation marks to appear at the bottom of each page.	none
.number n ⌈	Gives the page number to be assigned to the current page. n can range from 0 to 99.	
.vertical spacing n ⌈	Sets the height of a single line to n/48 inch.	8 48ths (1/6 inch)
.spacing n ⌈	Determines the number of lines (as determined by the <i>vertical spacing</i> statement) to be associated with each printed line. For example, spacing 3 is triple-spacing.	
.pitch n ⌈	Assigns the pitch (the number of characters per horizontal inch). n can range from 1 to 120. (Pitch for SolPrinter 3 is fixed at 10 characters per inch.)	10
.under ⌈	Used to underline characters, overstrike characters, or for boldface.	none
.eject ⌈	Causes the printer to print the next line at the top of a new form.	end of form
.widow n ⌈	Keeps the next n lines together on one page.	none
.define form length n ⌈	Specifies the length of a form in lines.	66 lines (11 inches)

You can abbreviate any of these statements by leaving off letters on the right. The minimum abbreviation is one letter (for example, .d is the same as .define form length), but, it's best to use the whole statement for clarity. Keep a space between the last letter and a number, if the statement uses a number. Use only lower case letters.

If you want to write notes to yourself for viewing at a later time, but do not want those notes to be printed, precede your notes at the far left margin with two dots (. .). In other words, any

.offset n determines LEFT margin

line that begins in column one with two dots is a comment and will not be treated as text.

Any line that begins in column one with *one* dot is a Print-Control Statement. If it is not one of the statements listed above, it will be ignored.

If you use a Print-Control statement and don't follow it with the expected number or string, the default setting is reinstated, i.e., ".header" resets the number of header lines to 6.

### 7.3 INDIVIDUAL PRINT-CONTROL STATEMENTS

The Print-Control Statements give you complete control over the format of your document as it is printed. The drafts of this manual were printed using Print-Control Statements. Your original Document Disk contains a document called W.W.MANUAL, which contains the first two sections of the manual you are now reading. Use the Edit activity to scan the source document. You should be able to get an idea of how the Print-Control Statements work.

The diagram on the facing page will help you understand the function of the individual Print-Control Statements. Refer to it as you read about each of the statements.

The key to defining your printed page is the *Lines Per Page* statement. The number of lines you specify for each page includes the *header lines* at the top and the *bottom lines* at the bottom. The *title* is printed as the first header line, and the footing is printed as the last bottom line. Each of these Print-Control Statements is described in detail below.

#### 7.3.1 Statements Affecting Format

##### Lines Per Page

The form of the Lines Per Page Statement is

```
.lines per page n  Γ
```

where *n* is the number of lines on each page. This number includes the header lines and bottom lines, as well as the body of the page, but not the bottom margin.

Assume you have four lines of text in your document and you use the Print-Control Statements shown below:

```
.lines per page 10      Γ
.header lines 2         Γ
.spacing 3  [triple-spacing]  Γ
.eject                  Γ
Line 1                  Γ
Line 2                  Γ
Line 3                  Γ
Line 4                  Γ
```

When you print the document, only the first three lines of text will appear on the first page:

```
1 Header line 1
2 Header line 2
3 Text line 1
4 skip
5 skip
6 Text line 2
7 skip
8 skip
9 Text line 3
10 skip
```

[PERFORATION OR EDGE OF SHEET]

SIX LINES TOP MARGIN

1 Title (position paper to this line before printing)

header lines 4

pitch 10

```

First line of text body *****
**2*****
**3*****
**4*****
**5***** PLACING THE FOLLOWING DOT COMMANDS JUST *****
**6***** BEFORE THE FIRST LINE OF TEXT WOULD CAUSE *****
**7***** A PAGE OF THIS FORMAT TO BE PRINTED: *****
**8*****
**9***** ..start *****
**10***** .pitch 10 [default] *****
**11***** .vertical spacing 8 [default] *****
**12***** .spacing 1 [default] *****
**13***** .define form length 66 [default] *****
**14***** .lines per page 54 *****
**15***** .header line 4 *****
**16***** .bottom lines 4 *****
**17***** .title "# Title (position . . .)" *****
**18***** .footer "Footer (can . . .)" *****
**19***** .number 0 [causes # to be set to 1 for title] *
**20***** .eject [causes title on first page] *****
**21*****
**22*****
**23*****
**24*****
**25*****
**26*****
**27*****
**28*****
**29*****
**30*****
**31*****
**32*****
**33*****
**34*****
**35*****
**36*****
**37*****
**38*****
**39*****
**40*****
**41*****
**42*****
**43*****
**44*****
**45*****
Last line of text body*****

```

vertical spacing 8  
spacing 1

bottom lines 4

Footer (can contain # for page no. and | for additional lines)

SIX LINES BOTTOM MARGIN

[PERFORATION OR EDGE OF SHEET]

define form length 66

lines per page 54

The fourth line will be at the top of the next page. Remember that the Lines Per Page statement has nothing to do with the length of the form you're using. No matter what the length of the page, if the statement ". lines per page 10" is active, then 10 lines will be printed on each page. After the tenth line is printed, the next line will be printed at the top of a new page.

Lines Per Page must not be set greater than 66, unless a larger number is used in a Define Form Length Statement (described below). If the numbers in Lines Per Page and Define Form Length are equal — that is, if the *form* and the *page* are of the same length — and there are no header or footer lines, then a continuous column is printed, with no top and bottom margins. If you do not include a Lines Per Page Statement, 60 lines per page will be printed.

### Header Lines

The form of the Header Lines statement is

```
.header lines n  ⌈
```

where *n* is the number of lines to be set aside for the header.

This statement determines how many lines, including the title, will be left before the beginning of the text. The title is included in the header lines, so if you have a title, you must leave enough header lines to include that title and any blank lines between the title and the beginning of text.

If you would like the text to begin six lines (one inch in single spacing) after a single title line, use the statement below

```
.header lines 7  ⌈
```

This leaves one line for the title and six blank lines between the title and the text.

The header lines and title are *not* printed on the first page of a document. When you begin printing a document, you should roll the paper under the platen so that the print head is exactly where you want the first header line printed (normally one inch below the top of the page). To get header lines and a title printed on the first page of a document, insert an Eject statement before the text, and discard the resulting blank page that is printed. (Such a blank page increases the page number by one — choose a *Number* statement accordingly.)

If you do not include a Header Lines Statement, the header (on all pages except the first) will consist of six lines — that is six blank lines before the text, or a total of six lines for the title and blank lines before the text.

### Title

The form of the Title statement is

```
.title " the text to appear at the top of each page "  ⌈
```

The text inside the quotation marks will be printed at the top of each page (except the first) beginning in column one. It will be printed within the Header Lines.

If you want text to print in the middle of the line, you must leave enough blanks between the first quote and the beginning of the text to position it correctly. For example:

```
.title "   This title starts four spaces from the left margin."  ⌈
```

To put title text near the right margin, you will have to release the right margin so as to offset the title text by the number of characters used by the statement itself.

The title is *not* printed on the first page. Thus you can create a first page with a special format before the remaining pages are printed with a title at the top of each one. If you do not want a title page, start the document with an Eject statement (described below).

There are two special characters you can use within the quotation marks of the Title statement: *number* (#) and *bar* (|). If the number character is present in the title, it will be replaced by the current page number. If the bar character is present, it will cause subsequent text to be printed at the beginning of a new line.

For example,

```
.title "                Page #|                Memo" |
```

would cause the following title to be printed at the top of each page:

```
Page n  
Memo
```

where *n* is the current page number. The page number is printed as two characters: if the page number is 0–9, it is printed as a blank and then a digit, if the page number is 10 or above, no blank is printed before the digits. Thus, the page numbers that can be printed with the # character are limited to 0 through 99.

You can use vertical bars anywhere in the title, preceding or following the actual text of the title with blank lines if you choose. Each extra line in the title that is created by a vertical bar is taken out of the blank header lines.

You can change the title anywhere in the document by inserting a new Title statement. To get rid of a title, insert the statement:

```
.title |
```

To express a very long title, use the full 128 characters available for a line. A Title statement cannot overflow onto a second line.

All titles are single-spaced. The Spacing statement has no effect on titles.

## Number

The form of the Number statement is

```
.number n |
```

where *n* is the number to be assigned to the current or first printed page. Consecutive numbering will continue from this number. If you are not printing page numbers in the title or footer, there is no need for this statement. If you are printing page numbers and do not include this statement, the first page number will be 0.

WordWizard keeps track of the current page number, whether or not you print it in a title or footer. For example, if you use the number statement to set the first page number of a document to 1, but you do not print a title (with page number) until the fourth page, the page number printed in the title will be 4.

If you use the Eject statement to eject a blank page at the beginning of a document, the ejected page uses the first page number. Thus for page number 1 on the first printed page, the default starting number of 0 is appropriate for the ejected page.

## Bottom Lines

The form of the Bottom Lines Statement is:

```
.bottom lines n  ␣
```

where *n* is the number of lines to be set aside between the bottom of the text and the bottom margin. The bottom lines include the footer, if there is one.

For example, if you want the text to be separated from the footer by six lines (one inch), use the statement

```
.bottom lines 7  ␣
```

The default condition is that there are *no* bottom lines; the last line of text is the last line before the bottom margin. However, if you have a footer and have not used the Bottom Lines Statement, bottom lines will be set to 1 (no spaces will be left between the bottom of the text and the footer).

## Footer

The form of the Footer statement is

```
.footer "  text to be printed at the bottom of each page  "  ␣
```

The footer is similar to the title, except that the text is printed at the bottom of each page instead of the top. The first character of the footer, whether it is a blank or some other character, is printed at the left margin. If you want the text of the footer to start to the right of the margin, leave blanks after the left quote to move it to the right.

You can use the same special characters in the footer that you can in use in the title: number (#) for the current page number and bar (|) to go to the next line.

You can change the footer or the title anywhere in the document by inserting another Footer or Title statement. The statement must appear before the change. Placing the statement is tricky because you may not know where that page starts. You may have to print the document once to find out.

To get rid of a footer, insert the statement:

```
.footer  ␣
```

One use for the Footer statement is to put *footnotes* at the bottom of a page. The footnote can be inserted just below its reference in the text so that it will appear on the same page as the reference. After setting the footnote with a special Footer statement, you'll have to get rid of it so it won't print on the next page. To do this, skip forward approximately one page from the footnote and give the command below:

```
.footer  ␣
```

If your document has a footer that appears at the end of each page, the footnote will be added by giving a new Footer statement that includes the footnote above the footer. To get rid of the footnote in this case, insert a statement specifying the original footer.

All footers are single-spaced. The Spacing statement has no effect on footers.

## Hands On – Footnotes

Print the following text double-spaced using 50 lines per page, and make a footnote for reference 1:

The national median price of a new house broke through the \$50,000 barrier this year.(1) In the first quarter it was \$54,000 and rising; that compares with ...

(1) In Minneapolis the median house has 1128 square feet while the median house in Phoenix has 2011.

Create a document named FOOT that consists of the following:

```
.lines per page 50      [
.bottom lines 4        [
.spacing 2              [
The national median price of a new house broke through
the $50,000 barrier this year.(1) In the first quarter [
```

On the next line, release the right margin and type the following Footer statement *on a single line*:

```
.footer "(1) In Minneapolis the median house (no break)
has 1128 square | feet, while the median (no break)
house in Phoenix has 2811."      [
```

Continue the text as follows:

```
it was $54,000 and rising; that compares with ...
.eject                                [
                                     —————> [
```

Notice the blank line under the .eject statement. Now print the document. Get the Activity Menu on the screen and select the Print Activity. When the system requests a document name, type

```
FOOT RETURN
```

Answer all three Printer Options with *ESCAPE*s.

Normally, the footer does not appear on the very last page of a document. To get a footer on the last page, end the document with an Eject statement followed by a blank line that ends with a *RETURN* (as shown in the preceding Hands On).

### 7.3.2 Typography

There are three Print-Control Statements that let you determine the horizontal and vertical spacing of the characters as they are printed. The *Vertical Spacing* Statement lets you set the height of a line. The *Spacing* Statement lets you select single, double, triple, etc., spacing. The *Pitch* Statement lets you specify how many characters are to be printed per horizontal inch for any printer except the SolPrinter 3.

#### Vertical Spacing

You can choose the height of a vertical space by using this statement. The form of the statement is

```
.vertical spacing n [
```

where *n* is the number of 1/48 inch increments to be used per line. Vertical spacing on a normal typewriter is 8/48 or 1/6 inches. This is the default value for the Vertical Spacing

Statement. It is also the recommended vertical spacing for a 10-pitch Daisy Print Wheel. Using a 12-pitch daisy wheel, you can print 8 lines per inch, so you can use a vertical spacing of six (6/48 or 1/8 inch).

There are several reasons you might want to change the vertical spacing. If you want a spacing of 1 1/2 rather than single spacing or double spacing, you can set the vertical spacing to 12 and use a spacing of 1 to get the desired effect.

You might also change the vertical spacing to set up a special vertical format, such as a graph with small vertical increments. For example, the statement

```
.vertical spacing 4  ⌈
```

would cause the graph shown here to be half as high as you see it:

```
      *                *      *      ⌈
      *                *                ⌈
        *              *          *      ⌈
          *          *                ⌈
            *      *                    ⌈
```

You can also use the Vertical Spacing Statement to create *superscripts* and *subscripts*. If you want to include footnote references or scientific symbols in your document, you can change the vertical spacing to space up or down a half line and include a superscript or subscript. For example:

```
Two lines before superscript.
One line before superscript.
Four scientists1 have discovered that the
gasses taken from H2O have surprising properties.
This study will be presented at Monday's lecture.
```

This passage was created as follows:

Column 1

```
|
|
Two lines before superscript.      ⌈
.vertical spacing 4                  ⌈
One line before superscript.       ⌈
      1                               ⌈
.vertical spacing 8                  ⌈
Four scientists have discovered that the ⌈
.vertical spacing 4                  ⌈
gasses taken from H O have surprising properties. ⌈
      2                               ⌈
This study will be presented at Monday's lecture. ⌈
.vertical spacing 8                  ⌈
```

Notice that `.vertical spacing 4` was used to change from *full* vertical spacing to *half* for the line preceding the superscript line. After the shift, `.vertical spacing 8` was used to return to normal spacing.

The example above is for a document that has a vertical spacing of 8 and a spacing of 1. If your document has some other spacing, you will have to adjust the numbers accordingly to print superscripts and subscripts.



## WARNING

*Superscripts and subscripts must be positioned exactly over or under the place where they are to be inserted. You cannot use CLOSE PARAGRAPH with passages containing superscripts and subscripts, because it would destroy the alignment.*

### Spacing

The form of the Spacing Statement is

```
.spacing n ␣
```

where *n* is the number of lines (as defined by the Vertical Spacing Statement) to be associated with each printed line. Examples:

```
.spacing 2   ␣   causes text to be double spaced.  
.spacing 3   ␣   causes text to be triple spaced.
```

The default spacing is single-spaced text, or

```
.spacing 1   ␣
```

### Pitch

Just as you can use the Vertical Spacing statement to assign the height of a line, you can use the *Pitch* statement to assign the horizontal space used per character. The form of the Pitch statement is

```
.pitch n ␣
```

where *n* is the number of characters to the inch. The usual options for pitch are 10 characters per inch (Pica) or 12 characters per inch (Elite). If you do not include a Pitch statement, the characters of your documents will be printed 10 per inch.

The Pitch statement is normally used to change pitch when you change to a print wheel with different pitch. The print wheels are marked 10-pitch and 12-pitch. For best print appearance, use a Pitch statement corresponding to the print wheel.

You can switch from one pitch to another in a document. For example, use a pitch of 10 throughout a document, then switch to 12 for notes and quotations. This is a good way to set them off from the rest of the document.

You can assign any pitch from 1 character per inch to 120 characters per inch. Higher pitch than 12 causes characters to overlap a little. These unusual pitches might be used for special effects or for squeezing graphs into a narrower space.

Examples:

```
This line was printed with a pitch of 12.  
T h i s   l i n e   w a s   e l o n g a t e d   w i t h   a   p i t c h   o f   6 .  
This is a normal, 10-pitch line.
```

SoIPrinter 3 does not respond to Pitch statements. It always prints ten characters per inch.

### 7.3.3 Overprinting

#### Under

The primary use of the Under statement is to underline words or passages in your text. The form of the Under statement is

```
.under          ʃ
text to be underscored  ʃ
                        ʃ
                        -----
```

The statement is used on the line *above* the text to be underscored. Then the underline itself (shifted DEL key) is typed on the *third* line.

Notice that the alignment is important when you use the Under statement. To avoid losing the alignment when you give a CLOSE PARAGRAPH command, end each of the lines with a RETURN.

The precise effect of the Under Statement is to cause the next two lines to be printed on top of each other. Thus if your print wheel has any character that might be printed over or under other characters, you can use the Under Statement to overprint a line.

When using the Under Statement, be careful to keep the two subsequent lines aligned correctly. The characters to be overprinted must be beneath the exact characters they are to overprint.

If you type mathematical reports, the underline feature can make your equations appear much clearer. For example, compare the following:

$$\begin{array}{c} \text{LAM} = (\text{AX} + \text{BY} + \text{CZ} + \text{D}) / \text{COS}(\text{A} - \text{B}) \\ \text{vs} \\ \text{LAM} = \frac{\text{AX} + \text{BY} + \text{CZ} + \text{D}}{\text{COS}(\text{A} - \text{B})} \end{array}$$

The second equation was created as follows:

Column 1

```
  |
  | .under
  |
  | LAM = AX + BY + CZ + D
  | -----
  | COS(A - B)
  |
```

Some other uses of the Under statement are demonstrated below:

A simple underline.

The original text ~~has=been=changed~~. has been stricken.

The letter O with a slash to indicate zero: Ø

Lowercase o with a backslash to indicate the character phi: ø

Arrows: ->      <-      ↑      ↓

You may find other examples for your particular print wheels. For example, if you have a legal style Daisy wheel for your SolPrinter 2E or Diablo 1610/1620, you can use the double underscore character, which replaces the bar (|) on most print wheels.

Boldface type is not available in WordWizard with a separate statement, but you can create your own boldface type using the Under Statement to type over the same characters until they appear bold. For example:

**This is BOLD.**

This example was created as follows:

Column 1

```
|  
.under          ƒ  
This is BOLD.   ƒ  
.under          ƒ  
This is BOLD.   ƒ  
.under          ƒ  
This is BOLD.   ƒ  
This is BOLD.   ƒ
```

#### 7.3.4 Pagination

When WordWizard prints a document, it selects the number of lines to be printed on each page according to the Lines Per Page Statement. This pagination is done automatically. There are two statements that you can use to make WordWizard start a new page prematurely. You can use the Eject statement at any time to advance to the top of the next form; you can use the Widow statement to tell the printer that a group of lines should be kept on one page, regardless of where the page would normally end.

##### Eject

The Eject statement causes the printer to print the next line at the top of the next form. If there is text to be printed on the next page, it is printed after the heading (if there is one) just as for other pages. If there is no text following the Eject statement, or if the printer is already at the top of a form, the Eject statement has no effect. The form of the Eject statement is

```
.eject ƒ
```

Its appearance anywhere in the text tells the printer, "This is the end of the current page," so several Eject statements in a row have the same effect as *one* Eject statement. If you want to eject pages with titles or footers only (to contain diagrams, for instance), include a blank line between every two Eject statements.

You can use the Eject statement to get a title on the first printed page. Just insert `.eject` before any text. Also, you must use the Eject statement to get a footer on the last printed page. End your text with `.eject` and then a blank line (Eject only works if there is text to be printed at the top of the next page — and a blank line is text.)

If no Eject statement is given, the printer automatically ejects the page when it reaches the full number of lines per page assigned.

##### Widow

To prevent important paragraphs, short statements, or lists from being split at the end of a page, precede the lines to be kept together with a Widow statement. A "widow" is a line that is part of a larger passage, but appears alone at the top or bottom of a page. The Widow statement lets you prevent widows. Its form is

```
.widow n ƒ
```

where *n* is the number of lines to be bound together.



## Define Form Length

The Define Form Length statement is used to tell the printer the length of paper to be used. Its form is

```
.define form length n  ⌈
```

where *n* is the number of *lines* per form (not the number of inches). Thus, the form length is a function of the vertical spacing. If you are using the normal vertical spacing of 8 (8/48 or 1/6 inch per line) the form length is six times the length of the page in inches. An eleven inch form would be 66 lines, and the statement would be

```
.define form length 66  ⌈
```

This is the default value and need not be specified.

Other common values are 84 for fourteen-inch paper at six lines per inch, and 88 for eleven-inch paper at eight lines per inch (used for a 12-pitch print wheel). The latter would be defined as follows:

```
.vertical spacing 6      ⌈  
.define form length 88   ⌈
```

The Define Form Length statement tells the system how much paper to eject at the end of a page to get to the top of the next form. The Eject statement also ejects the correct amount of paper for the defined form length.

The Define Form Length statement also affects the Eject Page Activity on the Activity Menu. Normally, the Eject Page Activity ejects a form of 11 inches. However, if a document that contains a Define Form Length statement is printed, the system remembers the new form length and ejects a form that long the next time the activity is selected.

Do not set a form length that is less than the value of the Lines Per Page statement. If these two values are equal, and there are no header or bottom lines, a continuous column is printed, with no top and bottom margins.

## Hands On — Using Print Control Statements

Assume you have some continuous form checks that look like this:

Company Name		555
700 Busy Street		
Watson, Ill.	_____19__	77-7777
Pay to the		
order of _____	\$ _____	
_____		Dollars
	_____	

Each check is 2 1/2 inches high and the spacing is six lines per inch.

Create a document with dates, names, and amounts for several different people. For this exercise you can just type the information, but in real life, you would probably pull names and payroll information from a library document and merge them.

To create the document, you will have to study the check form carefully and determine which information goes on which lines. The document should start like this:

```

.header lines 6
.define form length 15
                                October 1,      78
                                Arnold Arnsen      932.00
                                Nine Hundred Thirty-two and no/100
                                .eject
                                October 1,      78
                                John Johnson      1000.00
                                One Thousand and no/100
                                .eject
    
```

When you print the checks, roll the forms to the first line you want printed. That will be the top of the form on each check. (Or pretend your regular printer paper is perforated every 2-1/2 inches instead of every 11 inches.)

## PENDIX 1

# TABLE OF CONTENTS

### BLOCK COPYING

The COPY BLOCK command copies a block of text without removing it from its original place in the document:

1. Scroll so that the first line of the block is at the bottom of the screen.
2. Place the cursor on the first line of the block.
3. Give the COPY BLOCK command.
4. Move the cursor to the line above the place where you want to insert the block.
5. Give the INSERT BLOCK command.

### BLOCK MOVES

The MOVE BLOCK command removes a block of up to 16 lines of text and stores it for insertion elsewhere.

- To move a block of text:
1. Scroll so that the first line of the block is at the bottom of the screen.
  2. Place the cursor on the first line of the block.
  3. Give the MOVE BLOCK command.
  4. Move the cursor to the line above where you want to insert the block.
  5. Give the INSERT BLOCK command.

### COPYING DISKS

To duplicate an entire Document Disk:

1. ESCAPE to the System Functions Menu.
2. Select "Duplicate an existing Document Disk."
3. Insert the Document Disk to be duplicated into unit 0. Insert a scratch disk into unit 1. Press RETURN.

To duplicate an entire System Disk:

1. ESCAPE to the System Functions Menu.
2. Select "Make a new System Disk."

3. Leave the System Disk in unit 0.

4. Insert a scratch disk into unit 1.

1. Press RETURN.

To format a new Document Disk:

1. ESCAPE to System Functions.

2. Select "Make a new Document Disk."

3. Insert a scratch disk into unit 1.

1. Press RETURN.

### COPYING DOCUMENTS

To save a copy of a document on the System Disk:

1. Select "Archive" from the Activity Menu.
2. Type the name of the document you wish to save. Press RETURN.

To save an existing document on the same Document Disk you are currently using:

1. Select "Archive" from the Activity Menu.
2. Type the name of the document you wish to save. Press RETURN.
3. Select "Retrieve" from the Activity Menu.
4. Give the document a new name. Press RETURN.

To save a document on a Document Disk other than the one you are currently using:

1. Select "Archive" from the Activity Menu.
2. Type in the name of the document you want to save. Press RETURN.
3. ESCAPE to the System Functions Menu.
4. Remove the current Document Disk from unit 1.
5. Insert the Document Disk on which you wish to save or duplicate the document.
6. Select "Enter the Word Processing Function."

7. Select "Retrieve" from the Activity Menu.
8. Type the name of the document you wish to duplicate. Press RETURN.

## CREATING DOCUMENTS

You can create a new document in two ways:

1. Select "Create" from the Activity Menu and type the name of the document you wish to create (and press RETURN),

OR:

2. Select "Edit" from the Activity Menu, type the document name (and press RETURN). Press ESCAPE after editing to return to the Activity Menu.

## DELETING TEXT

You may delete text from your document in three ways:

1. The DEL key deletes a single character and closes the line.
2. The CLEAR key deletes the character under the cursor and the rest of the line, including the ¶, if there is one.
3. The DELETE LINE command deletes the line the cursor is on.

## FORMATTING

Documents

To tell the printer how to format a document, embed Print Control Statements within the text of the document. See Section 7.

Paragraphs

Block Paragraphs

1. Make sure the paragraph ends with a ¶.
2. Set the left and right margins.
3. Position the cursor on the first character of the first line of the paragraph.
4. Give the CLOSE PARAGRAPH command.

Indented Paragraphs

1. Make sure the last line ends with a ¶.
2. Position the cursor on the line above the first line you want indented.
3. Press RETURN.
4. Move the cursor to the column where the first character should appear.
5. Give the CLOSE PARAGRAPH command.

You can also use the INSERT SPLIT command to create an indented paragraph:

1. Position the cursor on the first character of the line or paragraph that will be indented.
2. Give the INSERT SPLIT command.
3. Position the cursor where the first character should appear.
4. Give the CLOSE PARAGRAPH command.

Hanging Indentation

1. Create a block paragraph as instructed above.
2. Set the left margin for the indent.
3. Position the cursor within a word on the first line of the paragraph.
4. Give the CLOSE PARAGRAPH command.

## INSERTING TEXT

To insert text into already existing text:

1. Position the cursor over the character that will follow the insertion.
2. Give the INSERT SPLIT command.
3. Type the material you wish to add.
4. Position the cursor where the first character following the inserted text should appear.
5. Give the CLOSE PARAGRAPH command.

## JUSTIFICATION

The default setting of WordWizard is justified right margins (even right and left margins).

For ragged right margins give the JUSTIFY OFF command before typing.

You may change the format of the text anytime within a document by giving the JUSTIFY ON or JUSTIFY OFF command. Either command affects all text inserted and all paragraphs closed after the command is given.

## MERGING

Documents

To merge two complete documents:

1. Select "Archive" from the Activity Menu.
2. Type the name of the document that is to be first in the combined document. Press RETURN.
3. Select "Retrieve" from the Activity Menu.
4. Type the name of the document that is to be second in the combined document. Press RETURN.



5. Both of the documents will now be in the document of the second name.
6. Select "Remove" from the Activity Menu.
7. Type the name of the first document. Press RETURN.

#### Paragraphs

To merge parts of one document into another document, proceed as follows:

1. Edit the document containing the passages you want.

To mark a passage as a merge clause:

a. Precede it with a line consisting of a caret (^) followed by a one- to forty-character "clause name."

b. Follow it with a line consisting of two carets.

For example:

```

^CODE1           |
This is a merge clause. |
^^              |
  
```

2. ESCAPE to the Activity Menu.
3. Choose "Select Merge" at the Activity Menu.
4. Type the name of the document with the marked passages you wish to use. Press RETURN.
5. Edit the document that will receive merged passages.
6. Move the cursor to the line below the place where the merged passage should appear.
7. Give the CALL MERGE command.
8. Specify the name of the clause you want to insert. Press RETURN.

### PRINT CONTROL

See the LIST OF PRINT-CONTROL STATEMENTS in Section 7.2.

### PRINTING

To print a document, follow the steps listed below.

1. If the printer is to be other than the last one used, select a printer:
  - a. ESCAPE to System Functions.
  - b. Choose "Select Printer" from the System Functions Menu.
  - c. Select the chosen printer from the Select Printer Menu.

d. "Enter the Word Processing Function."

2. To print your document:
  - a. Select "Print" from the Activity Menu.
  - b. Type the name of the document. Press RETURN.

The system asks three questions before it starts printing:

Skip how many pages? - To start at the first page, press ESCAPE or RETURN; otherwise, enter the number of pages to be skipped, then press RETURN.

RETURN for sheet, ESCAPE for continuous forms. - Press RETURN to stop at the end of each page; otherwise, press ESCAPE.

RETURN to print dot commands, ESCAPE to omit. If dot commands are printed, their effects are also visible.

If you should want to stop printing, select "Stop Printing" from the Activity Menu.

If you should want to "pause" while printing, select "Create" from the Activity Menu. When you wish printing to resume, press ESCAPE.

To eject a page from the printer, select "Eject Page" from the Activity Menu.

To print the document index as it appears at the Activity Menu, select "Print Document Index" from the Activity Menu.

### REMOVING BLOCKS OF TEXT

To remove blocks of text from a document, you may use the MOVE BLOCK command. You can remove up to 16 lines of text at one time. Use the following steps:

1. Scroll so that the last line of the block is at the bottom of the screen.
2. Place the cursor on the first line of the block.
3. Give the MOVE BLOCK command.

### REMOVING DOCUMENTS

To remove a document from a Document Disk:

1. Select "Remove" from the Activity Menu.
2. Type the name of the document to be removed. Press RETURN.
 

The screen will flash a caution: "confirm remove?"
3. If you are certain you want to remove the document, press RETURN.
4. If you do not want to remove the document, press ESCAPE.

To remove all documents from a Document Disk, ESCAPE to the System Functions Menu and follow the procedure "Make a New Document Disk."

## SCROLLING AND CURSOR CONTROL

Use the up and down arrow keys to move the cursor to the top or bottom of the screen, then "beyond". To scroll rapidly, use the arrow keys with the REPEAT key, or press MODE SELECT and then the arrow key.

To scroll horizontally and vertically at once, press MODE SELECT and then the right arrow to see text below the screen, or MODE SELECT and then the left arrow to see text above the screen.

HOME CURSOR pressed twice moves the cursor to the upper left-hand corner of the screen. Pressed before an arrow key, the HOME CURSOR key moves the cursor to the edge of the screen in the direction of the arrow that you press.

To see the beginning of the document, give the JUMP TO START command. To see the end of the document, give the JUMP TO END command.

## SEARCH

To search for a specified string:

1. Set the margins for the widest passage, or for a selective column search.
2. Give the SEARCH command.
3. Specify the exact string (word, characters, etc.) you wish to locate. Press RETURN.
4. Make changes in the text, if necessary.
5. If you want to continue searching for the same string, give the CONTINUE SEARCH command.

## REPLACE

To replace a word with another:

1. Give the REPLACE command.
2. Type the word you wish to replace. Press RETURN. If the word is found, "Replace String?" appears.
3. Type in the "new" word. Press RETURN.
4. WordWizard puts the cursor on the first character of the old word. Press RETURN to replace the word, otherwise press the space bar.
5. Examine the replacement and correct, if necessary.

6. To continue searching for another occurrence, give the CONTINUE REPLACE command.

## MARGINS AND TABS

The default margin and tab settings for WordWizard are:

Left margin:	Column 1
Right margin:	Column 63
Tabs:	None
Justification:	Justified

Just after selecting the Edit Activity, decide whether you want the text in your document to be justified or not. If you do not want your document to be justified, give the JUSTIFY OFF command.

To set the left margin:

1. If the new margin will be to the left of its current setting, give the LEFT MARGIN RELEASE command.
2. Position the cursor in the desired column for the left margin.
3. Give the LEFT MARGIN SET command.

To set the right margin:

1. If the new margin will be to the right the current setting, give the RIGHT MARGIN RELEASE command.
2. Position the cursor in the desired column for the right margin.
3. Give the RIGHT MARGIN SET command.

To set tabs:

1. Position the cursor on the desired column, releasing margins if necessary.
2. Give the TAB SET command.

Clear tabs one at a time:

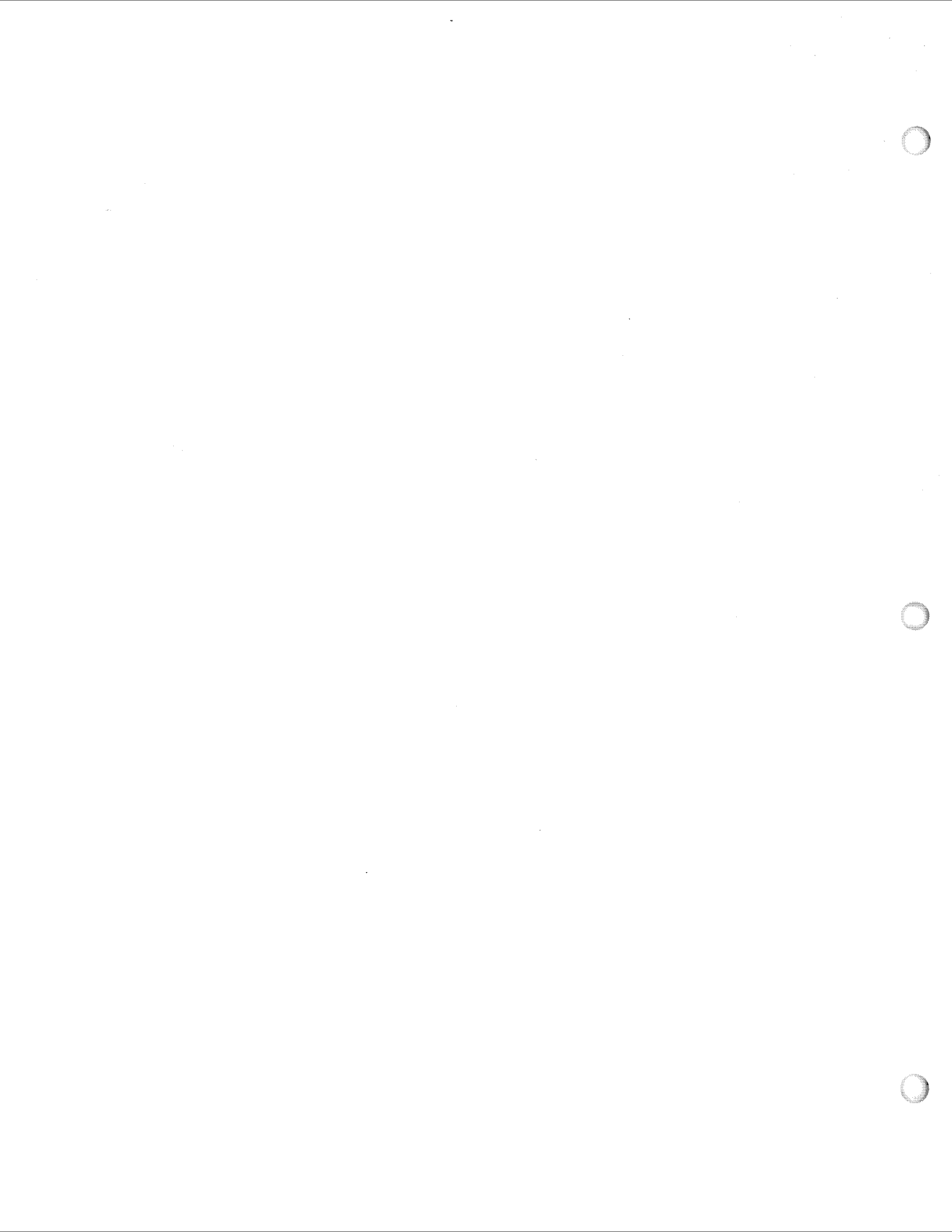
1. Position the cursor in the position of the tab you want cleared.
2. Give the TAB CLEAR command.

The TAB key tabs to the next tab stop, whether that stop is in the current line or the next line.

## APPENDIX 2

### ERROR MESSAGES

Message	What Happened?	What to Do?
Disk almost full! <i>[flashing]</i>	The document disk in unit 1 is nearly full and you may not have room to finish the operation.	Either press RETURN to keep trying or press ESCAPE to give up.
Disk full! <i>[flashing]</i>	The document disk is completely full, and may be unusable.	Escape to the Activity Menu and try to remove documents (by Archiving and Retrieving if you want to save them.)
DRIVE NOT READY <i>[not flashing]</i>	You have requested an operation and one of the disks needed is not in the drive correctly or there is a malfunction.	Insert the disk correctly and try again. If the problem persists, call your authorized service person.
Insert Disk! <i>[flashing]</i>	You have tried to start WordWizard without inserting a document disk in unit 1, or you have requested an operation that requires a disk that is absent.	Insert the disk and press RETURN.
Machine malfunction or wrong disks in drives!	Remove and check disks. Call local dealer if correct. Then press ESCAPE.	
	You have probably started WordWizard with a disk other than a Document Disk in unit 1. This error occurs whenever you insert the wrong type of disk in either unit.	Make sure you have the right type of disk in each unit for the operation you are performing. If the disks are inserted correctly, call your authorized service person.
Printer not ready! <i>[flashing]</i>	<ul style="list-style-type: none"><li>- The selected printer is not connected.</li><li>- The printer's power is not on.</li><li>- You are using the SolPrinter 3 or another printer connected to the serial port, and the Local light is on, inhibiting printing.</li><li>- A custom printer has been selected, but the printer driver is not on the System Disk, or it is the wrong driver.</li><li>- The ribbon or paper is used up, or the cover over the print head was removed or is ajar.</li></ul>	<ul style="list-style-type: none"><li>Connect the printer.</li><li>Turn on the power.</li><li>Press the LOCAL key to turn it off.</li><li>Call your dealer.</li><li>Replace ribbon, paper, or print head cover.</li></ul>
ANY OTHER MESSAGE FOLLOWED BY *	There may be problems with the equipment or power, or some unexpected combination of events could have caused you to lose the WordWizard program.	Press UPPER CASE and REPEAT together and start over. If it happens again, call your authorized service person.



## APPENDIX 3

# SYSTEM INSTALLATION AND INTERFACE

### 1.1 SYSTEM REQUIREMENTS

This Appendix is designed not for the user who wants to learn how to prepare documents, but rather for the technician who must initially install and later maintain WordWizard on a Sol System, and interface to a printer. Specialized knowledge is assumed below.

WordWizard is designed to run in a Sol System with a Helios II Disk Memory System and 48K of added RAM. Sol Systems III, IIIA, IIIB, IV, IVA, and IVB are suitable. In the System IVs, based on the Helios II, Model 4, only the left-hand dual disk drive is used. Memory should be addressed continuously from 0 to 48K.

There is no benefit to having more than 48K of RAM. WordWizard uses only a relatively small buffer area to hold text that is being edited. The major portion of any document remains on disk.

Switch S1 in the Sol, which is located under the front of the keyboard, should be set as follows:

S1-1	OFF	Run
S1-2	—	
S1-3	OFF	Display Control Characters
S1-4	—	Screen Polarity— <i>Set to customer's preference</i>
S1-5	OFF	Solid Cursor
S1-6	ON	Solid Cursor

It is especially important that control characters be displayed, since Control-A is used on the screen to indicate lines with forced endings.

### 1.2 INSTALLING SolPrinters

SolPrinters 2 and 2E use the Sol-HyType interface. This interface is tested and installed, so all that is necessary is to plug a cable into the Parallel Data Interface (J2) at the rear of the Sol. Word Wizard provides the necessary driver for SolPrinter 2 or 2E with a choice at the Select Printer menu.

Any of the three SolPrinters may be plugged into the 117 VAC accessory outlets at the rear of the Helios II, along with the Sol and video monitor. Total current drain from the accessory outlets and the Helios in this configuration is close to the limit of the 7 amp Helios fuse, so no additional equipment should get its power from the Helios. If AC power is supplied separately to Sol or SolPrinter 2 or 2E, make sure that power to the Sol or Helios cannot be disconnected while the printer has power, or damage to the printer may result from spurious signals at J3 of the Sol (the Parallel Data Interface).

SolPrinter 3 uses a serial interface and is provided with a cable that plugs into the Serial Communication Interface (J1) on the rear of the Sol. Various switch settings are required in both the Sol's serial interface and that of the printer. SolPrinter 3 is shipped with appropriate switch settings. In a normal installation, the Sol's switches must be set as follows:

S3-7	ON	2400 Baud ( <i>other S3 switches off</i> )
S4-1	OFF	Even Parity
S4-2	ON	7 Bit Data Words
S4-3	OFF	" " " "
S4-4	OFF	2 Stop Bits
S4-5	ON	Parity Enabled
S4-6	—	Don't Care

All switches in S3 must be off, except for S3-7. Make sure the 4800 baud jumper on Sol-PC between K and M is not installed.

Set the printer(s) on a table or typewriter stand separate from the surface bearing the Sol and Helios. The vibration from the printer is detrimental to the computer, and annoying to the typist.

### 1.3 INTERFACING TO THE DIABLO 1610 AND 1620

These two terminals, manufactured by Xerox/Diablo, can be readily interfaced. The Model 1620 is essentially a Model 1610 with a keyboard. The keyboard cannot be used with WordWizard.

Interface consists of rewiring the EIA connector which plugs into the Serial Communication Interface of the Sol, and configuring switches in the Sol. The necessary driver software is provided when the "Model 1610/1620" option is selected at the Select Printer menu. Either terminal normally has its EIA connector wired to present the equipment as a terminal. The Sol's Serial connector, however, is also wired as a terminal. Either an adapter can be fabricated from one male (DB-25P) and one female (DB-25S) EIA connector, or the terminal's plug can be rewired. If an adapter is fabricated, the following pins should be connected:

Female to (terminal	Male to Sol)	Signal Name at Sol
1	1	Chassis Ground
2	3	Receive Data
3	2	Transmit Data
4	8	Carrier Detect
5	20	Data Terminal Ready
6	20	Data Terminal Ready
7	7	Signal Ground
8	4	Request to Send
20	5, 6	Clear To Send, Data Set Ready

No other connections need be made. If the terminal's plug is rewired:

- 1) Reverse the wires to pins 2 and 3.
- 2) Reverse the wires to pins 4 and 8.
- 3) Reverse the wires to pins 6 and 20.
- 4) Cut the wire to pin 5, 3/4 inch from the pin.
- 5) Jumper pins 5 and 6 with the 3/4 inch wire.
- 6) Connect the wire that went to 5 to pin 20 instead.

This wiring has the same effect as the adapter above.

Set the DIP switches inside the rear cover of the Sol that control the serial interface as follows:

- 1) S3-switch 6 on, all others off (*1200 baud*)
- 2) S4-switches 1, 2, and 5 on, all others off (*odd parity, 7-bit data words, 2 stop bits, full duplex*)

Install a 1200 baud jumper wire on the 1610/1620 circuit board which has the 8080 IC, as instructed in the terminal's manual.

While using the terminal as a printer, leave the Auto LF switch off, and set for odd parity, full duplex.

#### **1.4 PRINT WHEELS**

The plastic print wheel for the SolPrinter 2E or Diablo 1610/1620 contains 96 characters, the same number of characters that the Sol keyboard provides. There are minor variations between the symbols on certain keytops and the corresponding print wheel characters. The differences may be determined easily by printing the document CHARACTER-SET, supplied on the original Document Disk, and comparing it with the keytops. When changing printers or printwheels, be sure to make this comparison, and inform operators accordingly.

A 96-character *Titan 10* print wheel is supplied with SolPrinter 2. As of this writing, this is the only 96-character print wheel that can be used with WordWizard. The device driver `SO12` includes tables for spoke addressing, ribbon advance, and hammer intensity appropriate for this print wheel only. New print wheels are in development and will be made available when ready.

The fixed character set of the SolPrinter 3 is identical to the keyboard characters of the Sol.

#### **1.5 BRIEF SOFTWARE DESCRIPTION**

There are special files on the WordWizard System Disk and also on its Document Disks. The System Disk includes some standard PTDOS system files, but these files may not correspond to the same files on any given release of the PTDOS System Disk. Many PTDOS commands and other files not necessary for use with the WordWizard are not present, so that the System Disk will have room to Archive a 110 page document. Adding additional files creates the risk that a user could not Archive the largest document that could be created on the Document Disk.

WordWizard does not use standard PTDOS files for each of its documents, but maintains one large file on the Document Disk. This file, called `SPACE`, contains the text of all documents in blocks of size `9C0`. The file `PDIR` is a special file containing a doubly-linked directory to all of the blocks in `SPACE`. This special file structure allows text to be added or deleted without requiring the entire document in memory, and allows spacing backwards through the text. When a given editing session is over, not all of the blocks of that document are necessarily filled with text. Scrolling from beginning to end of a document packs more text in partially filled blocks. This fact may cause the page count at the Activity Menu to vary, even though no text has been added or deleted.

The file structure also provides a high degree of security against power failure and crashes. Only a small portion of a document is in volatile RAM at any time — the rest is intact on disk. When a block of text is read from the file `SPACE` into a buffer for editing, the two blocks on either side of it in `SPACE` are immediately linked to one another. Thus if there is a power failure, and also in most types of crashes, the file structure will be intact — only the small amount of text in memory will be lost. A document with a missing block can be edited and printed like any document. The missing text could begin anywhere in a line.

When a document is Archived, it is copied out of the file `SPACE` on the disk in Unit 1 into a special file `ARCH` on the disk in Unit 0. `ARCH` is a normal PTDOS text file. It provides not only a means of supporting the Archive and Retrieve operations, but a means of communication. `ARCH` may be copied (using `COPY`) into another file and manipulated by other programs. Files

produced outside of WordWizard may be copied onto ARCH, and Retrieved into a WordWizard document, although there may be problems associated with line and paragraph endings, depending on the contents of the file. Custom software can be written to send the text in ARCH over the serial port to other systems for phototypesetting or other processing.

## 1.6 PRINTER DRIVERS

When the Print operation is used, output is sent to a PTDOS device driver (type D) file called PRINTER. The Select Printer operation copies an appropriate device file into PRINTER. Five device files are provided for this purpose:

So12	for a SolPrinter 2
So12E	for a SolPrinter 2E
So13	for a SolPrinter 3
1610	for a Xerox/Diablo Model 1610/1620
Cust	for a custom printer driver

These five files are actually device files, but of type IW. They are only used, however, after copying into PRINTER, a type D file.

Initially the contents of Cust is identical to the standard PTDOS device driver NULL whose sole purpose is to consume unwanted output. Cust is provided for the purpose of containing a custom device driver file for a non-standard printer. A custom driver must be specially structured to support simultaneous editing of another document, and to respond appropriately to the Control-A character that marks forced line endings. Contact the factory for details.

The Define Form Length print-control statement determines the length of a form in terms of Line Feeds of the current vertical height. When a page is full, a number of line feeds are printed to position the paper at the first printing line on the next form. The form feed character is not used in this process, so the form length control is not functional on printers like the 1610/1620.



## APPENDIX 4

### OPERATOR CONTROLS FOR THE DIABLO MODELS 1610 AND 1620

On the face of the Diablo Model 1610/1620 printer, above where the keyboard would be on a typewriter, there is a panel of lights and switches. The controls on this panel should be set as follows before printing:

- Power On/Off* — The system must be on before the printer will work. It will not operate without instructions from the computer. Never turn off the printer while it is printing using the on/off switch. To stop printing, get the Activity Menu on the screen and select the Stop Printing Activity. Turn off the printer when it is inactive.
- Power Indicator* — The power indicator light is on when the printer power is on.
- Audible Alarm* — Sounds when an error has been sent to the printer or when the DEL character has been received. Normally, you should select the Stop Printing Activity and then check the document for an erroneous Print-Control Statement (see Section 7).
- Scroll* — Not used. Be sure the scroll switch is off.
- Set TOF* — Not used.
- Form Feed* — Moves the paper to the first line on the next sheet. Use the Eject Page Activity instead.

#### WARNING

*A Diablo Model 1610/1620 cannot be plugged directly into the Serial Communication Interface of the Sol without rewiring the connector or inserting an adapter. See Appendix 3.*



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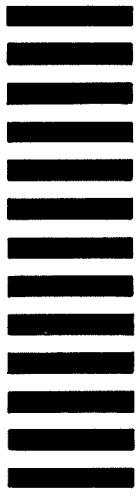
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