MicroPro®

The Microcomputer Software Company

WordStar®
Reference Manual

For Release 3.3

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MicroPro International Corporation
33 San Pablo Avenue
San Rafael, California 94903 USA

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Welcome

Unwrap the WordStar word processing package and meet your professional editor and layout artist. Put aside correction fluid, scissors, and paste. WordStar software does the work for you.

Once you typed and *retyped*; now you can process words. Your fingers still press those familiar keys, but other tasks that had to be done by hand—making corrections, moving text—can now be done by command.

As you enter your text, you'll find program features make editing on the electronic page easy. Each line you type wraps automatically around to the line below. Setting and resetting margins is accomplished by a few keystrokes. At a given signal, the WordStar program re-forms your paragraphs to new dimensions. If you change your mind and want to double-space your work, the program responds instantly. And if you decide you want to move, copy, or discard words, press a few keys and the job is done.

For all of these editing tasks, the WordStar program provides onscreen help. Menus list commands, and help screens explain the program to you as you work.

WordStar also makes it easy to design an attractive printed page. Print commands entered along with your text provide special effects and custom layout.

Everything you need to know about the program appears in the pages ahead. Whether you're a first timer or an old pro, you'll find WordStar easy to learn.

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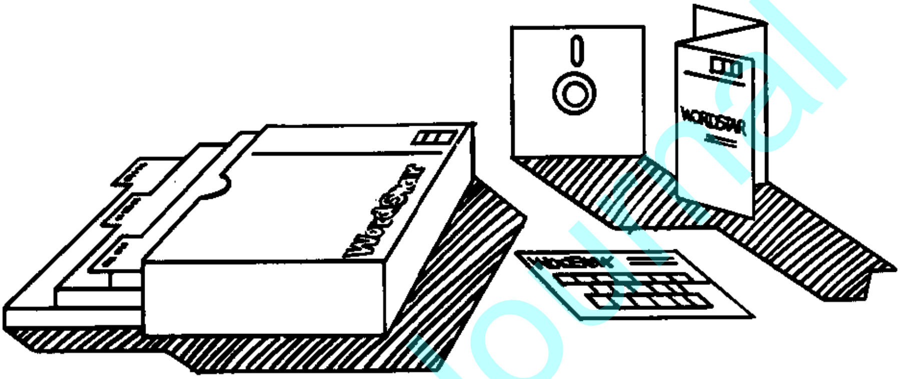
WHAT YOU HAVE

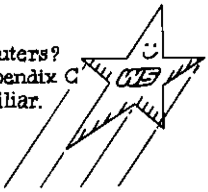
Your WordStar software package contains a disk, three manuals, a command card, and key-top labels. Here's what you have:



YOUR DISK

The disk contains the following WordStar program files and auxiliary files:

- **WSU.COM** This file contains the WordStar program Uninstalled. You use INSTALL.COM to adapt it for your computer system. Installing WordStar produces WS.COM, the main program file.
- **WSMSGS.OVR** This file contains all program messages and menus.
- **WSOVLY1.OVR** This file contains portions of the program that are auxiliary to the main program.



Hi, first time with computers?
Check the glossary in Appendix C
if some words are unfamiliar.

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- **WINSTALL.COM, WS.INS**. These files help you adapt WordStar to run on your particular computer system.

- **PRINT.TST** When printed, this sample file shows you the WordStar printing effects.

NOTE: IBM and other 16-bit computer systems use files with slightly different names and extensions. See the addendum for a list of files.

YOUR MANUALS

The following program manuals enable you to learn the practical uses of WordStar software at your own pace:

The *WordStar Installation Manual* tells you how to adapt the program for your particular computer system and how to customize certain features.

The *WordStar Training Guide* offers you a step-by-step approach to learning the WordStar program. If you're a first timer, this guide will soon have you up and running.

The *WordStar Reference Manual* is a comprehensive description of the program. If you're a first-time user, read it through after you've completed the training guide. You'll learn more about the program's features. An old pro now? Use this guide for reference and keep the menu map and command card handy.

At the back of the WordStar Reference Manual you'll find a fold-out menu map which shows you how to get from one menu to another and lists the commands as they appear on those menus. You'll also find a quick guide to the WordStar program.

The command card lists, by function, the most frequently used WordStar commands.

You also have key-top labels that can be affixed to your terminal keys as reminders of WordStar commands.

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WordStar®
Installation Manual

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How to Use This Book

You are the most important character in this book. The Reference Manual describes every feature and command of the WordStar program with you in mind. After the opening chapters introduce the program, you will find the book organized by tasks that WordStar can do for you.

REFERENCE AIDS When you want access to information, use the following reference aids:

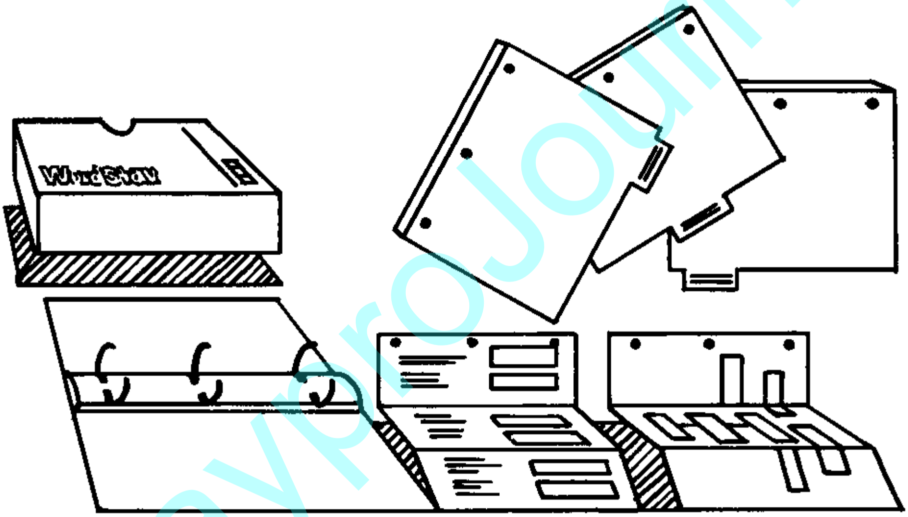

Table of Contents at the beginning of the manual	List of every subject covered in the ten chapters and four appendices
Table of Contents at the beginning of each chapter	Closer look at the subjects covered in the chapter

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Summary Table at the end of each chapter	Chart of commands covered in the chapter
Index	Quick pointer to a subject or command

When you want summaries, use the appendices:

Appendix A	Program Specifications
Appendix B	Error Messages
Appendix C	Quick guide to the program and the menu map
Appendix D	Glossary

As you read, cross-references tell you where to find more information. Cartoons and illustrations illuminate the way, and signposts give you easy access. Watch for these symbols:

filename *filename.EXT*	When you see one of these imitation file names in a procedure, use it as a reminder to insert an appropriate file name from your own directory.
n	"Any number"
↪ *n*	"Refer to this page (n) of the WordStar Reference Manual for more information."
	"CAUTION"
	"REMEMBER"
	"Keep this in mind"

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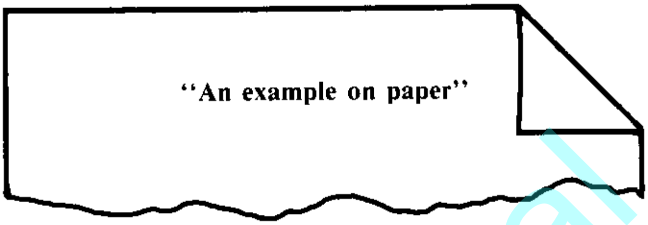
"An example onscreen"



RETURN	"RETURN Key"
☐	A single key command
^ ☐	A two-key command
^ ☐ ☐	A three-key command
• ☐ ☐	A dot command
▨	An option that only works with a previously entered command

You may find it easier to learn some commands by the mnemonic devices which appear in boldface when applicable. You can remember, for example, to open a file with **D** to edit in **D**ocument mode.

NOTE: ^ or CTRL represents the control key on your keyboard.

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1. INTRODUCING WORDSTAR

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This is exactly what we need! WordStar will help us get organized.
WS

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1. Introducing WordStar

You command the WordStar program from the keyboard of your computer terminal, using your regular keys and one special key marked CONTROL or CTRL. Onscreen messages and symbols show you how to use the program. Keep an eye on the screen and you won't get lost.

If you are new to computers and word processing, read this chapter carefully and refer frequently to your Training Guide and the glossary at the back of this manual. If you are experienced, you may want to read selectively.

THE BIG PICTURE

WordStar is highly flexible and very visible. Watch the screens as you give commands, and information in various parts of the screen will guide you. You won't see all the information all the time, but it will be there when you need it.

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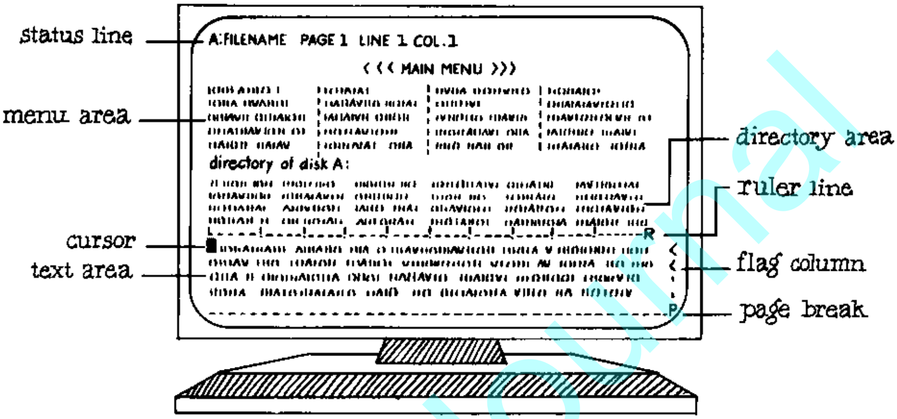
WHAT YOU SEE Here are the parts of the screen:



The *status line* indicates whether or not you are editing or printing and whether certain editing features are in operation.

The *menu area* displays lists of commands (menus), help screens, messages, or questions (prompts).

The *cursor*, a small block of light, locates your place on the screen as you type.

The *text area*, which can be moved (scrolled) up or down, is where your work appears.

The *directory* lists all the files on your disk except those ending with the extensions .COM, .HEX, .SYS, .OVR, .REL, or .$$$.

The *ruler line* indicates margins and tabs.

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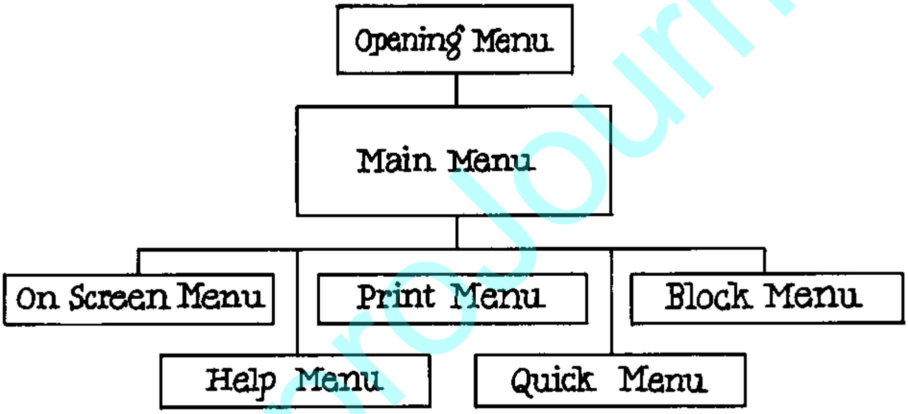
The *flag column* remains blank on lines ending with a soft carriage return; in all other lines, a symbol relating to text format or layout will appear.

The *page break display* indicates where the program will stop printing one page and begin another.

WHERE YOU ARE

The seven WordStar menus are your greatest aids. They are like signposts at the top of your screen, showing you where you are. Your path through the program looks like this:



The most important part of the screen is the text area where your work appears. How does your work get there? When you're at the Opening Menu, you command WordStar to open a file for your work, and you give the file a name. Then the Main Menu appears. Here you enter your work and give commands from your keyboard. Until you command the program to save your file, however, the work on the screen is not stored on your disk and could be lost. Saving files is very important.

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To avoid losing files during a power failure, use the save-and-resume command periodically as you work. Your file will be stored in its current form, and you can continue to work without having to re-open the file. ↪ *9-3*

There are two modes for working with files in WordStar, document and non-document. Document mode is tailor-made for word processing. Non-document mode, which eliminates many word processing features, is useful when you want to enter data or write computer programs. You choose the mode suited to your task as you open a file.

You are in command of WordStar. With WordStar commands you can work in your files, arranging and editing your work. You can also work with your files without opening them; for example, you can print a file or give it a new name.

When working with your files, you type commands or respond to questions (prompts) on the screen. Typing commands in WordStar is simple. Sometimes all that is required is a single keystroke. At other times, you press both the command key and the control key for the results you want. And sometimes you type a command right into a file.

Before you can begin typing WordStar commands, you must take these three steps:

GETTING READY

STEP 1 Turn on the computer and bring up (boot) your operating system.

STEP 2 Make a backup copy of the WordStar disk. Use the copy to run WordStar. Refer to your system documentation for exact instructions on how to copy a disk.

STEP 3 Install WordStar.

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TYPES OF COMMANDS

There are four types of commands in WordStar: single key, control key with one other key, control key with two other keys, and dot commands (which are discussed in Chapter 7). When entering any WordStar command, you can use either upper or lowercase letters, and you never have to press RETURN or any other key after the command letter.

Single-Key Commands

The Opening Menu offers a choice of single key commands, such as **D** (**D**ocument mode). To activate a command, press the single letter shown. Pressing the control key at the same time has no effect on a single-key command.

Two-Key Commands

Some commands, such as those in the screen on page 1-11, require that you hold the control key down while you press a second key. An example is the cursor movement command ^**D**.

Three-Key Commands

You perform many operations in WordStar, such as saving files (^KD), by using three-key commands.

To enter a three-key command, hold down the control key (CTRL) while you press the first key; then release CTRL and press the second key.

WordStar does not typically use the special-purpose function keys found on some terminals. However, some personal computer systems have assigned WordStar commands to certain function keys. Consult the manuals supplied with your system.

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STEP 10 TYPE **A**

SEE **Is your terminal on this list?**

STEP 11 TYPE **Y** (Yes) or **N** (No)

If you typed **Y** (Yes):

SEE **Terminal is currently : no terminal yet selected**

EXTRA TERMINAL TYPES

STEP 12 TYPE the appropriate letter for your terminal

OR, if you typed **N** (No) at STEP 11:

SEE **Terminal is currently : no terminal yet selected**, followed by a list of terminal types

STEP 12 TYPE the appropriate letter for your terminal

If your terminal isn't listed, go on to the next menu. If you are viewing menu #1, for example, type **2** to see menu #2.

NOTE: If the exact name of your terminal doesn't appear on any menu, talk to your dealer. One of the terminals listed may be so similar to yours that WordStar won't know the difference. Otherwise, you will need to select **B** on the Installation Menu and do a custom installation (see Chapter 2, "Custom Terminal Installation").

STEP 13 RETURN or TYPE **Y** if correct, **N** if you need to make a change

SEE **INSTALLATION MENU**

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At this prompt you can enter WordStar. You have a choice of three methods. The first, the basic entry method, introduces you to WordStar's Opening Menu. The second and third methods, which involve some shortcuts, are discussed at the end of the chapter.

Entering WordStar

BASIC METHOD

With this method you enter WordStar and then choose an activity from a list of commands. Begin at the system prompt:

TYPE **WS** RETURN

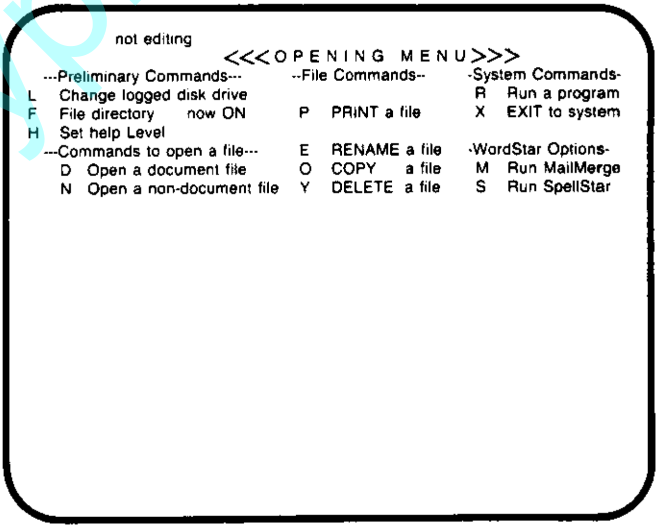
SEE copyright message

Included with the copyright message is the information about your system that was entered during the WordStar installation program.

THE OPENING MENU

The next display will appear automatically, but you can hurry it along by pressing the space bar after the copyright message appears.

SEE Opening Menu → *2-3*



```
            not editing
                        <<<O P E N I N G   M E N U>>>
  ---Preliminary Commands---      --File Commands--      -System Commands-
 L   Change logged disk drive                             R   Run a program
 F   File directory     now ON     P   PRINT a file       X   EXIT to system
 H   Set help Level
  ---Commands to open a file---    E   RENAME a file     -WordStar Options-
     D   Open a document file      O   COPY    a file     M   Run MailMerge
     N   Open a non-document file  Y   DELETE  a file     S   Run SpellStar
```

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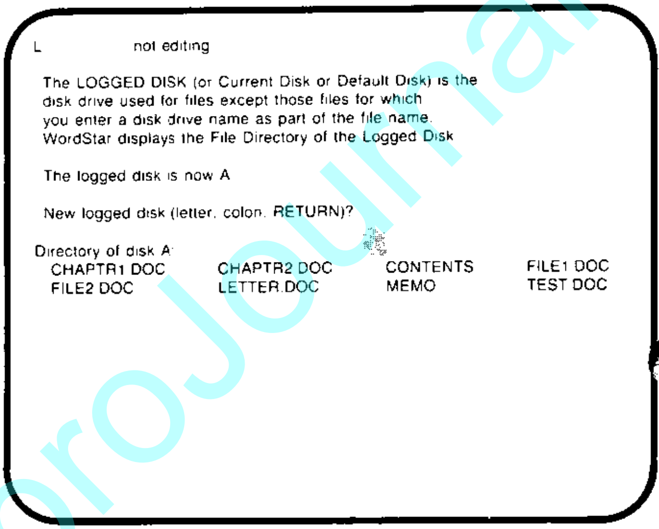
Opening Menu Commands

You will need to change (**Log**) to another disk drive when WordStar is located on one disk and your files on another. → *9-12*

TYPE **L**

The following screen appears and explains the use of the **L** command:



```
L              not editing

 The LOGGED DISK (or Current Disk or Default Disk) is the
 disk drive used for files except those files for which
 you enter a disk drive name as part of the file name.
 WordStar displays the File Directory of the Logged Disk

 The logged disk is now A

 New logged disk (letter, colon, RETURN)?

Directory of disk A:
  CHAPTR1.DOC        CHAPTR2.DOC        CONTENTS        FILE1.DOC
  FILE2.DOC          LETTER.DOC         MEMO            TEST.DOC
```

Your first alternative is to log onto a different disk:

TYPE **B** (or any letter A-P) RETURN

CAUTION

Be sure to name a disk drive on your system; naming a non-existent drive will cause an error message to appear.

Your second alternative is to maintain the currently logged disk:

RETURN or PRESS **ESC**

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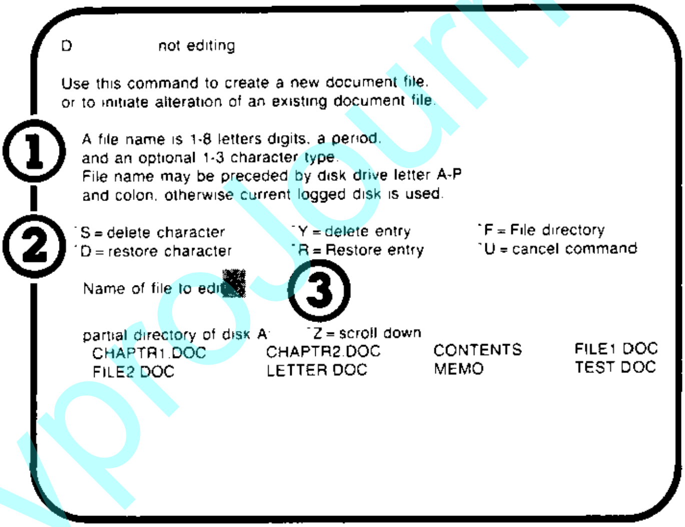
Opening a File

With the Opening Menu on your screen, you can open a new or existing file in document mode. (Non-document mode is explained in Chapter 10.)

TYPE **D**

A new screen appears and explains the use of the **D** (**D**ocument) command, gives you the file-naming requirements, and lists part of the current directory. You'll read more about each of these items later in this chapter. Here is the screen you'll see:



```
D            not editing

Use this command to create a new document file,
or to initiate alteration of an existing document file.

  A file name is 1-8 letters digits, a period,
  and an optional 1-3 character type.
  File name may be preceded by disk drive letter A-P
  and colon, otherwise current logged disk is used.

 ^S = delete character     ^Y = delete entry      ^F = File directory
 ^D = restore character    ^R = Restore entry     ^U = cancel command

  Name of file to edit?

  partial directory of disk A:    ^Z = scroll down
    CHAPTR1.DOC        CHAPTR2.DOC       CONTENTS        FILE1 DOC
    FILE2 DOC          LETTER DOC        MEMO            TEST DOC
```

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① Naming Files

CHOOSING A NAME

The most useful file name is one that helps you remember the file contents. In addition to the file-naming requirements listed on the screen, the following guidelines apply:

- Do not use names that are already in use on the current disk.
- Exclude question marks, asterisks, and other special characters which may affect your system.
- Use upper and lowercase letters interchangeably.

You may include a period followed by an extension of one to three characters to describe the type of file. For example, you might add .LET after each letter file name, .REP after each report or .912 to indicate that September 12 was the last editing session.

These are valid file names:

RESUME	**INDEX**
REPORT.JAN	**LETTER.521**

Extensions

CAUTION

Don't use the extension .BAK because it's used by the WordStar program to name backup copies. If other software on your system also creates files with extensions, avoid duplicating these as well. Check the product documentation.

Files on Other Disk Drives

To edit a file on another drive, you must include the name of the drive. If you want to edit file LETTER.DOC on disk B, enter three pieces of information (disk drive, file name, and extension):

```
TYPE B:LETTER.DOC
```

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To economize on disk space, you may occasionally want to store the results of an editing session on another disk. To edit a file named RESUME.LJL on disk A and store the new version on disk B, enter these four pieces of information:

TYPE **A:RESUME.LJL B:**

When you save the file after editing, it will be on disk B, not A.

Correcting Typing Errors

SPECIAL KEYS

The D Screen includes a list of editing keys. These keys, pressed while holding down the control key, allow you to correct typing errors as you enter a file name. You can use them whenever you respond to a prompt that ends with a question mark.

To give a two-key command, such as ^S, hold down CTRL while you type **S**.

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Here is a table which describes the purpose of each key on the D Screen:

② SPECIAL EDITING CHARACTERS

Keys	Purpose
^ S	Erases one character to the left. BACKSPACE, DELETE, or **^H** may also be used.
^ D	Restores one erased character at a time to the right. The restored characters are repeated from the last response given to the same prompt.
^ Y	Erases the entire response.
^ R	Restores the entire last response to the same prompt. If you delete an entry with **^Y**, **^R** can recall it. Check carefully, however, to be sure that the recalled entry is the one you want.
^ F	Displays the file directory for the currently logged disk drive until you enter a file name. **^F** does nothing if the directory is already on the screen.
^ U	Interrupts and terminates the current command, requests that you press the ESCape key, and clears any commands or text already typed.
^ Z	Moves (scrolls) your view of the file directory down when all the lines won't fit on your screen, adding new lines at the bottom of your screen.
^ W	Moves (scrolls) your view of the file directory up, adding new lines at the top of your screen.

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CAUTION

Many of the keys described as special editing characters have a double identity. At any of the Opening Menu screens or in certain file operations, these keys serve the purposes indicated in the chart. Once you begin editing "inside" a file, however, you'll see the same characters on the Main Menu as cursor control commands.

Use **^U** to interrupt commands from almost anywhere in the WordStar program.

③ Your Response

HOW TO ENTER YOUR FILE NAME

The cursor awaits your response to the prompt on the screen.

SEE **Name of file to edit?**

TYPE *filename* RETURN

If you have named a file not yet contained on the disk, the words NEW FILE will appear briefly just below the prompt.

If you see this message when you intend to edit an existing file, you probably mistyped the name or logged onto the wrong disk. Abandon editing by pressing **^KQ**, which returns you to the Opening Menu. ⟶ *9-5*

WHAT HAPPENS AFTER YOU PRESS RETURN

The next screen you'll see is the Main Menu and, below it, either your existing file or a blank text area ready to be filled.

STORING FILES

HOW TO USE SAVE COMMANDS

Use save commands as you work on a file and when you finish. Save commands store your work on the disk and protect it against unnecessary loss. ⟶ *9-4*

The save—**D**one command (^KD) stores your current file and returns you to the Opening Menu.

PRESS **^KD**

SEE **WAIT**
Saving file A:*filename*

SEE Opening Menu

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PRINTING YOUR DOCUMENT

ANOTHER OPTION MENU

At this point you can print your file. You give the basic print command at the Opening Menu. ↪ *9-19*

Here are the steps:

STEP 1 Prepare your printer. Refer to your printer manual and the WordStar Installation Manual for information.

STEP 2 At the Opening Menu

TYPE **P**

TYPE *filename*

PRESS **ESC**

NOTE: By pressing ESCape, rather than RETURN, you ignore a list of print options that would otherwise appear. Print options will be explained in Chapter 9.

Your document will be printed just as you designed it on the screen.

LEAVING WORDSTAR

HOW TO EXIT

When you finish working with a file, use this procedure to leave WordStar:

SEE Opening Menu

TYPE **X** (eXit)

SEE operating system prompt

NOTE: When you leave WordStar, you usually remain on the currently logged disk. Some operating systems, however, return you to the original disk.

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CAUTION

If you plan to be away from the computer for a while, you may want to turn it off completely. *Always remove disks before turning off the power.*

ALTERNATE METHODS OF ENTERING WORDSTAR

There will be times when you want to enter WordStar and go directly into a particular file to begin editing. You have two alternatives, both of which allow you to bypass the Opening Menu. The second also allows you to edit on one disk and store your file on another.

Editing and Storing on One Disk

HOW TO BYPASS THE OPENING MENU

To enter a WordStar file directly, you include a file name, either new or existing, at your operating system prompt. This method works in document mode only and does not accommodate non-document files.

SEE your system prompt

TYPE **WS** *filename* RETURN

SEE copyright message

Then you can begin editing:

SEE Main Menu and your file

If you enter a new name, first you'll see the following:

SEE **NEW FILE**

Then you'll go into the new file:

SEE Main Menu and blank text area

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If the file you want to edit is located on a different disk drive, include the disk drive name. If the file named RESPONSE is located on disk drive B, for example, the command looks like this:

TYPE **WS B:RESPONSE** RETURN

SEE the file you named

Editing on One Disk and Storing on Another

BYPASS AND CHANGE DISKS

When space on your disk is limited, you can edit a file on one disk and place the result on another. To edit a file which occupies more than half of your disk, you *must* use this method:

TYPE file's present disk drive (and a colon)

filename

the second disk drive (and a colon)

RETURN

CAUTION

Make sure you don't type anything but RETURN after the name of the second disk drive (including the colon), not even a space.

Note that you can omit the file's present disk drive if it's your currently logged drive.

Here's an example that tells WordStar you want to edit the file BOOK.DOC on disk C and save it on disk B:

TYPE **WS C:BOOK.DOC B:** RETURN

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After you edit and save the file named BOOK.DOC on disk C, the new version is placed on disk B. The file on disk C will have been renamed BOOK.BAK and will serve as your backup file.

If you use a save-and-resume command (^KS), each successive save command will result in a location switch; you will edit on disk B and save on disk C, then edit on C and save on B, and so on. ⟶ *9-3*

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2. USING MENUS

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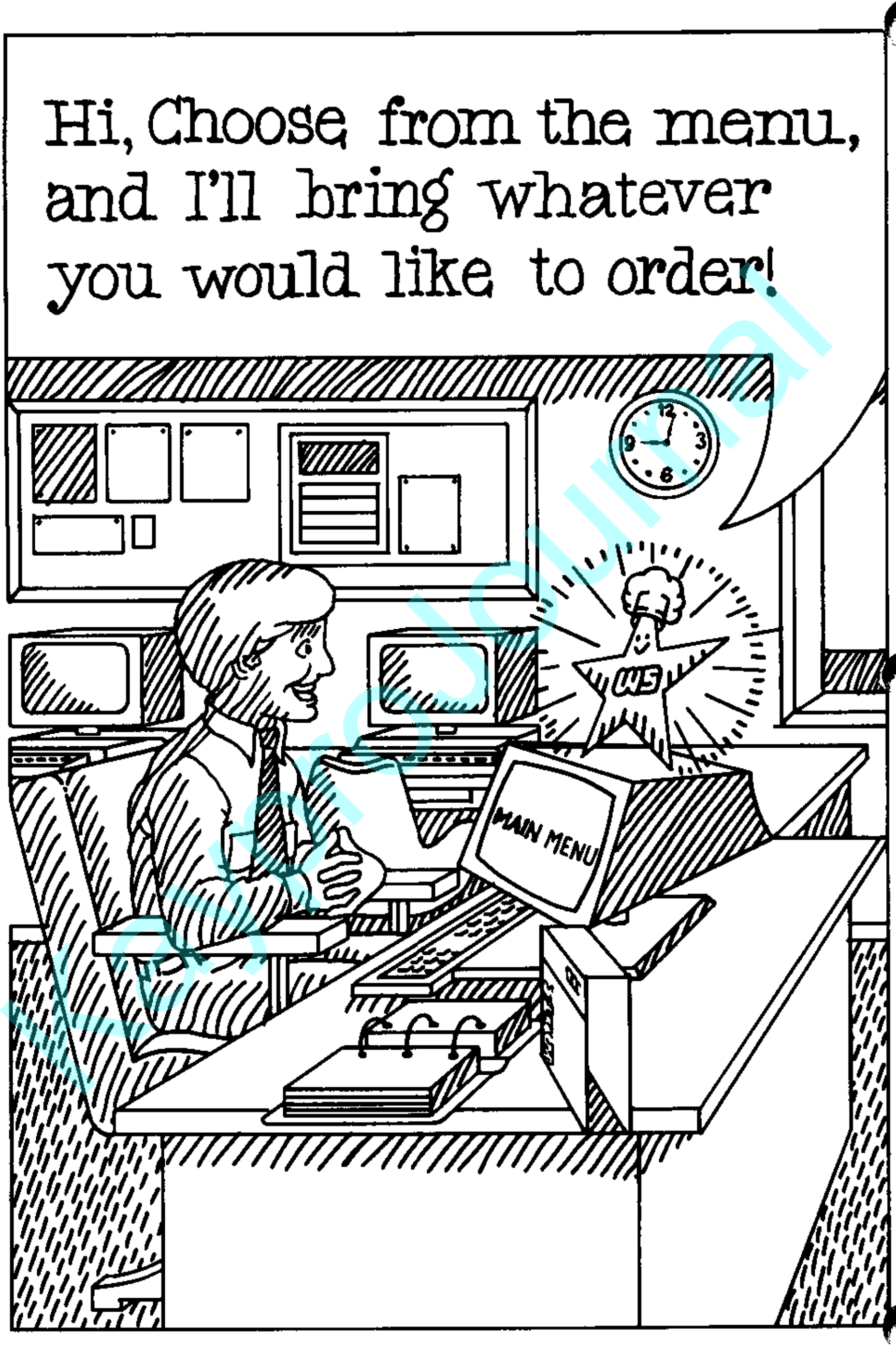
Hi, Choose from the menu, and I'll bring whatever you would like to order!
12
3
6
9
WS
MAIN MENU

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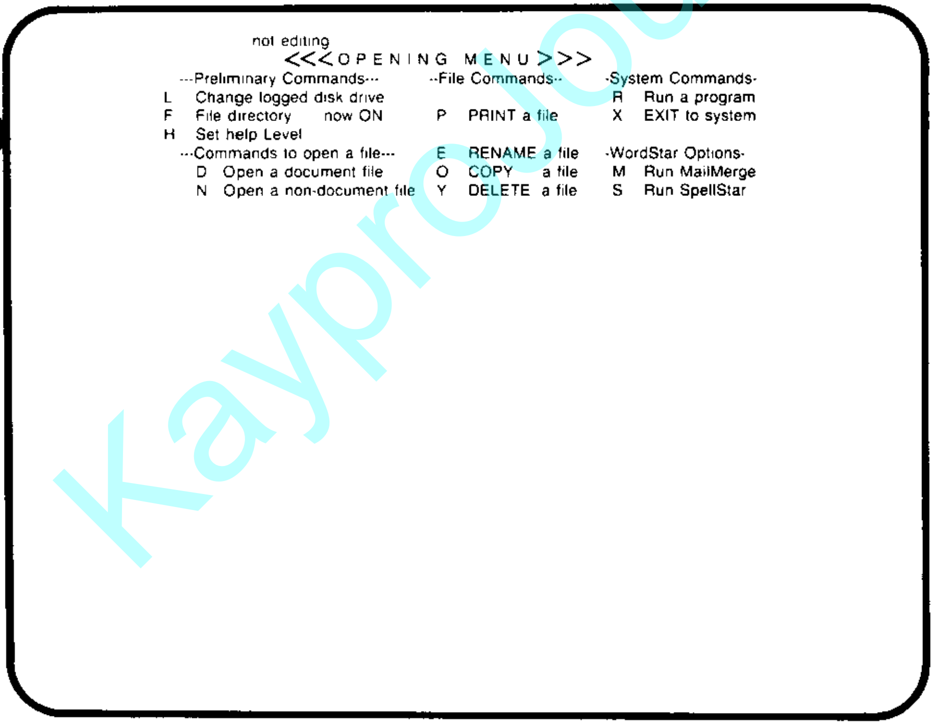
2. Using Menus

The WordStar program has seven major menus which provide an onscreen guide to WordStar commands. This chapter lists all of these menus, along with quick references to command explanations throughout this manual. The menus are charted on a fold-out map in Appendix C. Refer to it as you read this chapter.

OPENING MENU

After you start the WordStar program, the Opening Menu appears. Here's what you see:



```
                not editing
                    <<<O P E N I N G   M E N U >>>
   ---Preliminary Commands---        --File Commands--        -System Commands-
L    Change logged disk drive                                   R    Run a program
F    File directory      now ON      P    PRINT a file          X    EXIT to system
H    Set help Level
   ---Commands to open a file---     E    RENAME a file        -WordStar Options-
     D   Open a document file        O    COPY      a file      M    Run MailMerge
     N   Open a non-document file    Y    DELETE  a file        S    Run SpellStar
```

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The Opening Menu is like a platform on which you begin and end your work. You normally pass the Opening Menu when you enter or exit from WordStar. From the Opening Menu, you cannot edit your work or give a control command leading to auxiliary menus. The commands on the Opening Menu are for tasks performed either before or after you begin work on a file, such as changing the logged disk drive or printing a file.

The following table lists the commands on the Opening Menu and indicates where to get more information about them:

OPENING MENU CHOICES					
Preliminary Commands			**File Commands**		
L	Change logged disk drive	p. 9-12	P	PRINT a file	p. 9-19
F	File directory	p. 9-7	E	RENAME a file	p. 9-9
H	Set help level	p. 2-25	O	COPY a file	p. 9-8
			Y	DELETE a file	p. 9-10
Commands to open a file			**System Commands**		
D	Open document file	p. 1-11	R	Run a program	p. 9-13
N	Open non-document file	p. 10-4	X	EXIT to system	p. 9-5
WordStar Options					
S	Run SpellStar	p. 9-12	M	Run MailMerge	p. 9-12

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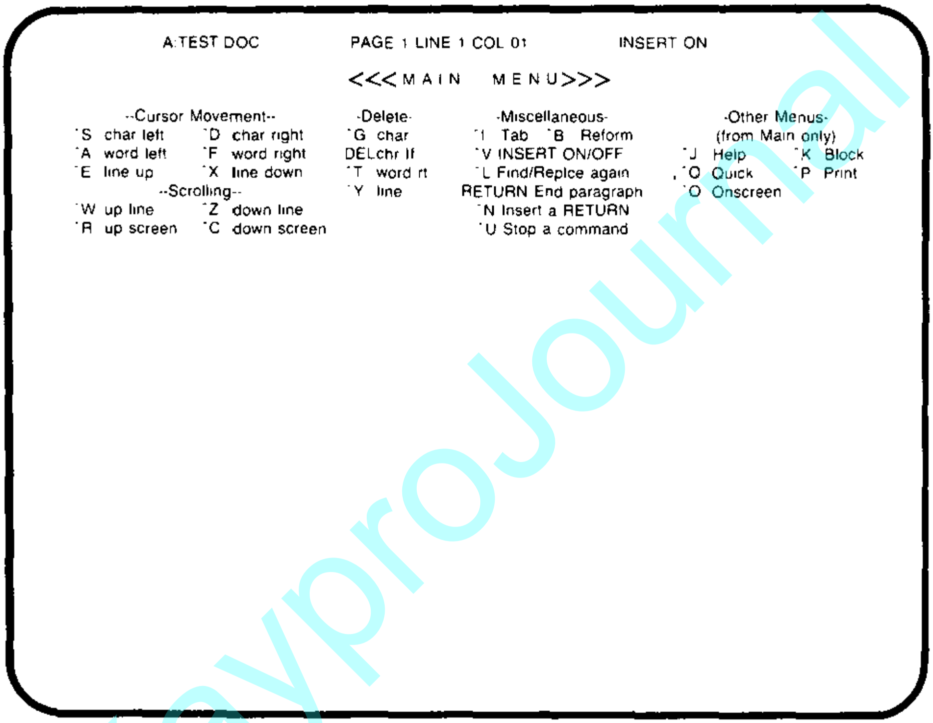
MAIN MENU

When you open a document (**D**) or non-document (**N**) file, you'll see the Main Menu. Here it is:



```
          A:TEST DOC              PAGE 1 LINE 1 COL 01            INSERT ON

                                <<<M A I N   M E N U>>>

       --Cursor Movement--          -Delete-     -Miscellaneous-          -Other Menus-
 ^S  char left     ^D  char right   ^G  char     ^I  Tab   ^B  Reform     (from Main only)
 ^A  word left     ^F  word right   DELchr lf    ^V INSERT ON/OFF     ^J  Help      ^K  Block
 ^E  line up       ^X  line down    ^T  word rt  ^L Find/Replce again ^Q  Quick     ^P  Print
           --Scrolling--            ^Y  line    RETURN End paragraph  ^O  Onscreen
 ^W  up line       ^Z  down line                 ^N Insert a RETURN
 ^R  up screen     ^C  down screen               ^U Stop a command
```

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The following table tells you where to find more information about each of the Main Menu commands:

		CURSOR MOVEMENT	
^S	char left	Moves cursor one character to the left	p. 3-7
^D	char right	Moves cursor one character to the right	p. 3-7
^A	word left	Moves cursor one word to the left	p. 3-8
^F	word right	Moves cursor one word to the right	p. 3-7
^E	line up	Moves cursor up one line	p. 3-8
^X	line down	Moves cursor down one line	p. 3-9
		SCROLLING	
^W	up line	Moves screen view up one line	p. 3-8
^Z	down line	Moves screen view down one line	p. 3-9
^R	up screen	Moves up one whole screen	p. 3-8
^C	down screen	Moves down one whole screen	p. 3-9
		DELETE	
^G	char	Deletes character	p. 3-15
DELETE	chr lf	DELETE Key deletes one character to the left	p. 3-16
^T	word rt	Deletes one word to the right	p. 3-17
^Y	line	Deletes one full line	p. 3-18
		MISCELLANEOUS	
^I	Tab	Moves cursor to next tab mark	p. 6-11
^B	Re-form	Rearranges text to form paragraphs within margins	p. 3-19
^V	INSERT ON/OFF	Toggle switch for insertion feature	p. 3-12
^L	Find/Replce again	Continues the search of a ^QA or ^QF command	p. 5-6
RETURN	End paragraph	Inserts a "hard" carriage return into text	p. 3-23
^N	Insert a RETURN	Inserts a "hard" carriage return into text	p. 3-24
^U	Stop a command	Interrupts many commands before executed	p. 1-14
		OTHER MENUS	
^J	Help	Displays the Help Menu	
^K	Block	Displays the Block Menu	
^Q	Quick	Displays the Quick Menu	
^P	Print	Displays the Print Menu	
^O	Onscreen	Displays the Onscreen Menu	

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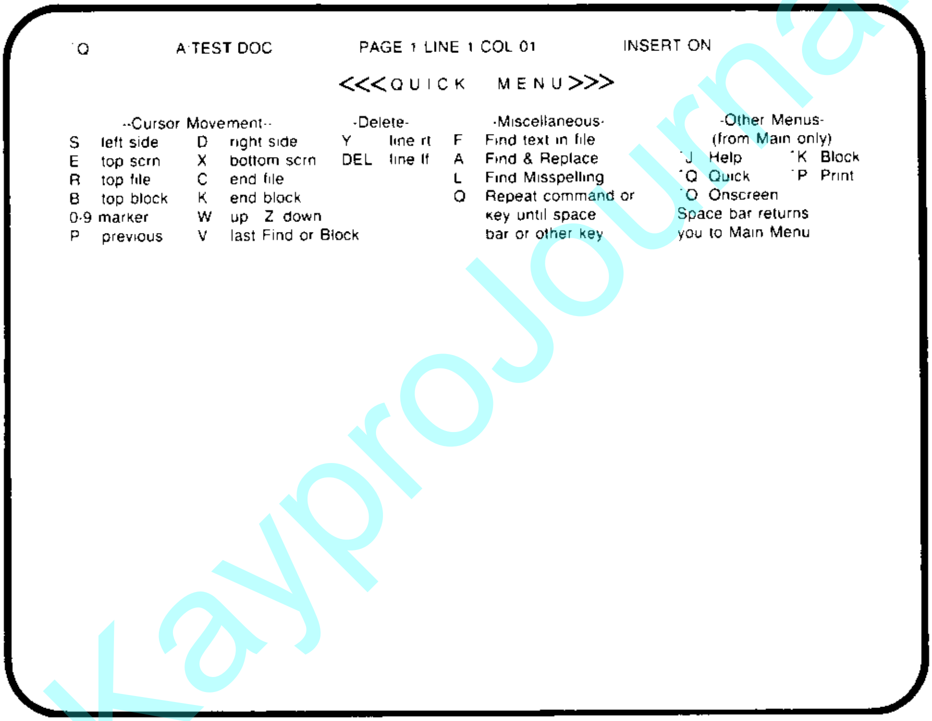
The last section of the Main Menu identifies five other menus. Take a look at them now, one at a time.

QUICK MENU

When you press **^Q** at the Main Menu, you'll see the **Quick** Menu:



```
^Q           A:TEST DOC          PAGE 1 LINE 1 COL 01          INSERT ON

                             <<<Q U I C K   M E N U>>>

      --Cursor Movement--            -Delete-       -Miscellaneous-          -Other Menus-
S    left side     D   right side    Y    line rt  F   Find text in file      (from Main only)
E    top scrn      X   bottom scrn   DEL  line lf  A   Find & Replace       ^J  Help       ^K  Block
R    top file      C   end file                    L   Find Misspelling     ^Q  Quick      ^P  Print
B    top block     K   end block                   Q   Repeat command or    ^O  Onscreen
0-9 marker         W   up  Z  down                     key until space      Space bar returns
P    previous      V   last Find or Block              bar or other key     you to Main Menu
```

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The Quick Menu lists commands that activate other commands until specific conditions are reached. For example, **^S** moves the cursor one character to the left, and **^QS** moves the cursor all the way back to the left end of the line.

The **^Q** commands are explained in subsequent chapters.

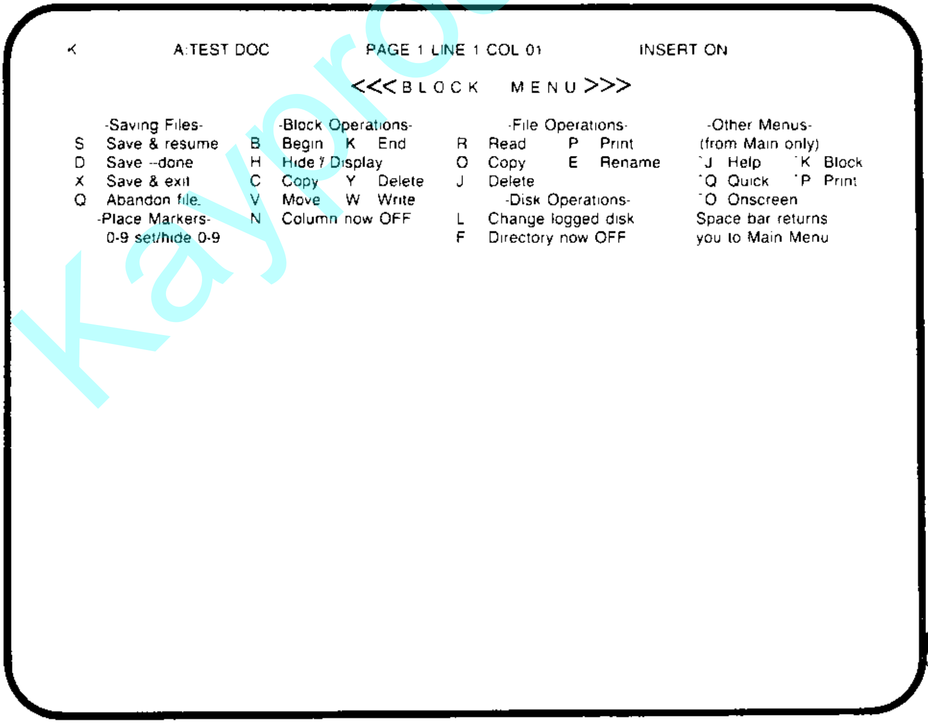
- Cursor movement commands ↪ *3-7*
- Delete commands ↪ *3-18*
- Miscellaneous commands:

^QA and ^QF ↪ *5-3*
^QL ↪ *5-13*
^QQ _ ↪ *3-9*

BLOCK MENU

^ K

When you press **^K** at the Main Menu, you'll see the Bloc**K** Menu illustrated here:



```
 K            A:TEST DOC          PAGE 1 LINE 1 COL 01              INSERT ON
                              <<<B L O C K   M E N U>>>
     -Saving Files-        -Block Operations-          -File Operations-           -Other Menus-
S    Save & resume     B   Begin    K   End       R   Read      P   Print     (from Main only)
D    Save --done       H   Hide / Display         O   Copy      E   Rename    ^J  Help    ^K  Block
X    Save & exit       C   Copy     Y   Delete    J   Delete                  ^Q  Quick   ^P  Print
Q    Abandon file      V   Move     W   Write         -Disk Operations-       ^O  Onscreen
    -Place Markers-    N   Column now OFF         L   Change logged disk      Space bar returns
     0-9 set/hide 0-9                             F   Directory now OFF       you to Main Menu
```

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The Block Menu lists commands for manipulating blocks of text, whether the block is a whole file or only a portion of text.

The **^K** commands are described on these pages.

- Saving Files ⟶ *9-3*
- Block Operations ⟶ *4-5*
- File Operations ⟶ *9-7*
- Disk Operations ⟶ *9-15*

To save you the trouble of closing a file and returning to the Opening Menu, the Block Menu includes commands for file and disk operations which duplicate those on the Opening Menu.

Refer to the following chart for a comparison of these commands:

OPENING MENU (outside file)	**BLOCK MENU** (inside file)	**FILE AND DISK OPERATIONS**
L	**^KL**	Change logged drive
F	**^KF**	Turn file directory on/off
P	**^KP**	Print
E	**^KE**	Rename
O	**^KO**	Copy
Y	**^KJ**	Delete

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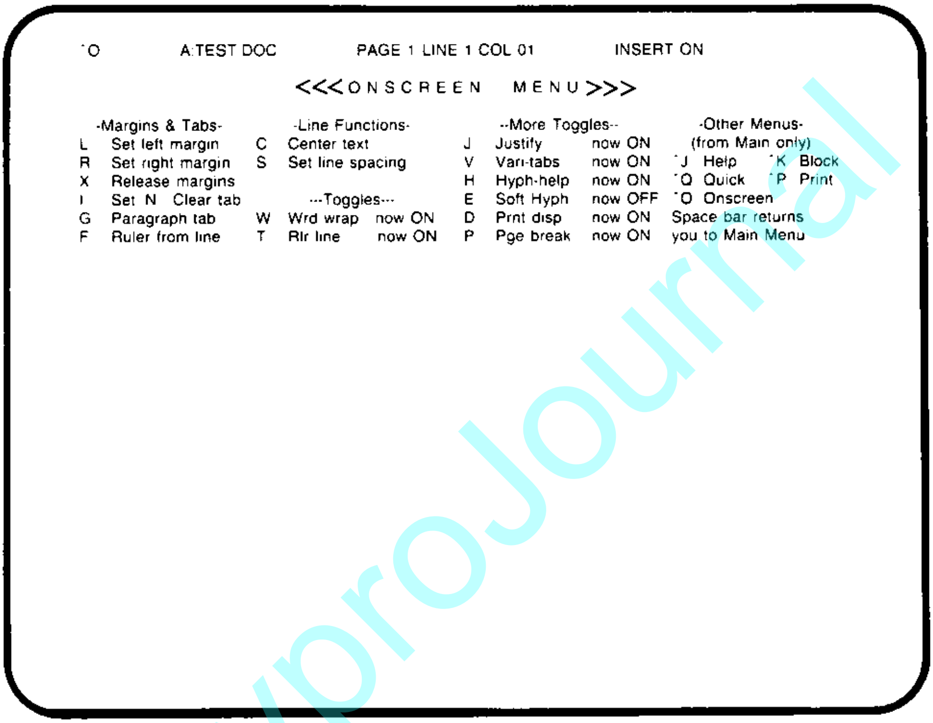
ONSCREEN MENU

You reach the **Onscreen** Menu by pressing **^O** at the Main Menu.



```
^O          A:TEST DOC          PAGE 1 LINE 1 COL 01          INSERT ON

                         <<<O N S C R E E N   M E N U>>>

   -Margins & Tabs-        -Line Functions-          --More Toggles--          -Other Menus-
L  Set left margin      C  Center text            J  Justify      now ON     (from Main only)
R  Set right margin     S  Set line spacing       V  Vari-tabs    now ON   ^J  Help      ^K  Block
X  Release margins                                H  Hyph-help    now ON   ^Q  Quick     ^P  Print
I  Set  N  Clear tab        ---Toggles---         E  Soft Hyph    now OFF  ^O  Onscreen
G  Paragraph tab        W  Wrd wrap   now ON      D  Prnt disp    now ON   Space bar returns
F  Ruler from line      T  Rlr line    now ON     P  Pge break    now ON   you to Main Menu
```

The Onscreen Menu lists commands for formatting text. The effects of these commands can be seen right on the screen. This menu also shows the status of most toggle switches. If you forget whether a toggle switch is on or off, you can press **^O** and look.

The **^O** commands for formatting text are explained in Chapter 6.

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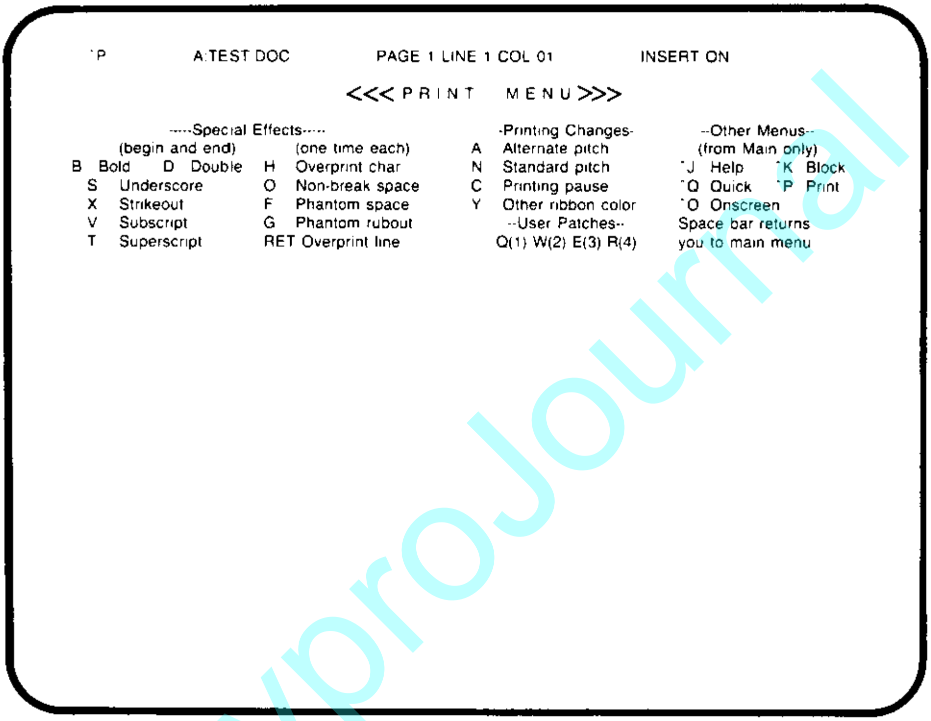
PRINT MENU

When you press **^P** while editing a file at the Main Menu, you see the **Print** Menu.



```
 ^P          A:TEST DOC          PAGE 1 LINE 1 COL 01          INSERT ON
                          <<< P R I N T   M E N U >>>
         -----Special Effects-----                  -Printing Changes-      --Other Menus--
      (begin and end)        (one time each)    A  Alternate pitch       (from Main only)
 B  Bold    D  Double    H  Overprint char      N  Standard pitch      ^J  Help    ^K  Block
   S  Underscore         O  Non-break space     C  Printing pause      ^Q  Quick   ^P  Print
   X  Strikeout          F  Phantom space       Y  Other ribbon color  ^O  Onscreen
   V  Subscript          G  Phantom rubout       --User Patches--      Space bar returns
   T  Superscript        RET Overprint line     Q(1) W(2) E(3) R(4)    you to main menu
```

The Print Menu lists commands which affect design of the printed page. Unlike **^O** commands, their effects are not visible on the screen. When you press **^P** with one of the letters on the Print Menu, the letter will appear on the screen, preceded by the control symbol. **^PB** appears as **^B** on the screen, for example.

The **^P** commands are explained in Chapter 7.

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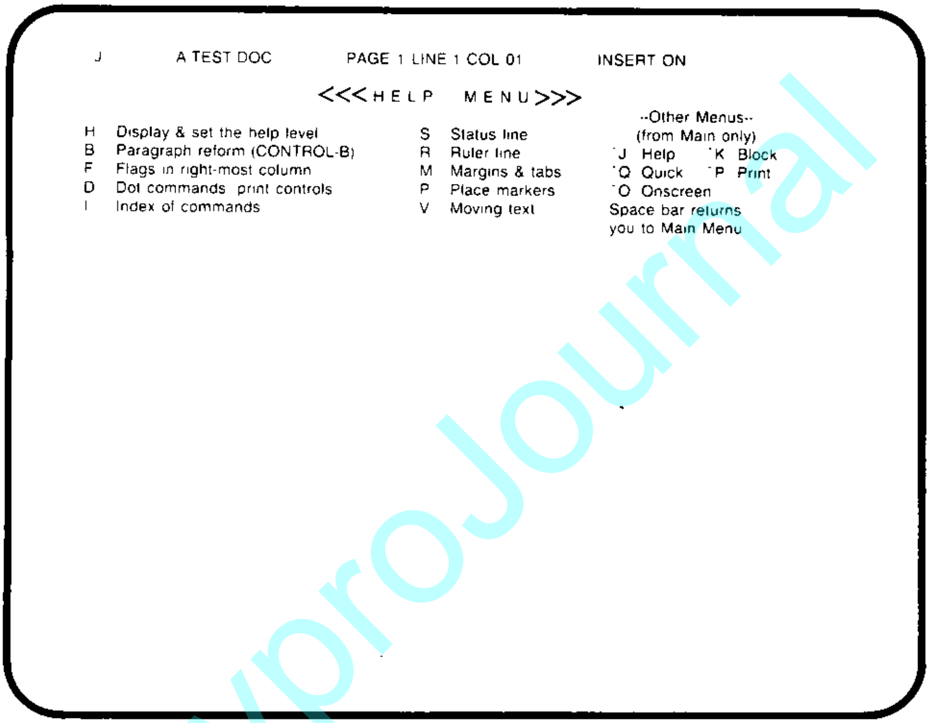
HELP MENU

The Help Menu appears when you press ^**J** at the Main Menu:



```
 J          A TEST DOC          PAGE 1 LINE 1 COL 01          INSERT ON
                              <<<H E L P   M E N U>>>
                                                                  --Other Menus--
H   Display & set the help level            S   Status line       (from Main only)
B   Paragraph reform (CONTROL-B)            R   Ruler line       ^J  Help     ^K  Block
F   Flags in right-most column              M   Margins & tabs   ^Q  Quick    ^P  Print
D   Dot commands  print controls            P   Place markers    ^O  Onscreen
I   Index of commands                       V   Moving text      Space bar returns
                                                                 you to Main Menu
```

The Help Menu is a condensed guide to WordStar. If you press a letter other than **H** after ^**J**, you'll see a help screen that explains one general feature or function of the program. From the Help Menu, you can also set (^JH) the level of onscreen assistance (help level) which the program will give you.

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Help Screens

Some help screens consist of multiple frames. For instance, when you press **^JD**, you'll first read about dot commands, then press the space bar several times to see lists of all the dot commands. If you don't want to look at all of the multiple frames, press **^U** to return to editing.

All help screens which you can reach from the Help Menu are reproduced in this chapter. Each is on the page indicated in the following alphabetized table. Except for **^JH**, explained on page 2-25, the screens are self-explanatory.

The following chart shows how to use the help (^J) menus:

COMMAND	HELPS YOU TO
^JB	re-form a paragraph
^JD	use **D**ot commands for printing
^JF	interpret **F**lags in farthest right column
^JH	set the **H**elp level
^JI	locate commands
^JM	set **M**argins, tabs, line spacing, justification
^JP	set and use **P**lace markers
^JR	interpret the **R**uler line
^JS	interpret the **S**tatus line
^JV	mo**V**e blocks of text

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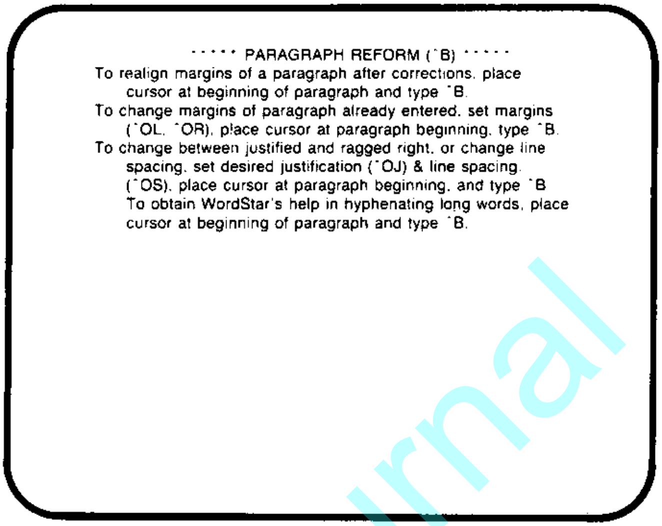
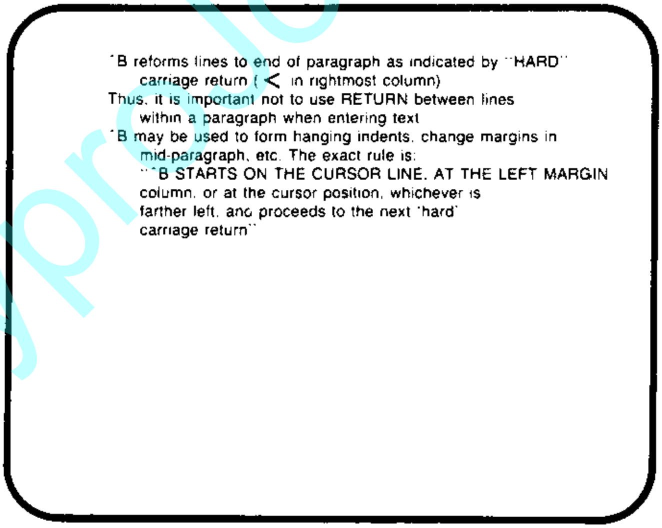
^ J B



```
                ····· PARAGRAPH REFORM (^B) ·····
To realign margins of a paragraph after corrections, place
     cursor at beginning of paragraph and type ^B.
To change margins of paragraph already entered, set margins
     (^OL, ^OR), place cursor at paragraph beginning, type ^B.
To change between justified and ragged right, or change line
     spacing, set desired justification (^OJ) & line spacing
     (^OS), place cursor at paragraph beginning, and type ^B
     To obtain WordStar's help in hyphenating long words, place
     cursor at beginning of paragraph and type ^B.
```

^JB SCREEN 1 PARAGRAPH REFORM



```
^B reforms lines to end of paragraph as indicated by ``HARD''
     carriage return ( < in rightmost column)
Thus, it is important not to use RETURN between lines
     within a paragraph when entering text
^B may be used to form hanging indents, change margins in
     mid-paragraph, etc. The exact rule is:
     ``^B STARTS ON THE CURSOR LINE, AT THE LEFT MARGIN
     column, or at the cursor position, whichever is
     farther left, and proceeds to the next `hard'
     carriage return''
```

^JB SCREEN 2 PARAGRAPH REFORM
continued

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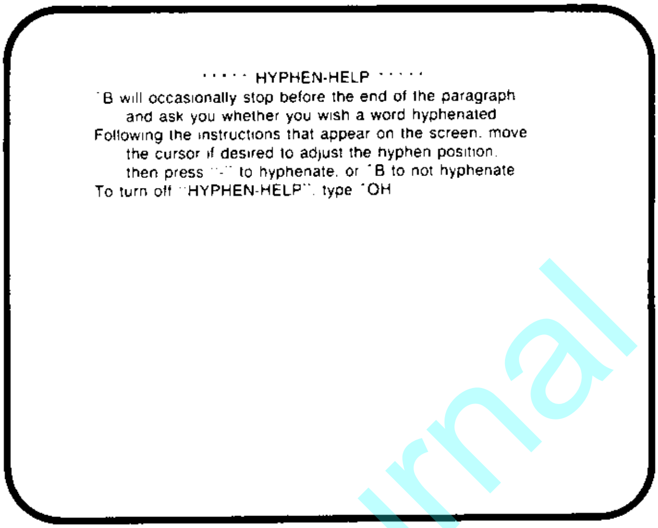
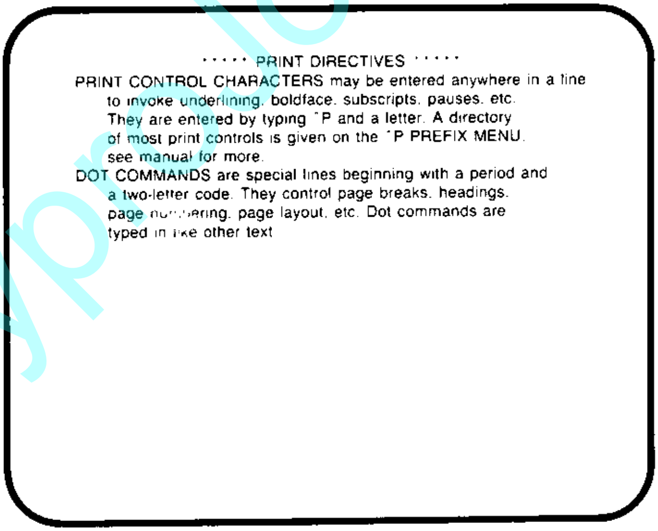


```
               ..... HYPHEN-HELP .....
 ^B will occasionally stop before the end of the paragraph
     and ask you whether you wish a word hyphenated
Following the instructions that appear on the screen, move
     the cursor if desired to adjust the hyphen position,
     then press "-" to hyphenate, or ^B to not hyphenate
To turn off "HYPHEN-HELP", type ^OH
```

^JB SCREEN 3 HYPHEN-HELP



```
               ..... PRINT DIRECTIVES .....
PRINT CONTROL CHARACTERS may be entered anywhere in a line
     to invoke underlining, boldface, subscripts, pauses, etc.
     They are entered by typing ^P and a letter. A directory
     of most print controls is given on the ^P PREFIX MENU,
     see manual for more.
DOT COMMANDS are special lines beginning with a period and
     a two-letter code. They control page breaks, headings,
     page numbering, page layout, etc. Dot commands are
     typed in like other text
```

^JD SCREEN 1 PRINT DIRECTIVES

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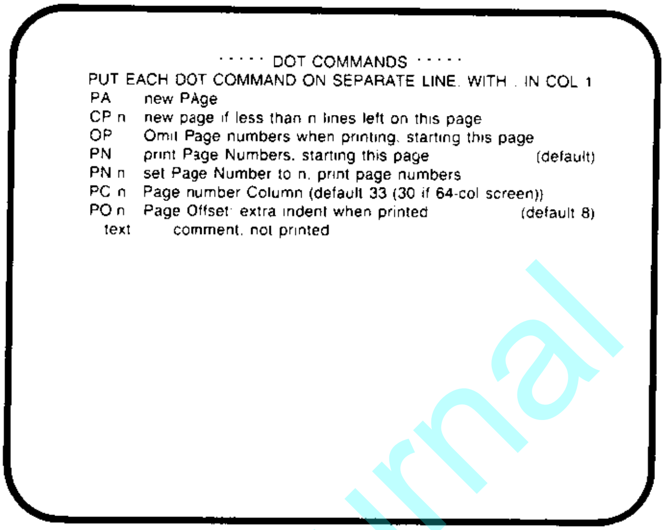
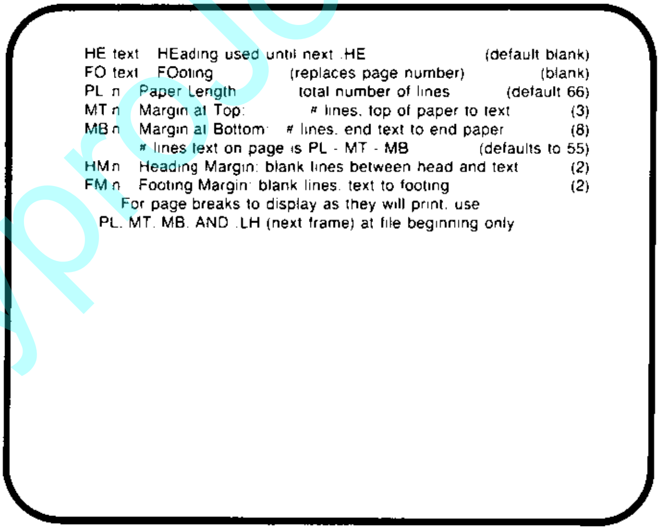


```
                        ····· DOT COMMANDS ·····
PUT EACH DOT COMMAND ON SEPARATE LINE. WITH . IN COL 1
PA      new PAge
CP n    new page if less than n lines left on this page
OP      Omit Page numbers when printing, starting this page
PN      print Page Numbers, starting this page                 (default)
PN n    set Page Number to n, print page numbers
PC n    Page number Column (default 33 (30 if 64-col screen))
PO n    Page Offset: extra indent when printed               (default 8)
  text      comment, not printed
```

^JD SCREEN 2 DOT COMMANDS



```
HE text  HEading used until next .HE                  (default blank)
FO text  FOoting              (replaces page number)          (blank)
PL  n   Paper Length          total number of lines      (default 66)
MT n    Margin at Top:            # lines, top of paper to text   (3)
MB n    Margin at Bottom:   # lines, end text to end paper        (8)
           # lines text on page is PL - MT - MB       (defaults to 55)
HM n    Heading Margin: blank lines between head and text         (2)
FM n    Footing Margin: blank lines, text to footing              (2)
        For page breaks to display as they will print, use
     PL. MT. MB. AND .LH (next frame) at file beginning only
```

^JD SCREEN 3 DOT COMMANDS continued

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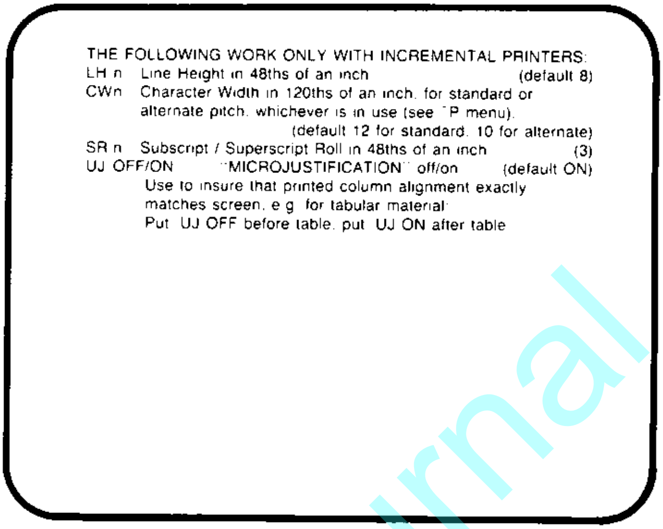
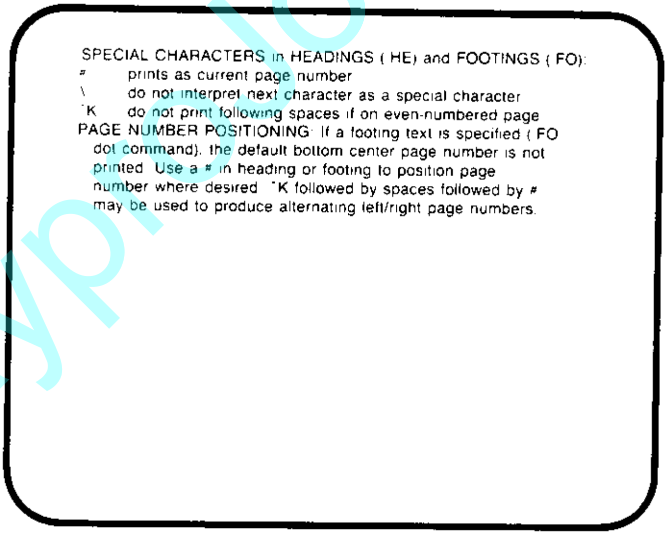


```
THE FOLLOWING WORK ONLY WITH INCREMENTAL PRINTERS:
LH n   Line Height in 48ths of an inch                       (default 8)
CWn    Character Width in 120ths of an inch. for standard or
       alternate pitch. whichever is in use (see ^P menu).
                           (default 12 for standard. 10 for alternate)
SR n   Subscript / Superscript Roll in 48ths of an inch              (3)
UJ OFF/ON       "MICROJUSTIFICATION" off/on              (default ON)
        Use to insure that printed column alignment exactly
        matches screen. e g  for tabular material:
        Put  UJ OFF before table. put  UJ ON after table
```

^JD SCREEN 4 DOT COMMANDS FOR INCREMENTAL PRINTERS



```
SPECIAL CHARACTERS in HEADINGS ( HE) and FOOTINGS ( FO):
#       prints as current page number
\       do not interpret next character as a special character
^K      do not print following spaces if on even-numbered page
PAGE NUMBER POSITIONING: If a footing text is specified ( FO
  dot command). the default bottom center page number is not
  printed  Use a # in heading or footing to position page
  number where desired  ^K followed by spaces followed by #
  may be used to produce alternating left/right page numbers.
```

^JD SCREEN 5 SPECIAL CHARACTERS IN HEADINGS AND FOOTINGS

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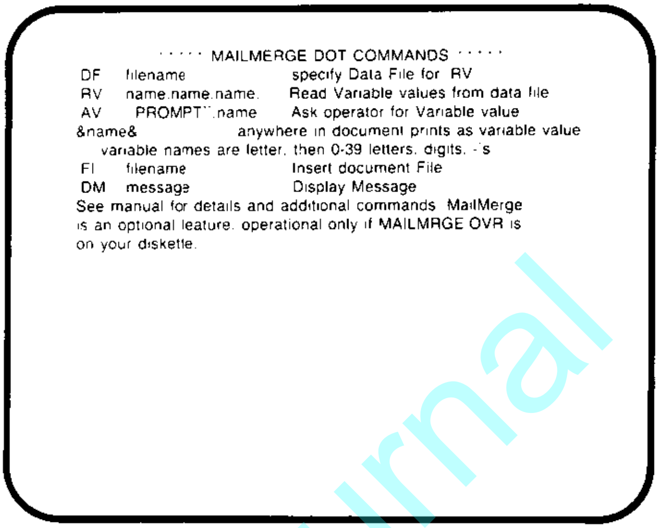
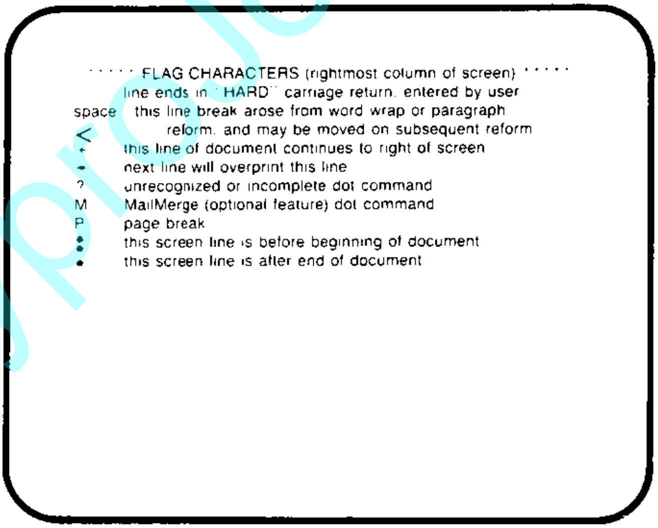


```
      ..... MAILMERGE DOT COMMANDS .....
 DF   filename              specify Data File for  RV
 RV   name.name.name.      Read Variable values from data file
 AV    PROMPT'',name        Ask operator for Variable value
&name&                anywhere in document prints as variable value
   variable names are letter, then 0-39 letters, digits, -'s
 FI   filename              Insert document File
 DM   message               Display Message
See manual for details and additional commands  MailMerge
is an optional feature, operational only if MAILMRGE OVR is
on your diskette.
```

^JD SCREEN 6 MAILMERGE DOT COMMANDS

^ J F



```
  ..... FLAG CHARACTERS (rightmost column of screen) .....
        line ends in "HARD" carriage return, entered by user
space    this line break arose from word wrap or paragraph
<              reform, and may be moved on subsequent reform
+       this line of document continues to right of screen
-       next line will overprint this line
?       unrecognized or incomplete dot command
M       MailMerge (optional feature) dot command
P       page break
:       this screen line is before beginning of document
.       this screen line is after end of document
```

^JF FLAG CHARACTERS

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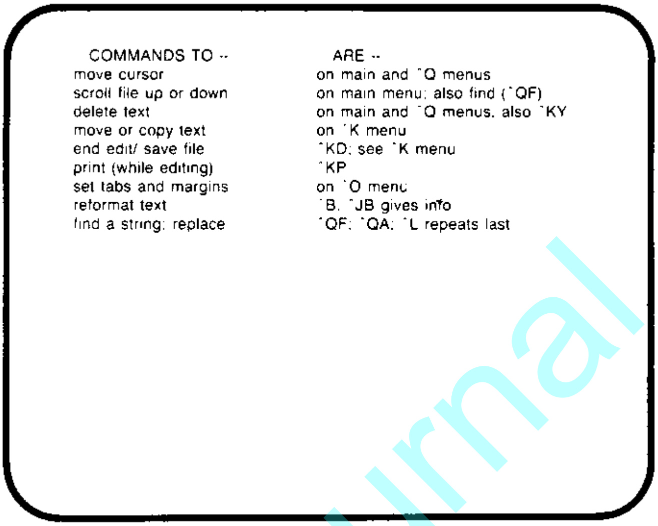
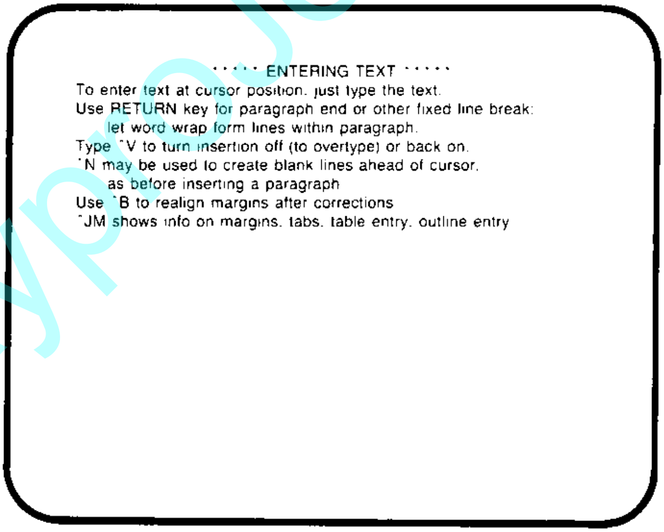
^ J I



```
  COMMANDS TO --          ARE --
move cursor             on main and ^Q menus
scroll file up or down  on main menu; also find (^QF)
delete text             on main and ^Q menus, also ^KY
move or copy text       on ^K menu
end edit/ save file     ^KD; see ^K menu
print (while editing)   ^KP
set tabs and margins    on ^O menu
reformat text           ^B, ^JB gives info
find a string; replace  ^QF; ^QA; ^L repeats last
```

^JI SCREEN 1 COMMAND LOCATIONS



```
              ····· ENTERING TEXT ·····
To enter text at cursor position, just type the text.
Use RETURN key for paragraph end or other fixed line break;
   let word wrap form lines within paragraph.
Type ^V to turn insertion off (to overtype) or back on.
^N may be used to create blank lines ahead of cursor,
   as before inserting a paragraph
Use ^B to realign margins after corrections
^JM shows info on margins, tabs, table entry, outline entry
```

^JI SCREEN 2 ENTERING TEXT

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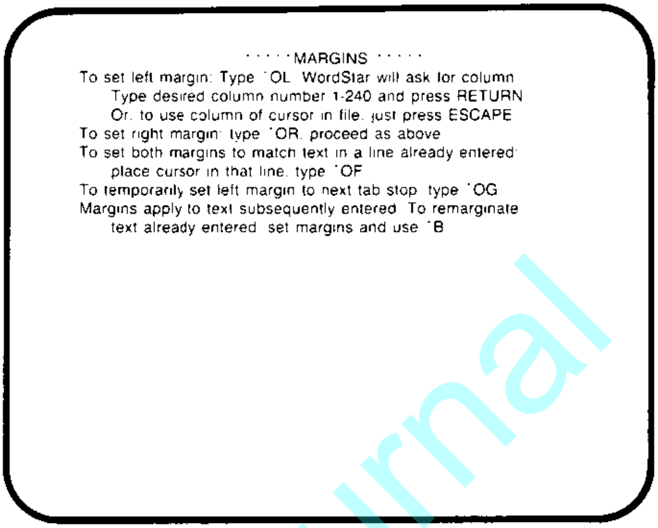
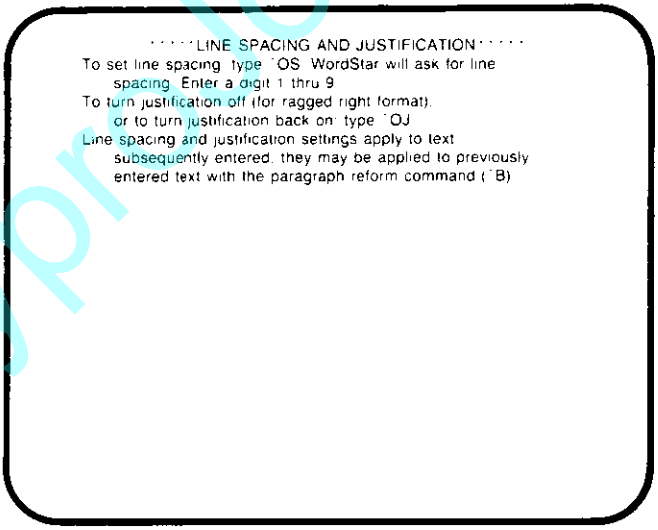
^ J M



```
· · · · · MARGINS · · · · ·
To set left margin: Type ^OL. WordStar will ask for column.
     Type desired column number 1-240 and press RETURN.
     Or, to use column of cursor in file, just press ESCAPE.
To set right margin: type ^OR, proceed as above.
To set both margins to match text in a line already entered:
     place cursor in that line, type ^OF.
To temporarily set left margin to next tab stop: type ^OG.
Margins apply to text subsequently entered. To remarginate
     text already entered, set margins and use ^B.
```

^JM SCREEN 1 MARGINS



```
· · · · · LINE SPACING AND JUSTIFICATION · · · · ·
To set line spacing: type ^OS. WordStar will ask for line
     spacing. Enter a digit 1 thru 9.
To turn justification off (for ragged right format),
     or to turn justification back on: type ^OJ.
Line spacing and justification settings apply to text
     subsequently entered; they may be applied to previously
     entered text with the paragraph reform command (^B).
```

^JM SCREEN 2 LINE SPACING AND JUSTIFICATION

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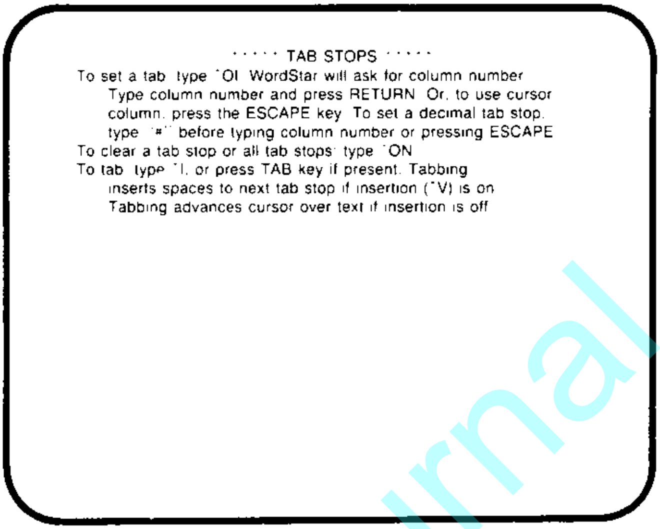
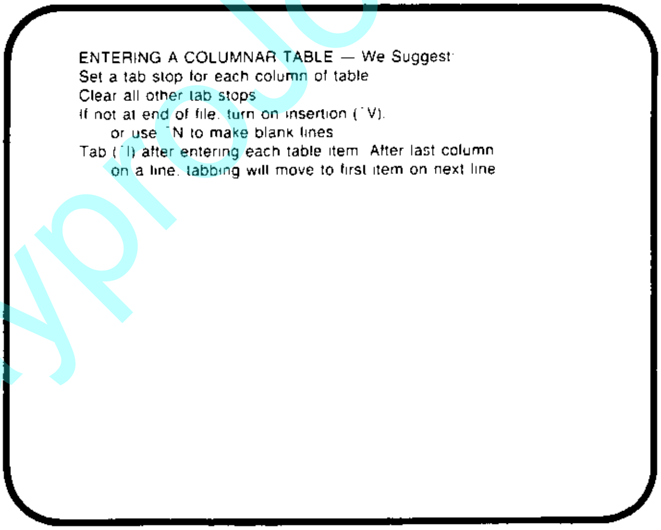


```
..... TAB STOPS .....
To set a tab  type ^OI  WordStar will ask for column number
     Type column number and press RETURN  Or, to use cursor
     column, press the ESCAPE key  To set a decimal tab stop,
     type "#" before typing column number or pressing ESCAPE
To clear a tab stop or all tab stops  type ^ON
To tab  type ^I, or press TAB key if present. Tabbing
     inserts spaces to next tab stop if insertion (^V) is on
     Tabbing advances cursor over text if insertion is off
```

^JM SCREEN 3 TAB STOPS



```
ENTERING A COLUMNAR TABLE — We Suggest:
Set a tab stop for each column of table
Clear all other tab stops
If not at end of file, turn on insertion (^V),
     or use ^N to make blank lines
Tab (^I) after entering each table item  After last column
     on a line, tabbing will move to first item on next line
```

^JM SCREEN 4 ENTERING A COLUMNAR TABLE

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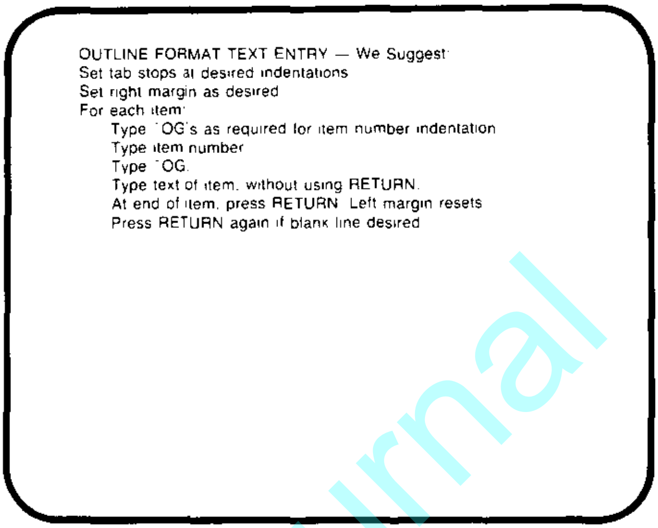
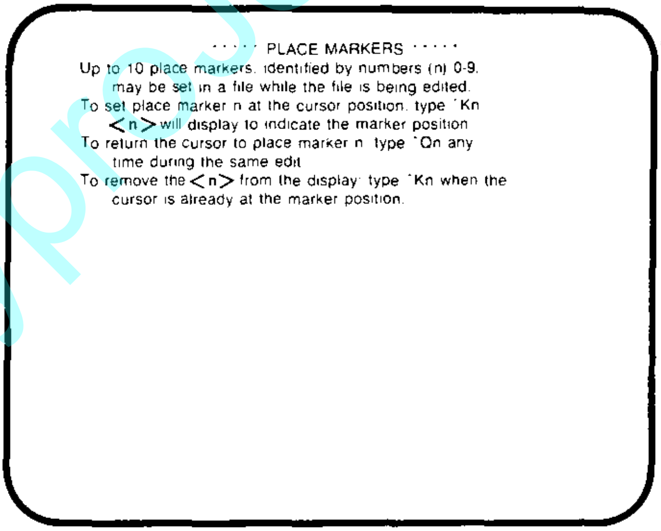


```
OUTLINE FORMAT TEXT ENTRY — We Suggest:
Set tab stops at desired indentations
Set right margin as desired
For each item:
    Type ^OG's as required for item number indentation
    Type item number
    Type ^OG.
    Type text of item, without using RETURN.
    At end of item, press RETURN. Left margin resets
    Press RETURN again if blank line desired
```

^JM SCREEN 5 OUTLINE FORMAT TEXT ENTRY

^ J P



```
                  · · · · · PLACE MARKERS · · · · ·
Up to 10 place markers, identified by numbers (n) 0-9,
    may be set in a file while the file is being edited.
To set place marker n at the cursor position, type ^Kn
    <n> will display to indicate the marker position
To return the cursor to place marker n, type ^Qn any
    time during the same edit
To remove the <n> from the display: type ^Kn when the
    cursor is already at the marker position.
```

^JP SCREEN 1 PLACE MARKERS

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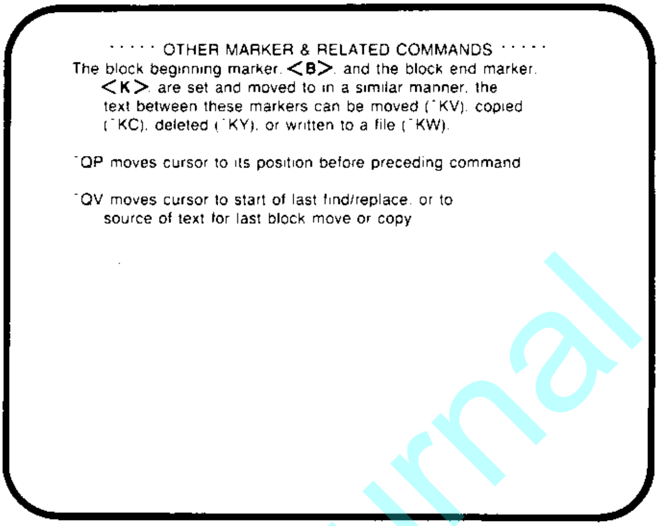
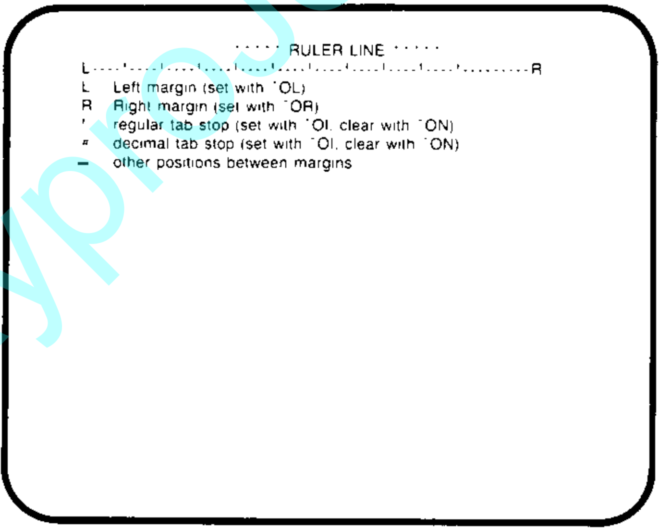


```
   ····· OTHER MARKER & RELATED COMMANDS ·····
The block beginning marker, <B>, and the block end marker,
   <K>, are set and moved to in a similar manner, the
   text between these markers can be moved (^KV), copied
   (^KC), deleted (^KY), or written to a file (^KW).

^QP moves cursor to its position before preceding command

^QV moves cursor to start of last find/replace, or to
   source of text for last block move or copy
```

^JP SCREEN 2 OTHER MARKERS AND RELATED COMMANDS



```
                  ····· RULER LINE ·····
L----!----!----!----!----!----!----!----!----!----!----------R
L   Left margin (set with ^OL)
R   Right margin (set with ^OR)
!   regular tab stop (set with ^OI, clear with ^ON)
#   decimal tab stop (set with ^OI, clear with ^ON)
-   other positions between margins
```

^JR RULER LINE

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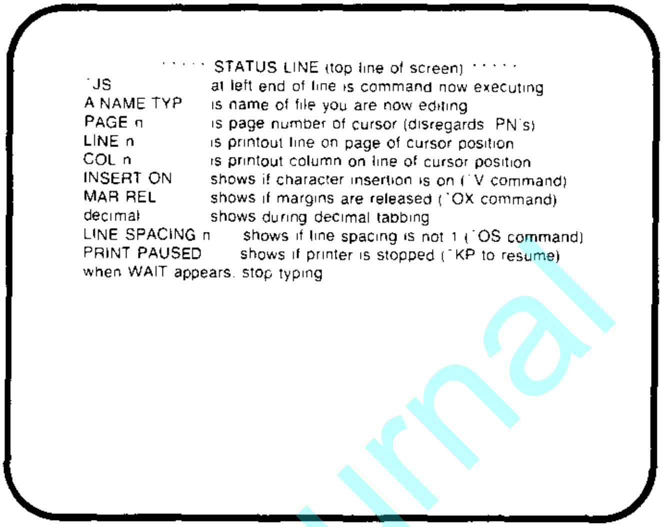
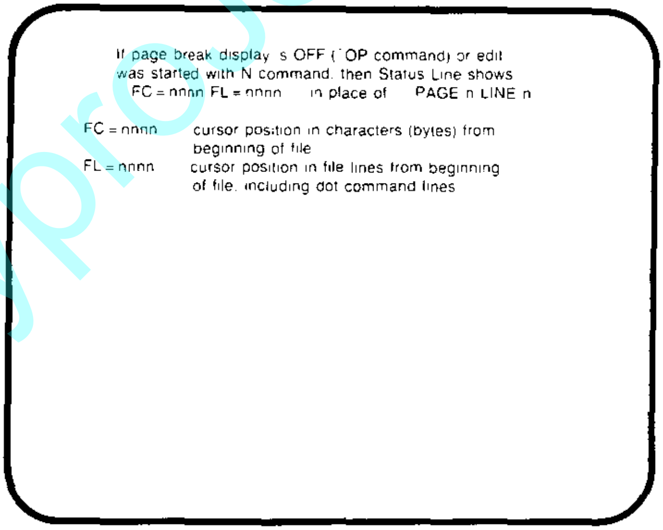
^ J S



```
             · · · · ·  STATUS LINE (top line of screen)  · · · · ·
^JS              at left end of line is command now executing
A:NAME.TYP       is name of file you are now editing
PAGE n           is page number of cursor (disregards .PN's)
LINE n           is printout line on page of cursor position
COL n            is printout column on line of cursor position
INSERT ON        shows if character insertion is on (^V command)
MAR REL          shows if margins are released (^OX command)
decimal          shows during decimal tabbing
LINE SPACING n       shows if line spacing is not 1 (^OS command)
PRINT PAUSED         shows if printer is stopped (^KP to resume)
when WAIT appears, stop typing
```

^JS SCREEN 1 STATUS LINE



```
     If page break display is OFF (^OP command) or edit
     was started with N command, then Status Line shows
       FC=nnnn FL=nnnn      in place of     PAGE n LINE n

FC=nnnn           cursor position in characters (bytes) from
                  beginning of file
FL=nnnn           cursor position in file lines from beginning
                  of file, including dot command lines
```

^JS SCREEN 2 STATUS LINE continued

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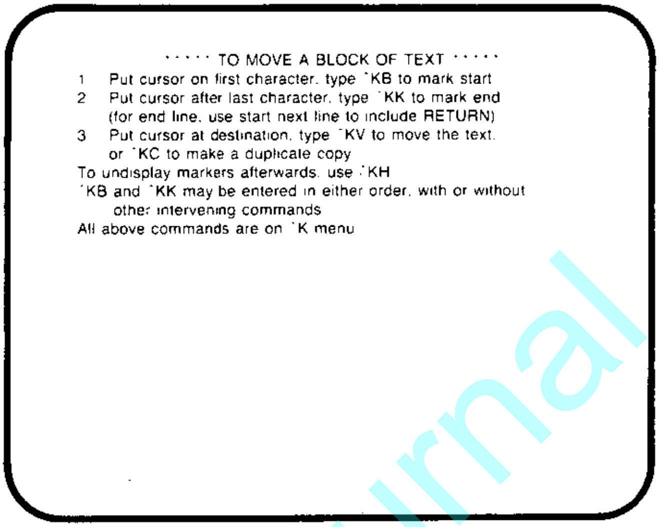

```
        ····· TO MOVE A BLOCK OF TEXT ·····
1   Put cursor on first character, type ^KB to mark start
2   Put cursor after last character, type ^KK to mark end
    (for end line, use start next line to include RETURN)
3   Put cursor at destination, type ^KV to move the text,
    or ^KC to make a duplicate copy
To undisplay markers afterwards, use ^KH
^KB and ^KK may be entered in either order, with or without
     other intervening commands
All above commands are on ^K menu
```

^JV   TO MOVE A BLOCK OF TEXT

Whenever you need it, help is available. If you're careful to read what appears on your screen and use all the help offered, you have a dependable guide through WordStar. When you no longer need the screen messages to tell you how to get help, you can reduce the help level.

Setting the Help Level

You can set the help level after you enter WordStar and before you start your work by pressing **H** at the Opening Menu. The level you choose here will remain in effect until you change it with **^JH**.

You can also set the help level while you are working on a file by pressing **^JH** at the Main Menu. With **^JH** you can set the help level as often as you like.

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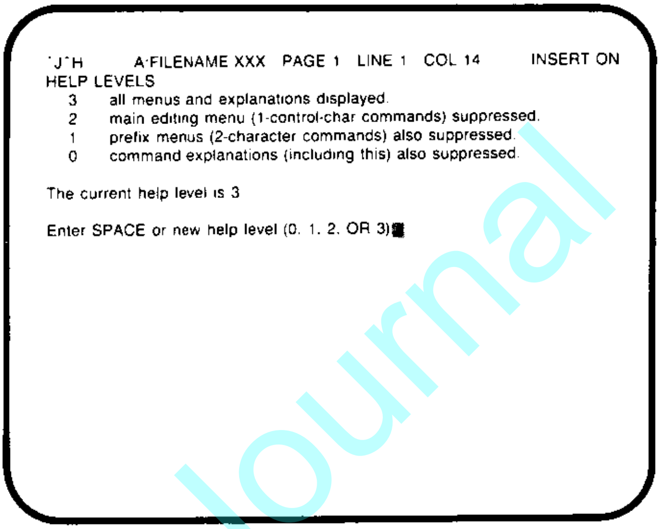
The help-level screen tells you the current level of onscreen assistance and displays a prompt that lets you change that level. Here it is:



```
^J^H       A:FILENAME XXX   PAGE 1   LINE 1   COL 14        INSERT ON
HELP LEVELS
   3     all menus and explanations displayed.
   2     main editing menu (1-control-char commands) suppressed.
   1     prefix menus (2-character commands) also suppressed.
   0     command explanations (including this) also suppressed.

The current help level is 3

Enter SPACE or new help level (0. 1. 2. OR 3)█
```

LEVEL 3

The present (default) help level is 3. Until you're thoroughly familiar with WordStar, you'll probably want to maintain this maximum help level.

As you become more proficient, your need for help decreases, and you can reduce the help level accordingly. Reducing it provides more screen space for text and, on some terminals, allows you to move faster.

To reset your help level, press **^JH**, followed by the number of the help level you choose. If you want to avoid the help-level screen that appears with the change, don't pause between the command and the number.

Help levels range from 3 (the maximum) to 0 (the minimum). At every level below 3, the Main Menu disappears, leaving only the status and the ruler lines.

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LEVEL 2

At level 2, you can no longer consult the Main Menu. Access to the other menus is still possible, as long as you remember the keys for access:

^Q	for the **Q**uick Menu
^K	for the Bloc**K** Menu
^O	for the **O**nscreen Menu
^P	for the **P**rint Menu
^J	for the Help Menu

LEVEL 1

The auxiliary menus are not available at level 1. But the commands that they initiate—those preceded by **^Q**, **^K**, **^O**, **^P**, and **^J**—still function. Also unavailable at this level and below are the explanations of multiple choices that you're accustomed to seeing before prompts. However, all the help screens reached from the Help menu are displayed at level 1.

LEVEL 0

At level 0, all command explanations, except an abbreviated help-level message, are unavailable, but the help screens reached from the Help Menu are still available.

Pressing **^JH3** will offer you all the help that you need any time that you need it.

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3. ENTERING AND EDITING TEXT

CONTENTS

SUMMARY TABLES

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3. Entering and Editing Text

Entering text in WordStar is much easier than using a typewriter. No more retyping a whole page to correct a single error. No need to watch the margins or respond to a ringing bell.

PROGRAM FEATURES

When you enter text, certain program features simplify your work. The terms defined and explained on the next few pages will help you understand these features.

Use ^**KS** frequently to save your work. ^**KS** allows you to save and then re**S**ume work without leaving your file or the WordStar program. Press ^**QP** to return **Q**uickly to your work **P**lace prior to saving.

→ *9-3*

Word Wrap and Justification

Word wrap keeps track of the number of characters and spaces on each line. If you type beyond the right margin, words automatically move to the next line. The cursor appears at the end of the "wrapped" word so you can continue typing. You can enter an entire paragraph at high speed before pressing the RETURN key. Word wrap is a toggle switch (^OW).

→ *6-3*

As you type a paragraph, word wrap inserts spaces between words to align them at the right margin. This process, called justification, is activated by a toggle switch (^OJ). → *6-4*

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WHAT IS INSERTION?

Insertion is another feature that can be turned on or off with a toggle switch (^V). When on, insertion moves existing text or spaces to the right to make room for what you type at the cursor position. With insertion off, each character you type replaces whatever was in the same cursor position, whether a letter, number, blank, or space.

Hard and Soft Spaces

The WordStar program provides three types of spaces: hard, soft, and non-break. Non-break spaces are described in Chapter 7.

WHAT IS A HARD SPACE?

A *hard* space is created any time you press the space bar while entering text. It becomes a permanent part of the file but can be removed by deletion, just like any other character. If you enter two spaces after a period, for example, two spaces will always follow that period. If the period falls at the end of a line, you won't see the spaces. If, however, in re-forming the paragraph, the period moves to the middle of a line, the spaces will be inserted. ⟶ *3-19*

To form indented paragraphs, type the desired number of spaces at the beginning of each paragraph, or use the tabulator key (TAB or ^I). You insert these spaces, too, as hard spaces.

⟶ *6-11*

WHAT IS A SOFT SPACE?

Soft spaces look like hard spaces on the screen, but the WordStar program distinguishes between them. Soft spaces are not a permanent part of your file. They're inserted and removed selectively as the program forms and re-forms your text within the margins you set.

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Paragraphs and Carriage Returns

Paragraph re-forming, controlled by a Wordstar command (^B), reshapes your paragraphs within specified margins. With this command you can automatically re-form every paragraph in an entire file. ⟶ *3-19*

The WordStar program distinguishes between carriage returns that you purposely enter (hard) and automatic carriage returns at the end of a typed line (soft).

WHAT IS A SOFT CARRIAGE RETURN?

Soft carriage returns automatically appear at the end of each line as you enter text with word wrap on. They are indicated on the screen by a blank in the flag column. You can rearrange or delete these soft carriage returns when you re-form the text.

WHAT IS A HARD CARRIAGE RETURN?

You enter hard carriage returns purposely to end a paragraph or to add blank lines. These returns are not moved or removed unless you delete them, and the process of re-forming a paragraph always stops at the first hard carriage return. Hard carriage returns are indicated on the screen by the symbol   in the flag column.

MOVING AROUND IN YOUR TEXT

Once you've entered text, you can easily move the cursor around on your electronic page—by character, word, line, or page. You can even move to the beginning or end of a file with a few keystrokes.

Moving with cursor control commands does not affect your text. The cursor simply moves through words without changing, adding or deleting any characters. You'll find a table of cursor commands at the end of this chapter.

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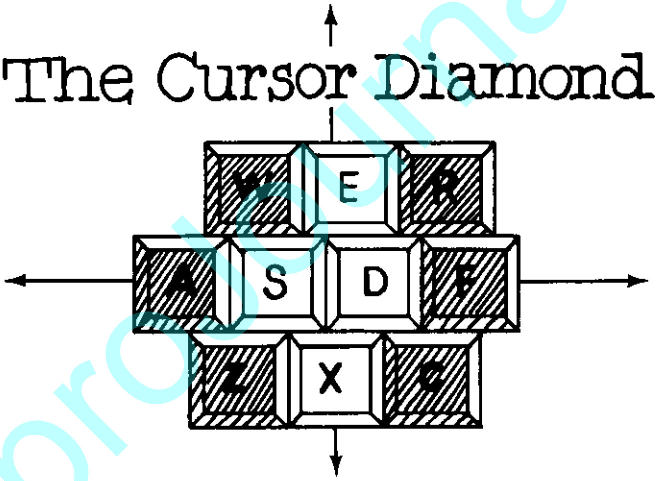
RIGHT AND LEFT Moving to the right with basic cursor control commands means moving to the *next* character or space—even when it rests on the next line. Likewise, moving left means moving to the *preceding* character or space. Cursor control commands also offer you the choice of moving by whole words to the left or right or moving to the left or right end of the line in which the cursor is located.

In the following illustration, "The Cursor Diamond," notice the relationship between control characters on the keyboard and the direction in which the cursor moves.



As you move around the screen with the cursor control commands, you will sometimes move to a portion of text not currently displayed on the screen. Imagine the screen as a "window" onto your text. Scrolling moves that window up, down, left, or right, allowing you to view various portions of your electronic page. Here's an illustration.

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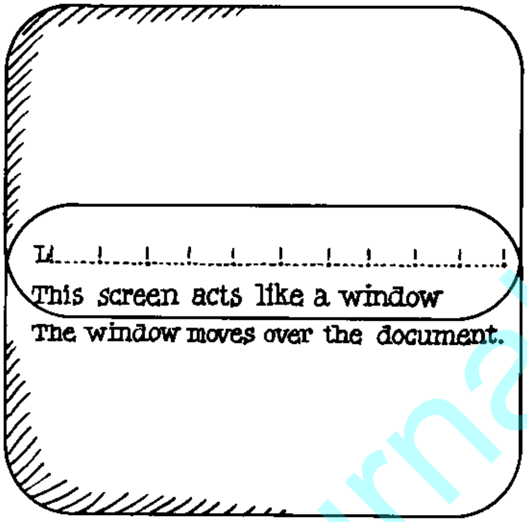
L!....!....!....!....!....!....!....!....!....!....!
This screen acts like a window
The window moves over the document.

Moving Right and Left

^ D

Press **^D** to move to the right by one character. If you want to move to the right by several characters, press **^D** repeatedly.

^ F

Press **^F** to move the cursor to the first character in the next word.

^ Q D

Press **^QD** to move to the right end of the current line. The cursor will stop at the right of the last character entered on that line or column 80.

If the cursor jumps far to the right, scrolling to a blank screen, you must have moved text or inserted spaces far to the right at an earlier time. Check your status line for the current column, and move the cursor back to the appropriate location.

^ S

Press **^S** to move to the left by one character.

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^ H

Press **^H** (backspace), too, to move to the left, character by character.

^ A

Press **^A** to proceed back through your text, word by word.

^ Q S

Press **^QS** to move quickly to the left edge of your screen. The cursor moves to column 1, regardless of the left margin setting.

Moving Up and Down

^ E

Press **^E** to move the cursor up one line at a time. As you move the cursor up, it stays in the same column until it reaches a blank area; then it moves toward the left edge of the screen.

^ Q E

Press **^QE** to move the cursor to the top screen line in the same column.

^ W

Press **^W** to scroll the screen window up one line at a time. You'll see the added text at the top of your screen.

^ R

Press **^R** to move the cursor upward about three-quarters of a screen. You'll still see enough of the previous screen to keep your place.

^ Q R

Press **^QR** to move the cursor back to the beginning of your file in one step.

CAUTION

Use caution when moving the cursor backward through long files; doing so may involve heavy memory requirements. ⟶ *B-6*

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Press **^X** to move the cursor down one line at a time. As you move the cursor down, it stays in the same column until it reaches a blank line; then it moves to the left edge of the screen.

Press **^QX** to move the cursor to the bottom screen line in the same column.

Press **^Z** to scroll the screen window down one line at a time. You'll see the added text at the bottom of your screen.

Press **^C** to move the cursor down about three-quarters of a screen. As with **^R**, you'll still see enough of the previous screen to keep your place.

Press **^QC** to reach the end of your file in one step. The cursor will come to rest just past the last typed character.

Repeating Commands

^QQ^__ can be combined with most commands to repeat the function until you press another key. For example, if you press **^QQ^C**, the cursor will move gradually toward the end of your file, about three-quarters of a screen at a time. You can combine **^QQ^**__ with all cursor movement and deletion commands.

You can control the speed of all **^QQ^**__ commands by following the command with a number. The range is 1-9 with 1 the fastest, 9 the slowest. Unless you specify otherwise, WordStar sets the speed at 3.

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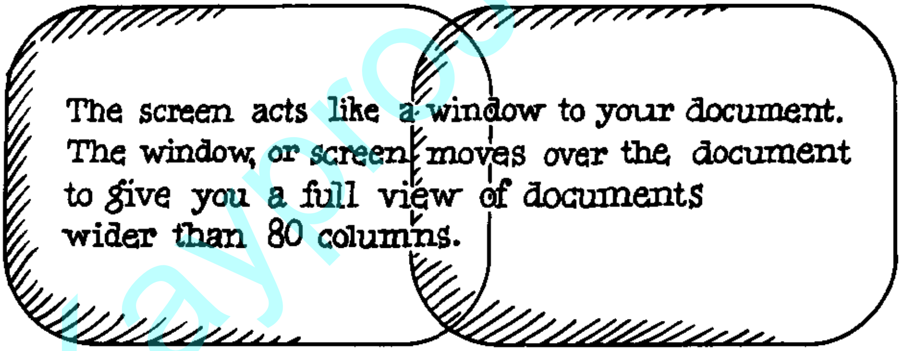
USE SPACE BAR TO STOP REPETITION

Typing any character other than a number halts the the repetition. Using the SPACE bar is best because it's a safe target. If you hit an alphabetic character while your finger is still on the control key you may generate a new command. The space bar halts the process without generating a command, even when the control key is pressed.

Horizontal Scrolling

If you create files wider than the standard 80 columns on the screen, such as those for certain mathematical charts, you'll scroll the screen horizontally across your document. As you move the cursor to the right beyond column 80, the contents of the screen appear to shift to the left, 20 columns at a time.



The screen acts like a window to your document. The window, or screen, moves over the document to give you a full view of documents wider than 80 columns.

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WordStar scrolls automatically when necessary. You can also use **^Q** commands to begin horizontal scrolling on a line longer than 80 characters.

⟶ *3-7*

Although margin settings can't be wider than 240 characters, horizontal scrolling allows you to view up to 32,000 characters. The practical limits, of course, are often somewhat less.

When you scroll horizontally, watch the status line for the current cursor column. Also check the ruler line, which displays a plus sign (+) when your margin is set beyond the right side of the screen, and the flag column which also displays a plus sign when the text extends beyond the right side of the screen.

Finding Your Place

If you find yourself facing a blank screen and you don't know where you are or where your text has gone, look for a signpost to guide you. The best guide may be the status line or the flag at the end of a line, which tell you where you are in relation to your text. Use **^QQ^R** or **^QQ^C** to run backward or forward through the file until you find your place.

SLOWING DOWN

You may be surprised by how long the computer sometimes takes to execute a cursor movement command. The further you are from where you're going, the longer it takes. For example, when you're near the beginning of your text, the execution of **^QC** takes longer than when you're near the end.

Backward movement takes longer than forward movement. You'll be wise to avoid long, backward moves whenever possible.

Time differences are almost imperceptible in a short file, but in a long file, you may wonder if your command has registered. Look for the command in the upper left of the status line, sometimes with a WAIT message, before entering another command.

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CAUTION

Interpret a computer slowdown as a warning. Your disk may be getting too full. You can find out with a system check. Refer to your system documentation for information.

You'll find suggestions for avoiding and solving the slowdown problem in Chapter 4.

INSERTING TEXT

As you edit, you can easily add any amount of text by inserting it in the file.

Insertion On and Off

^ V

Use ^**V** to turn the insertion toggle switch on or off. With insertion on, WordStar creates space for new text as necessary. With insertion off, WordStar simply types over existing text.

The insertion switch will be on each time you begin a new editing session. Type ^**V** once to turn the switch off; type ^**V** again to turn the switch back on. When insertion is on, WordStar displays **INSERT ON** in the status line.

EFFECT OF ^V ON TEXT ENTRY

When you enter text, turning insertion on or off is a matter of personal preference. Either choice offers its own advantages for correcting certain typing errors. For example, you may want to change **the white bull** to **the brown bull.** With insertion off, you simply type the word **brown** over **white.** With insertion on, WordStar inserts the word, which gives you **the**

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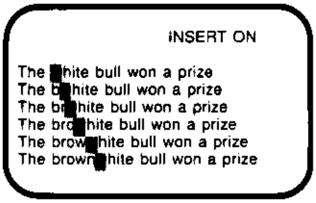
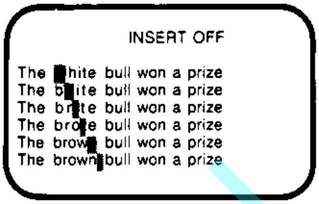
brownwhite bull. The following examples show what happens, character by character, as you type:



```
INSERT ON

The █hite bull won a prize
The b█hite bull won a prize
The br█hite bull won a prize
The bro█hite bull won a prize
The brow█hite bull won a prize
The brown█hite bull won a prize
```

WordStar pushes text right of the cursor to make room for new text. You must delete **white** to correct the text.



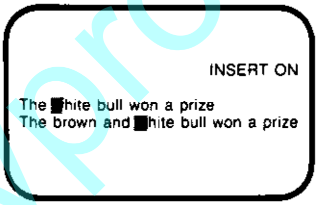
```
INSERT OFF

The █hite bull won a prize
The b█ite bull won a prize
The br█te bull won a prize
The bro█e bull won a prize
The brow█ bull won a prize
The brown█bull won a prize
```

Insert OFF uses a type-over mode. **Brown** and **white** are the same length so you can just type the correction.

EFFECT OF ^V WHEN ENTERING NEW TEXT

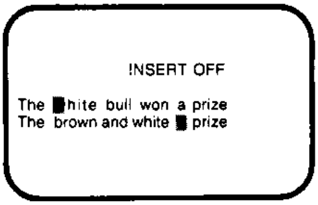
For contrast, suppose you want **the brown and white bull.** With insertion off, you type over any text that follows **the.** You may have to retype lost text. With insertion on, WordStar creates space for the additional words:



```
INSERT ON

The █hite bull won a prize
The brown and █hite bull won a prize
```

WordStar creates space . . .and saves this text.



```
INSERT OFF

The █hite bull won a prize
The brown and white █ prize
```

Some text is lost.

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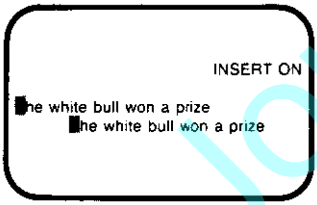
Using the Space Bar

HOW DO SPACE CHARACTERS WORK?

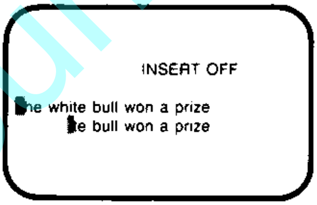
When you use the space bar on your keyboard, you're actually entering space characters in your text. Spaces are treated like any other character, whether insertion is on or off. Each time you press the space bar, the cursor moves one position to the right. With insertion on, spacing inserts a new space character each time you press the bar, which pushes text to the right of the cursor further right. With insertion off, spacing replaces existing text with a space character.

In the following example, assume that the cursor is positioned on the letter **T** at the beginning of the sentence. Then the space bar is pressed six times:



```
                    INSERT ON
▮he white bull won a prize
      ▮he white bull won a prize
```

Spaces inserted.



```
                 INSERT OFF
▮he white bull won a prize
      ▮e bull won a prize
```

Spaces typed over this text.

Tab Stops

Insertion affects what happens when you use the tabulator key or ^**I** to skip the cursor to the next tab stop. ⟶ *6-11*

TABBING MEANS SPACING

With insertion on, tabbing moves the cursor to the next tab stop, inserting a space at every character position the cursor passes. Text on the line is pushed one space to the right for each space inserted.

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Normally, the cursor does not move outside the existing text. For example, you cannot move the cursor down a line (^X) if the new line is beyond the last character you typed in the document. However, you can use the tab key, even at the end of the document.

If you tab while the cursor is in the last line of text and the next tab stop is on a new line, the cursor will skip to the new line. Because the cursor cannot move outside the document, WordStar creates "text" by extending your document with spaces and carriage returns as long as you continue tabbing. These spaces become part of the document, just as they do when you enter them by pressing the space bar. Such invisible text can be confusing when you try to edit the document.

DELETING TEXT

You can remove pieces of text of various sizes ranging from one character to an entire file.

Be sure to position the cursor carefully before inserting or deleting text. All text corrections, insertions, and deletions depend on the current position of the cursor. For example, **^QY** deletes characters from the cursor (including any character under the cursor) to the right end of the line.

Deleting Characters

^ G

Use **^G** to delete the character at the cursor's position. Characters to the right of the cursor shift one position to the left each time **^G** is pressed. If you press the keys repeatedly, **^G** continues to delete characters until the end of the line is reached. At the end of a line, **^G** deletes the carriage return, if any, and then pulls up text from the following line and continues deleting characters.

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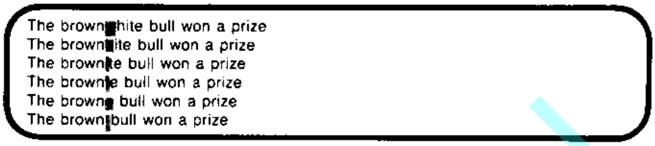
As an example, take another look at the **brownwhite bull**. When you finish typing **brown**, the cursor stops over the second letter **w**. To change the animal into a **brown bull**, type **^G** five times:



```
The brown█hite bull won a prize
The brown█ite bull won a prize
The brown█te bull won a prize
The brown█e bull won a prize
The brown█ bull won a prize
The brown█bull won a prize
```

If you accidentally hit **^G** a sixth time, the animal becomes a **brownbull**. If insertion is on, press the space bar to convert him back to a **brown bull**. If insertion is off, pressing the space bar will turn him into a **brown ull**, with the cursor on the letter **u**. To rescue the poor animal, either set insertion on (^V) and type the letter **b**, or leave insertion off and retype the rest of the sentence.

DELETE

On some terminals a deletion key (DEL) removes the character to the left of the cursor, shifting the cursor left by one position. Any characters to the right of the cursor also shift left.

If you press the DELete key repeatedly, you'll continue deleting characters and shifting the cursor to the left. When the beginning of the line is reached, the DELete key jumps to the right end of the line above and continues deleting characters, including the carriage return, if any. When it jumps up a line, characters to the right of the cursor jump up with it.

Different manufacturers label this key DELETE, DEL, RUBOUT, or RUB.

CAUTION

At the Opening Menu, you can use DELete, **^S**, **^H**, or BACKSPACE to delete the character to the left. When you're editing a file at the Main Menu, however, **^S**, **^H**, and BACKSPACE simply move the cursor to the left without deleting characters.

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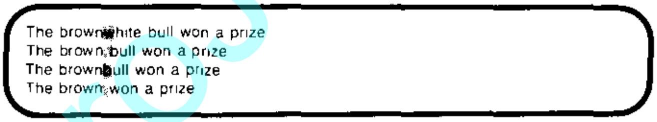
Deleting Words

^ T

Use ^**T** to delete the word that contains the cursor and any spaces that follow the word, thus closing up the line. If the cursor is within a word, use ^**T** to delete the character at the cursor position and the portion of the word to the right of the cursor. When the cursor is between words, use ^**T** to delete spaces up to the next word.

If you want to delete a carriage return and any spaces that follow the last word in a line, position the cursor just past the word, and press ^**T**. Similarly, if you want to delete an overprint control (^P RETURN) set for a line, position the cursor just past the last word in the line, and press ^**T**.

Again, assume that you have just typed **brown**, resulting in the word **brownwhite**. With the cursor positioned on the second **w**, typing ^**T** three times gives you the following result:



```
The brownwhite bull won a prize
The brown bull won a prize
The brownbull won a prize
The brown won a prize
```

HOW ^T LOCATES A WORD

What is a "word"? To the program, a word is a string of characters that starts after a space or punctuation mark and ends with a space or punctuation mark, or both. The following punctuation marks are recognized between words, even if there's no space:

. , : ; ! ?

In the following example, the initial letter of each new word is boldfaced:

When **i**sa **w**ord **n**ot **a** **w**ord? **N**ever, **y**ou **s**ay.

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Note that spaces and punctuation are included in the identification of each word, as is the typing error which omitted a space. To move one word at a time with ^**A** or ^**F**, means to move from one boldfaced letter to the next. To delete a word with ^**T** means to delete all characters, starting with one in boldface and stopping at the next.

Deleting Lines of Text and Files

^ Y

Press ^**Y** to delete the entire line that contains the cursor, including the carriage return, if any. If the line is too long to fit on the screen, ^**Y** deletes the portion of the line that is not visible as well as the portion on the screen. Lines following the deleted line move up on the screen. The ^**Y** command also deletes overprint lines.

^ Q Y

Press ^**QY** to delete all characters from the cursor to the right end of the line. ^**QY** does not delete a carriage return at the end of a line, nor does it delete an overprint line.

^ Q DELETE

Press ^**Q** and the DELete key to delete all characters left of the cursor back to the beginning of the line. The remainder of the line then shifts to the left margin.

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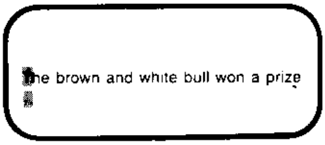
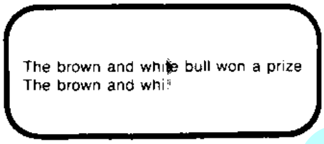
The following chart compares the effects of **^Y**, **^QY**, and **^Q DEL**:

^Y



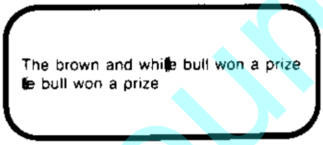
```
█he brown and white bull won a prize
█
```

^QY



```
The brown and whi█e bull won a prize
The brown and whi█
```

^Q DEL



```
The brown and whi█e bull won a prize
█e bull won a prize
```

^ Q Q
^ Y

Enter **^QQ^Y** to tell WordStar to delete the line containing the cursor, update the screen, then repeat the command until you stop it.

Use **^KY** to delete a marked portion (block) of text. ⟶ *4-9*

Y

When you are at the WordStar Opening Menu, type **Y** to delete a whole file. (WordStar will also accept ^Y at this point.) When you're editing a file, use **^KJ**. ⟶ *9-10*

RE-FORMING PARAGRAPHS

^ B

Press **^B** to justify text within a paragraph to current right and left margins. While the paragraph is being re-formed, you'll have the chance to hyphenate at the ends of long lines. The program offers "hyphen help" by placing the cursor within a word at the end of each line that is too long. ⟶ *6-4*

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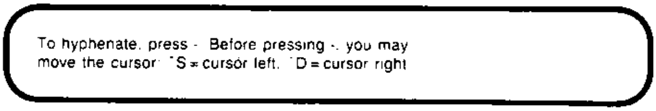
You'll see the following message at the top of your screen:



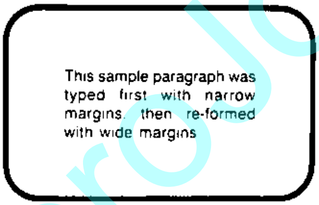
```
To hyphenate, press -  Before pressing -, you may
move the cursor: ^S = cursor left,  ^D = cursor right
```

If you hyphenate the word, a soft hyphen will be added. ⟶ *6-4*

If you choose not to hyphenate the word, press **^B** again. The word will move to the next line, and the previous line will be realigned.

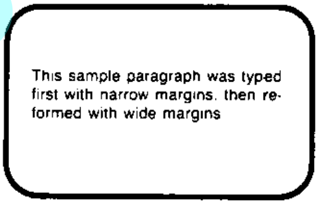
You can move the cursor within a word to be hyphenated before pressing the hyphen key.

Here is an example of a re-formed paragraph:



```
This sample paragraph was
typed  first  with  narrow
margins,  then  re-formed
with wide margins
```

Before



```
This sample paragraph was typed
first with narrow margins, then re-
formed with wide margins
```

After

After re-forming a paragraph, you'll find the cursor at the end of the paragraph. The end is defined by a hard carriage return, the end of the file, or a line-feed character (^PJ). ⟶ *7-39*

USES FOR ^B

Your use of **^B** also involves current margin settings, line spacing (^OS), and WordStar toggle switches that control justification (^OJ) and hyphenation (^OH), all discussed in Chapter 6.

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Thus, you use **^B** to perform the following:

- Correcting and changing margins
- Changing line spacing
- Eliminating or adding right justification within a paragraph
- Assisting in hyphenation

CORRECTING MARGINS CHANGED BY EDITING

A common use for **^B** is to re-form a paragraph that has become messy because of additions and deletions made in the course of editing. For example, inserting text near the beginning of a line pushes the remainder of the line to the right, often right off the screen. After editing the whole paragraph, move the cursor back to the beginning (or to the first messy line), and press **^B** to re-form the paragraph.

EFFECTS OF CHANGING MARGINS

Always remember that you'll use **current** margin settings when re-forming a paragraph. If you enter text that requires frequent margin changes and then continue editing that text, check margin settings on the ruler line before using **^B**. Use **^OF** to change margin settings quickly. → *6-17*

CAUTION

If you want text (or dot commands) to appear in the margins, exercise care when using **^B**. Avoid re-forming marginal text into the body of your document. Be especially careful if you speed up re-forming with **^QQ^B**. Also consider the capabilities of your printer; don't generate text lines wider than it can print.

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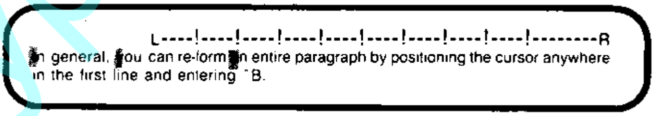
^B, in conjunction with related commands and toggle switches, allows you to change margins, spacing, and justification at any time, even in the middle of a paragraph. The ability to make these changes simplifies layout problems such as making space to insert a picture or diagram.

You can alter the margins to insert a diagram as you enter text, or you can wait to edit the text until you know the size of the artwork to be inserted.

CURSOR POSITIONING

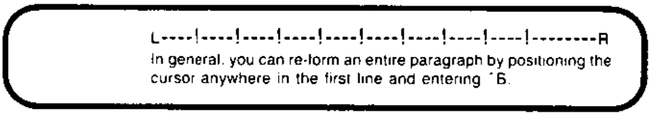
In general, you can re-form an entire paragraph by positioning the cursor anywhere in the first line and entering **^B**. When the left margin is not in column 1, however, re-forming won't affect text to the left of the cursor on the first line of a paragraph; nor will it affect text left of the first line of a paragraph; nor will it affect text left of the left margin. Thus, paragraph numbers left of the margin are not always moved by **^B**. If you want to pull the numbers into the paragraph, you must position the cursor at the paragraph number.

The following examples show the effect of three different cursor positions with **^B**.



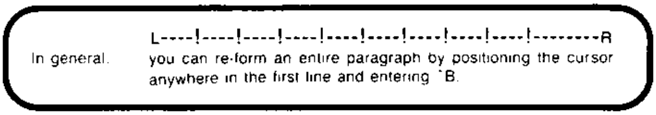
```
                     L----!----!----!----!----!----!----!----!----!----!--------R
In general, you can re-form an entire paragraph by positioning the cursor anywhere
in the first line and entering ^B.
```

Before ^B



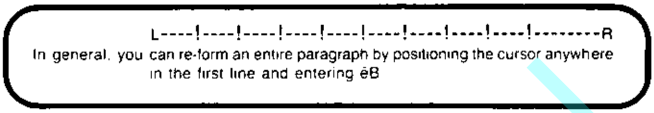
```
                     L----!----!----!----!----!----!----!----!----!----!--------R
                     In general, you can re-form an entire paragraph by positioning the
                     cursor anywhere in the first line and entering ^B.
```

After ^B (1)



```
              L----!----!----!----!----!----!----!----!----!--------R
In general,   you can re-form an entire paragraph by positioning the cursor
              anywhere in the first line and entering ^B.
```

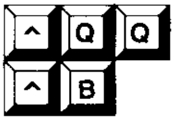
After ^B (2)



```
              L----!----!----!----!----!----!----!----!----!--------R
In general, you can re-form an entire paragraph by positioning the cursor anywhere
              in the first line and entering ēB
```

After ^B (3)

When you move the left margin to the left and re-form indented text, WordStar will remove the soft spaces used to form the indentation: Otherwise, the re-formed paragraph would contain large gaps where the spaces fell between words.



Pressing **^QQ^B** tells WordStar to re-form the current paragraph and to continue forward through the file, re-forming each paragraph to the current margin settings. With hyphen help off (^OH), the process will continue until you press a key or until the end of the file is reached ⊂→ *6-4*

You can control the speed of the **^QQ^B** operation by following the command with a number, 1-9, with 1 the fastest and 9 the slowest.

ENTERING HARD CARRIAGE RETURNS

There are two ways to insert a hard carriage return into your text: press RETURN or **^N**.

Use RETURN whenever you want a fixed line break—for a new line at the end of a paragraph, a space between lines in a table, or the spaces after headings and titles. When you need a new line while entering text within a paragraph, don't use RETURN; let word wrap do the work.

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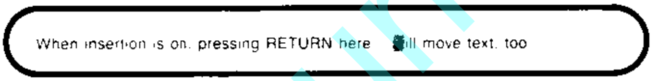
When you press RETURN, the cursor moves to the beginning of the next line. The result of pressing RETURN, however, also depends on whether the insertion toggle switch (^V) is on or off.

RETURN WITH INSERTION ON

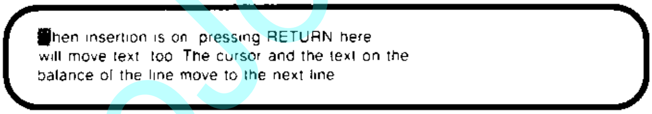
If you press RETURN with insertion on, you insert blank space—a whole line if the cursor is at the beginning of the line, a partial one if the cursor is mid-line. The hard carriage return appears on the line wherever the cursor is positioned before you press RETURN, and any text following the cursor moves along with it.

Here is an illustration:



When insertion is on, pressing RETURN here █ill move text, too

Before



█hen insertion is on, pressing RETURN here
will move text, too. The cursor and the text on the
balance of the line move to the next line

After

RETURN WITH INSERTION OFF

When you press RETURN with insertion off, you move the cursor to the beginning of the next line, without inserting a blank space, leaving text as-is and moving only the cursor to the next line.

If you set the line spacing greater than 1, pressing RETURN will insert multiple hard carriage returns. Line spacing is set with **^OS**. ⟷ *6-6*

^ N

When you use **^N**, you always insert one carriage return, leaving the cursor on the same line as the inserted carriage return. Blank space is inserted the same way it is with RETURN, a whole line if the cursor is at the beginning of a line, a partial line if the cursor is mid-line.

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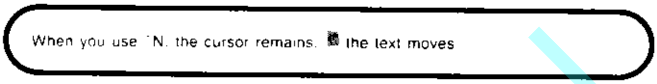
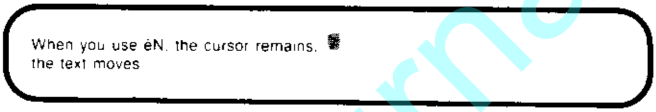
There is one major difference between the effect of RETURN and of **^N**. **^N** leaves the cursor where it is and moves text down, but RETURN moves the cursor as well as the text. **^N** works the same way with insertion on or off.

Here is an illustration:



When you use ^N, the cursor remains, ▓ the text moves

Before



When you use ^N, the cursor remains, ▓
the text moves

After

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SUMMARY TABLE: CURSOR MOVEMENT

COMMAND	FUNCTION
^D	Moves cursor right one character
^F	Moves cursor right one word
^QD	Moves cursor to right end of current line
^S	Moves cursor left one character
^H	Moves cursor left one character
^A	Moves cursor left one word
^QS	Moves cursor to beginning of current line
^E	Moves cursor up one line
^QE	Moves cursor up to top of screen
^W	Leaves cursor in same position; new line appears at top of screen, and window on text moves down one line
^R	Leaves cursor in same position; previous screen reappears
^QR	Moves cursor back to beginning of file
^X	Moves cursor down one line
^QX	Moves cursor down to bottom of screen
^Z	Leaves cursor in same position; new line appears at bottom of screen, and window on text moves up one line
^C	Leaves cursor in same position; next screen appears
^QC	Moves cursor forward to end of file
^QQ^__	Repeats any cursor movement or scrolling command continuously until stopped

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SUMMARY TABLE: ENTERING AND EDITING TEXT

COMMAND	FUNCTION
^V	Turns insertion on/off
^G	Deletes character at cursor position
DELETE	Deletes character to left of cursor position
^T	Deletes word from cursor position to the right
^Y	Deletes entire line in which cursor is located
^QY	Deletes all characters from cursor position to the right end of the same line
^QDEL	Deletes all characters from cursor position to the beginning of the same line
^B	Re-forms paragraphs between current margins
RETURN	Inserts a hard carriage return, leaving cursor at beginning of previous line (insertion: on)
^N	Inserts a hard carriage return, leaving cursor at beginning of newly inserted blank line

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4. MARKING AND MOVING TEXT

CONTENTS

SUMMARY TABLE

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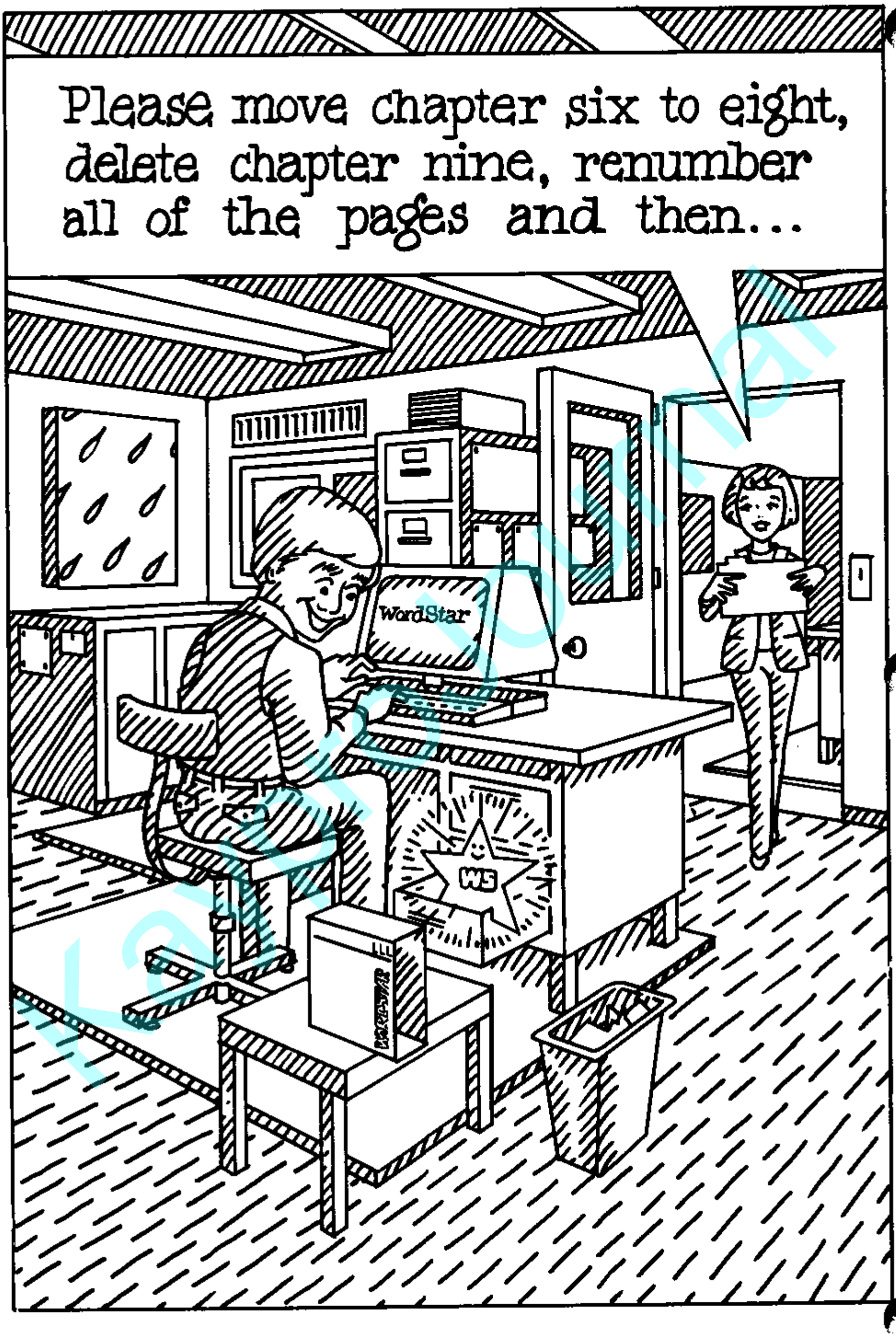
Please move chapter six to eight, delete chapter nine, renumber all of the pages and then...
WordStar
WS
WORDSTAR

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4. Marking and Moving Text

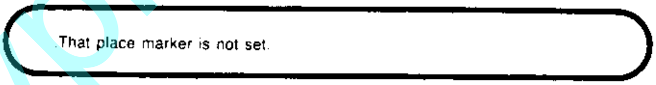
While editing a document, you can insert many characters that are not part of the text and won't appear in your printed results. Among these characters are place markers, which speed up cursor movement within your text, and block markers, which help you move marked text to a new place in your file or to another file.

PLACE MARKERS

WHAT ARE PLACE MARKERS?

Place markers identify text at particular locations in your document. You can return to a marked place with a simple command. Although place markers stay in your file after a save-and-resume command (^KS), they disappear after any other save command.

There are up to ten place markers available, numbered **0-9**, and you can use each number once in a file. You must set each marker in your file before you can use it. If you try to return to a marker that's not set, you'll see the following message:



```
That place marker is not set.
```

Press ESCape to return to editing.

Setting the Marks

^ K 0

through

^ K 9

To set place marker number 1 at your current cursor position, enter the following command:

PRESS **^K1**

SEE **1**

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If your terminal can display highlighted characters, the marker will be highlighted. It is not actually part of your file, and you cannot move the cursor into the columns where it appears. Text moves to the right of the marker.

To move the same marker to another portion of text, re-issue the command and the same number at the new location. The original location will cease to be marked.

HOW TO HIDE PLACE MARKERS

To remove a place marker from the screen, place the cursor in the first column to the right of the mark and press **^K**, followed by the number. The marker will disappear from the screen, but it will be assigned to the same portion of text until you reassign it. The marker will reappear when you move to it from elsewhere in the text.

Returning to a Place Marker

^ Q 0

through

^ Q 9

To return to the place previously marked <1>, enter the following command:

PRESS **^Q1**

The cursor will move to the first column to the right of the marker.

You can move either forward or backward through a document. If, for example, you are editing concurrently several places in a file, mark each location and move from one to another by pressing **^Q** and the respective place number.

CAUTION

Remember that moving backward through long documents is slow and may cause disk-full errors.

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BLOCK OPERATIONS

WordStar block commands enable you to perform various editing tasks automatically—moving a sentence, deleting a column, or copying a paragraph to another part of the document or to another file, for example.

WHAT IS A BLOCK?

A block is a portion of text ranging in length from one word to several pages. You can mark the beginning and end of a WordStar block, then move, copy, or delete it, and read it from or write it to another file. You can mark only one block at a time, but you can change its size and content at any time before or after an operation upon it.

IS BLOCK SIZE LIMITED?

Block size is the total number of characters from the beginning to the end of the block, including spaces and carriage returns. The amount of text that can be moved or copied at one time varies with the size of your system from about 500 characters in a small system to many thousands of characters in a 56K or 64K system. If your block is too large, an error message will appear.

Marking a Block

HOW TO MARK BLOCKS

Marking a block is similar to setting a place marker. Keep the following points in mind:

- Only one beginning mark (<**B**) and one end mark (<**K**>) can exist at a time.
- The block markers may be moved by simply resetting them, which also deletes them at the original location.
- The beginning and end marks can be set in either order, and they remain in effect until reset, whether used or not.

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- Block operations require that the beginning mark precede the end mark in the text.
- You may enter other commands during or after marking a block.

^ K B

Mark the beginning of the **B**lock with ^**KB**. Move the cursor to the appropriate spot.

PRESS ^**KB**

SEE **<B>**

The symbol will not print as part of your document.

^ Q B

To move the cursor quickly to the beginning mark, press ^**QB**. The marker, if hidden by ^**KH** (explained in this chapter), will reappear.

^ K K

Mark the end of a bloc**K** with ^**KK**. Depending on your terminal, either the symbol **<K>** will appear on the screen to mark the spot, or the text between the beginning and end marks will appear highlighted when you set the end mark.

^ Q K

To move the cursor quickly to the end marker, press ^**QK**. If the marker has been hidden by ^**KH**, it will reappear.

WHERE SHOULD BLOCK BE PLACED?

If the last line of the block is a complete line ending with a carriage return, place the end marker at the beginning of the next line to include the carriage return. Beginning and end markers may also be set in the middle of a line to extract a sentence or other phrase from the middle of a paragraph.

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HOW IS THE BLOCK HIGHLIGHTED?

On terminals with highlighting (inverse video or high and low intensity), the entire marked block appears highlighted, without the markers **<B>** and **<K>**. The spaces on the screen after the end of the last line in the block and the flag character (for hard carriage return) in the last line are included in the highlighted area only if the end marker is set beyond the carriage return at the end of that line.

On terminals without highlighting, the beginning marker and the end marker will appear at the beginning and end of each line within the block, as shown here:

```
<B>xxxxxxxxxxxxxxxxxxxxxxxxx<K>
<B>xxxxxxxxxxxxxxxxxxxxxxxxx<K>
<B>xxxxxxxxxxxxxxxxxxxxxxxxx<K>
<B>xxxxxxxxxxxxxxxxxxxxxxxxx<K>
<B>xxxxxxxxxxxxxxxxxxxxxxxxx<K>
```

Hiding a Block

^ K H

Use ^**KH**, the block **H**iding command, to remove block markers or remove highlighting from your display. If the block is already hidden, use ^**KH** to restore markers or highlighting to the display.

You cannot perform a block operation while the marked block or one of the markers is hidden. You'll see the following message:

```
Block beginning not marked
(or marker is undisplayed)
```

This interruption gives you a chance to protect your document against accidental block operations. Press ESCape. Then use ^**KH** or reset the beginning and end markers until both appear (or block text is highlighted). Repeat your previous command.

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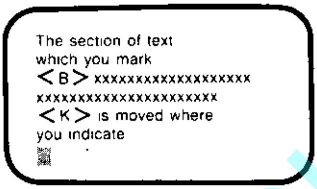
^ K V

Moving Blocks

Use **^KV** to moVe all text in a marked block to the current cursor position. The remaining text will move up to fill the space left by the moved block.

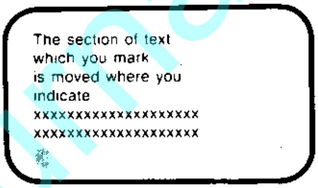
The destination of your block may be anywhere in the text area—between paragraphs or in the middle of a line. Place the cursor wherever you want to move the block, and press **^KV**.

Here is an example:



```
The section of text
which you mark
<B> xxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxx
<K> is moved where
you indicate
```

Before



```
The section of text
which you mark
is moved where you
indicate
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
```

After

HOW MANY CHARACTERS MOVE?

The beginning and end markers move with the block and remain in the display. After the move, use **^KH** to hide the markers, both to remove the distraction from the screen and to protect against block commands typed inadvertently. Place markers (0-9) in the marked block do not move with the block; they remain at the block's former place.

CAUTION

When WordStar print control or dot commands are within a marked block of text, they move to the block's new location, too. If any of these commands are toggle switches, check both the block and the block's previous location for matching pairs.

With **^KV**, characters move exactly as they are, without any reformatting. Use regular editing commands to make changes or corrections at the block's new location.

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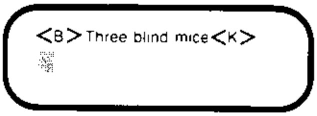
^ Q V

Use **^QV** to position the cursor back at the beginning marker's location preVious to moving, copying, or deleting a block. Then check to verify that the move was what you intended, and use regular editing commands as necessary to reformat the original area.

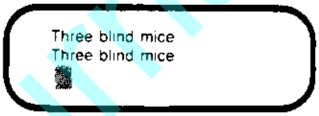
Copying Blocks

^ K C

Use **^KC** to Copy a marked block at the cursor's location. The block will appear both at the cursor position and in its original position. You can copy the block successively by pressing **^KC** several times.



```
<B>Three blind mice<K>
```



```
Three blind mice
Three blind mice
```

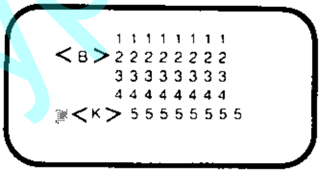
Before **After**

Deleting Blocks

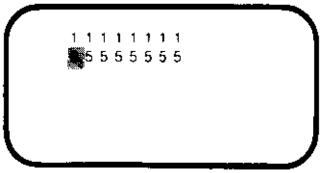
^ K Y

Use **^KY** to delete a marked block. The beginning and end markers will be hidden but set at the position where the deleted text was. The cursor rests in the first column to their right.

Look at this example:



```
    1 1 1 1 1 1 1 1
<B> 2 2 2 2 2 2 2 2
    3 3 3 3 3 3 3 3
    4 4 4 4 4 4 4 4
<K> 5 5 5 5 5 5 5 5
```



```
1 1 1 1 1 1 1 1
5 5 5 5 5 5 5
```

Before **After**

CAUTION

To avoid accidental deletions, keep the markers hidden between block operations. You cannot stop **^KY** once it has been initiated. Save or copy your document before using deletion commands.

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Working with Column Blocks

You may sometimes need to move a column of numbers within a table. If so, column mode enables you to define column-shaped areas in your document.

^ K N

Use ^**KN**, a toggle switch, to turn colum**N** mode on and off when you're working with column-shaped blocks of text. Follow these steps to move a column of text:

STEP 1 Turn on column mode.

PRESS ^**KN**

STEP 2 Insert the beginning marker at upper left corner of the column.

PRESS ^**KB**

STEP 3 Place the end marker one position to the right of the bottom right corner of the column.

PRESS ^**KK**

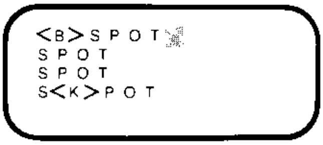
STEP 4 Move, copy, or delete the defined rectangle.

STEP 5 Turn off column mode.

PRESS ^**KN**

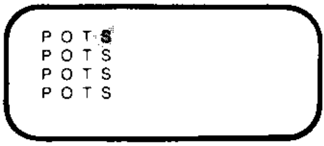
Any time you need to check the status of the ^**KN** toggle switch, press ^**K** and pause. The Block Menu will appear, and you'll read either "now ON" or "now OFF" next to each command that's a toggle switch.

Here's an example of moving a column block:



```
<B>SPOT
SPOT
SPOT
S<K>POT
```

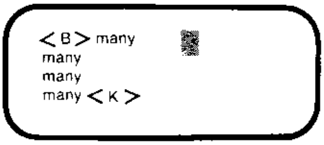
Before



```
POTS
POTS
POTS
POTS
```

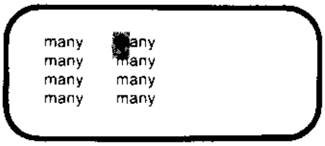
After

Here's an example of copying a column block:



```
<B> many      ▓
many
many
many <K>
```

Before



```
many    ▓any
many    many
many    many
many    many
```

After

When you are using column mode to move columns embedded in text, you may see this message:

```
Block too long
```

CAUTION

The total number of characters in surrounding text is included in the program's calculation, even though it is not included in column-block operations. Keep in mind, too, that the maximum column width is 240 columns.

You can divide a block into two or more smaller portions. Then, after reducing the number of lines in each block, you can repeat the operation until the original block is moved.

In column mode, block operations ignore carriage returns within the block. When you move a column composed of lines that end in carriage returns, a block of blank lines will remain in its place.

Column mode has no impact on normal text entry or editing within a column. You still type from margin to margin, whether or not you are in column mode.

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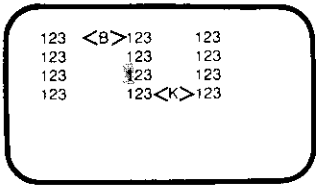
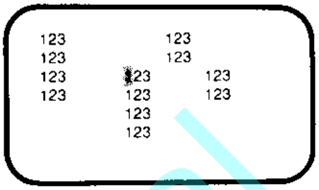
HOW TO REALIGN COLUMNS

During a column move, text to the right of the moved block moves left to fill the vacated area. Use spaces to realign the columns, as in the following example:



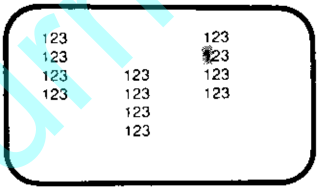
```
123  <B>123     123
123     123     123
123     123     123
123     123<K>123
```

Before Move



```
123           123
123           123
123       123      123
123       123      123
          123
          123
```

After Move



```
123                123
123                123
123       123      123
123       123      123
          123
          123
```

Then Add Spaces

When you include print control characters within a column, be sure to begin and end each line in the column with the print control character. ⟶ *7-3*

MOVING BLOCKS BETWEEN FILES

You can copy marked blocks from one file to another when you use the block writing (^KW) and block reading (^KR) commands.

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Writing Blocks

^ K W

Use ^**KW** to **W**rite text from the file you're editing to another file. After marking the beginning and end of your block, follow this procedure:

PRESS ^**KW**

SEE

```
Name of file to write marked text on?
```

TYPE *filename* RETURN

When the cursor returns to your previous place in the file, a copy of the block will be in the named file. You can thus save a portion of text as though it were a separate document without moving the cursor or altering the text.

CAUTION

If you name a file that already exists, you'll see the following message:

```
File A filename exists—overwrite (Y/N)?
```

Respond **Y** if you want to erase and replace (overwrite) text in the existing file with text in the marked block. Respond **N** to preserve the existing file; then enter a different file name.

To reduce chances of overwriting, use file extensions, such as .DOC for documents and .TMP for temporary files used only while moving text around within documents.

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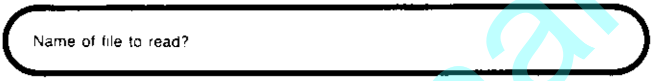
Reading Blocks

^ K R

Use ^**KR** to **Read** a previously written block or whole file, pulling it out of storage and into the current document. Follow this procedure:

PRESS ^**KR**

SEE



```
Name of file to read?
```

TYPE *filename* RETURN

You'll see a copy of the named file appear at the cursor's present location. The original contents of the file you're editing will shift down to make room for the new text. The contents of the file you read are unchanged.

COMMON USES OF ^KW AND ^KR

When there are standard paragraphs or sections of text that you use frequently, write each into a small, separate file with ^**KW** or by normal text entry. Then, whenever necessary, use ^**KR** to copy a small file to the cursor position in the document you're currently editing.

Large-Scale Block Operations

CAUTION

Block operations require the computer to move an "internal cursor" to the location of the marked block, then back to the original position. In large files, the command may be executed very slowly. You run the risk of a disk-full error because so much file space is necessary to perform the operation. Do not create a file longer than 25 pages when you combine files.

For moving and copying text when the source and destination are in large or separate files, you may want to use the following combination of block writing and reading commands.

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HOW TO MAKE MOVES SAFELY

STEP 1 Edit the first document.

STEP 2 Mark the desired block of text (^KB and ^KK).

STEP 3 Write the block (^KW) into a temporary file.

STEP 4 Exit from the first document.

STEP 5 Open the second document and put the cursor where you want the text.

STEP 6 PRESS **^KR**

TYPE *filename* used in STEP 3.

You can also use this method for transferring a block within one large file.

HOW TO MOVE COLUMNS BETWEEN FILES

You cannot move marked columns between files, but you can reproduce the effect in either of two ways.

One way is to mark a larger block of text that contains the column. Then write the whole block to the second document, and edit out the unnecessary text. The other way is to copy the column from its surrounding text to a blank space at the end of the file, write it to another file, then read it into a second document.

Use **^KJ** to conserve disk space by deleting any temporary file as soon as you finish using it.

⟶ *9-10*

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SUMMARY TABLE: BLOCK COMMANDS

COMMAND	FUNCTION
^K 0-9	Marks a place in the text with single digit
^Q 0-9	Returns cursor to previously marked place
^KB	Marks the beginning of a block of text <B>
^QB	Moves cursor to beginning block marker
^KK	Marks the end of a block of text <K>
^QK	Moves cursor to end block marker
^KH	Hides or displays a marked block
^KV	Moves a marked block (including block markers) to cursor position
^QV	Moves cursor back to previous position (Position of beginning marker in block operations, position at end of last command executed in find or find-and-replace commands)
^KC	Copies a marked block (including block markers) to cursor position with no change in original text
^KY	Deletes a marked block from document
^KN	Turns column mode on/off
^KW	Writes a marked block to another file with no change in original text
^KR	Inserts (reads) another file at cursor position in the file currently being edited

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5. FINDING AND REPLACING TEXT

CONTENTS

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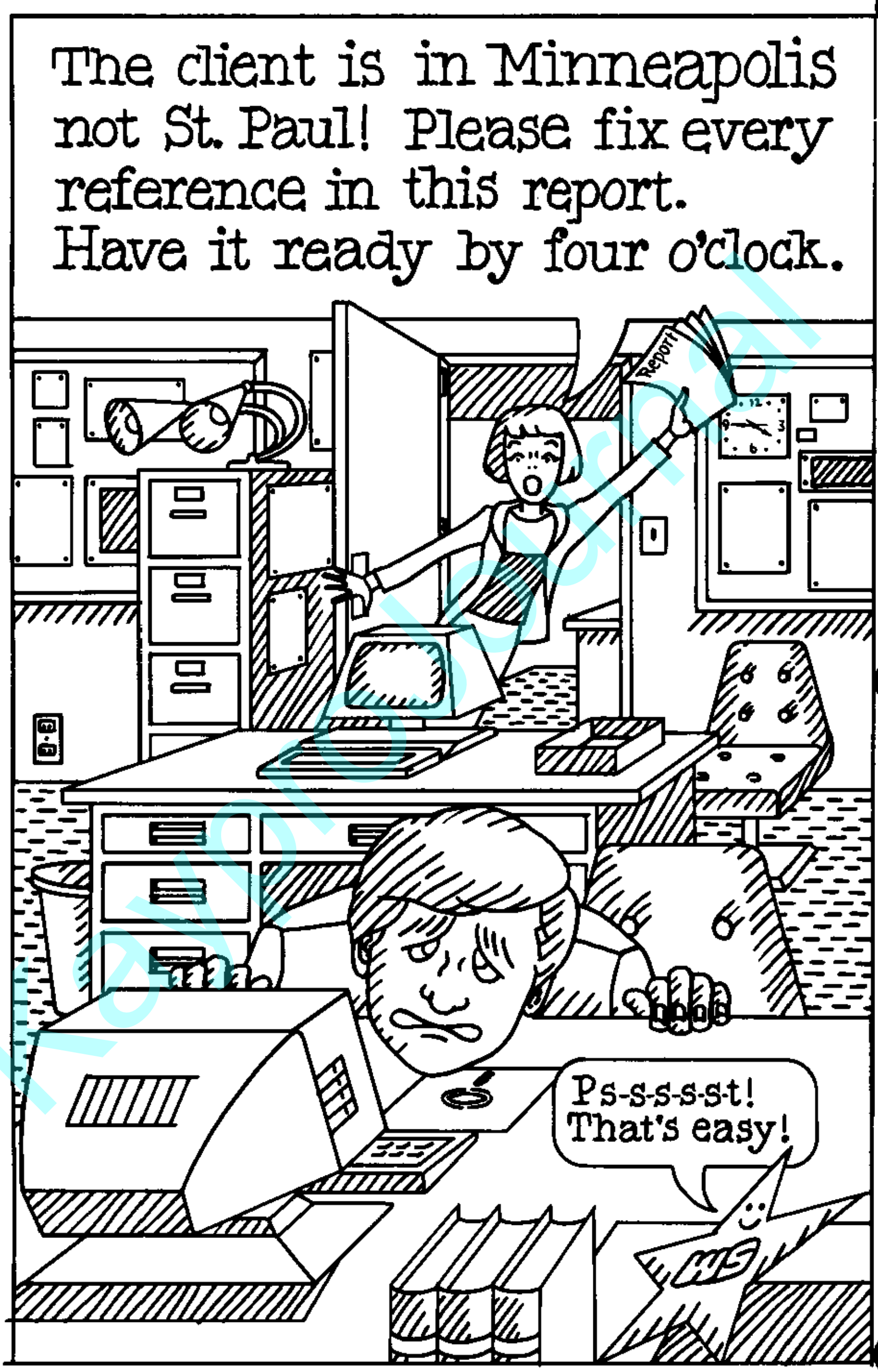
The client is in Minneapolis not St. Paul! Please fix every reference in this report. Have it ready by four o'clock.
Report
Ps-s-s-s-s-t! That's easy!

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5. Finding and Replacing Text

You can locate, locate and change, or locate and delete any word or phrase (string of characters) in your text, using the find and find-and-replace commands. Your find string can be as long as 30 letters, numbers, or symbols. Use options to the find commands and variable (wild-card) characters to help track down similar words or phrases.

FINDING WORDS AND PHRASES

Press **^QF** to **F**ind any word or phrase. The cursor will appear at the first character of the first occurrence of your string. Nothing will have changed except the cursor location and the portion of text displayed on the screen.

HOW TO FIND A PHRASE

To issue a find command without options, follow this simple procedure:

STEP 1 PRESS **^QF**

SEE **FIND?**

STEP 2 TYPE your string (up to 30 characters)

STEP 3 PRESS **ESC**ape

When the cursor appears at the first occurrence of your string, you have three choices:

- To continue work at the cursor's present location
- To repeat the find command with **^L** (explained in this chapter)
- To return to your previous location with **^QV** (also in this chapter)

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If there is a lot of text between the cursor and the first occurrence of your find string, be patient. The operation may take a few moments to finish.

Your find operation ends when you see this message:

```
*** NOT FOUND: "(your string)" *** Press ESCAPE Key
```

The message indicates one of two conditions:

- There are no occurrences of your find string in the file.
- There are no further occurrences between the cursor position (when you began the operation) and the end of the file.

When you press ESCape, the cursor will appear at the end of your file.

FINDING AND REPLACING

^ Q A

Press **^QA** (Find-And) to locate *and change* a word or phrase in your text. You can order this find-and-replace operation from anywhere in your document, and a combination of options can help you to replace a word or phrase throughout your entire file.

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HOW TO REPLACE A PHRASE

To issue a find-and-replace command without options, follow this simple procedure:

STEP 1 PRESS ^**QA**

SEE **FIND?**

STEP 2 TYPE your present string (up to 30 characters) RETURN

SEE **REPLACE WITH?**

STEP 3 TYPE your new string (up to 30 characters)

PRESS **ESC**ape

The cursor will appear at the *next* occurrence of the find string, and a prompt will ask you to approve the replacement.

NOTE: You must position the cursor at the beginning of your file in order to find the first occurrence of your find string.

You'll see a flashing cursor at the first character in your find string and another after **REPLACE (Y/N)** in the upper right corner of your screen. WordStar will perform the replacement *only* if you type **Y**.

After your command is executed, you'll have three choices:

- To continue work at your present location
- To repeat the find-and-replace with ^**L**
- To return to your previous location with ^**QV**

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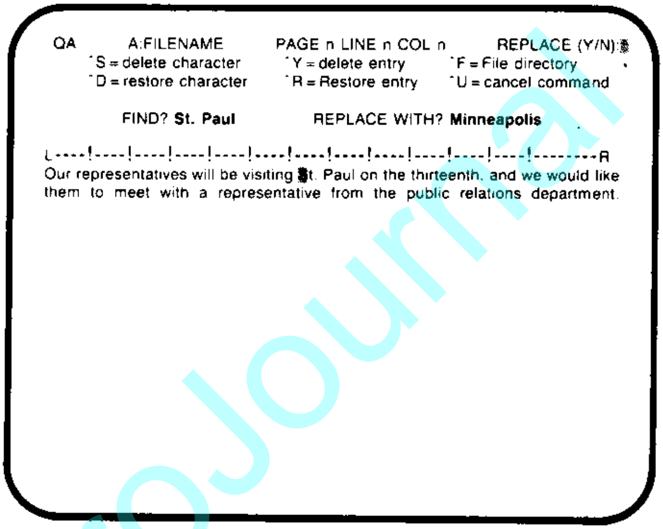
Here's an example:

If you type **Y**, **St. Paul** will be deleted, and **Minneapolis** will be inserted in its place automatically. If you type **N**, the cursor will move to the end of the string, awaiting your next command.



```
QA       A:FILENAME          PAGE n LINE n COL n        REPLACE (Y/N):
      ^S = delete character    ^Y = delete entry     ^F = File directory
      ^D = restore character   ^R = Restore entry    ^U = cancel command

          FIND? St. Paul              REPLACE WITH? Minneapolis

L----!----!----!----!----!----!----!----!----!----!----!----!--------R
Our representatives will be visiting St. Paul on the thirteenth, and we would like
them to meet with a representative from the public relations department.
```

HOW TO DELETE A PHRASE

If you simply want to delete your present string from the text, don't type the replacement string. If you type nothing, you'll produce a *null* string. Just press **ESCape**, and the operation will be underway.

Repeating the Last Command

Press **^L** to repeat your Last find or find-and-replace operation. When you use **^QF** or **^QA**, the operation is performed only once, and the cursor is left at the first occurrence in the text. When you enter **^L**, the cursor moves forward to the next occurrence of your string. You initiate the same search as before, with the same options.

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You can use **^L** to move through your files quickly and examine or change specific sections of text. When no further occurrences of your string can be located, you'll see this prompt:

```
*** NOT FOUND: "your string" *** Press ESCape key
```

Press **ESCape**, and the cursor will appear at the end of your file.

Returning to Your Work Point

^ Q V

Press **^QV** to return the cursor to your preVious place in the text. This spot is *not* the same as your cursor's *original* position except when only one occurrence of your string is found. If you're going to use **^L** many times, mark your original position in the text with a place marker so that you can return there quickly. ⟶ *4-3*

OPTIONS IN FIND COMMANDS

Six options help you to define the scope of your find or find-and-replace operation, each in a specific way. When you answer the question **FIND?**, you tell WordStar to look for an *exact* string of characters. The search is normally conducted forward from the cursor position, once only, but the options give you considerably more flexibility.

You can choose none, one, several, or all of the options with most find or find-and-replace commands.

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In the simple ^**QF** and ^**QA** procedures just covered, you avoided the options question before it was asked by pressing ESCape. If you use RETURN, rather than ESCape, you'll see the options prompt.

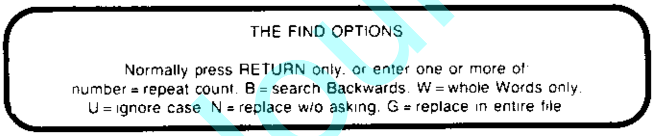
TYPE your string (up to 30 characters)

RETURN

SEE **OPTIONS? (? FOR HELP)**

VIEW YOUR OPTIONS

To view the options, respond with a question mark (?) and press RETURN. You'll see the following display:



```
                  THE FIND OPTIONS

 Normally press RETURN only, or enter one or more of:
number = repeat count. B = search Backwards. W = whole Words only.
  U = ignore case  N = replace w/o asking. G = replace in entire file
```

If you now decide against using options, simply press either ESCape or RETURN. If you *do* want options, type the letter or number for each at this point. You can enter upper or lowercase letters with or without spaces between them; it doesn't matter. Then press RETURN, and the operation with options will begin.

Here are the specific descriptions of each option.

Finding *n* Occurrences

n

The number option works differently with ^**QF** and ^**QA**.

NUMBER OPTION WITH ^QA

With ^**QA**, enter any whole number (*n*) as an option, and the find-and-replace operation will locate the next *n* occurrences of your string. This option is useful, whether you want to locate the next ten occurrences of a particular word or you want to search the rest of the file without having to press ^**L** after each occurrence.

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Use a number greater than the number of words in your file (99999, for instance) to insure that **^QA** will find *all* occurrences of your string between the cursor location and the end of the file. When the not-found message tells you that you've reached the end, press ESCape.

NUMBER OPTION WITH ^QF

With **^QF**, enter any whole number (*n*) as an option, and the find-only operation will locate the **n**th occurrence of your string. For example, if the string is **St. Paul** and you enter **10** as an option, the cursor will appear at the tenth occurrence of **St. Paul**.

Searching Backward

B

Use **B** (**B**ackward) to reverse the usual order of the **^QF** or **^QA** operation. The search will start at any cursor location and proceed ("backward") toward the beginning of your file.

If the cursor is almost at the end of your file, for example, and you want to find or find-and-replace an item just a few paragraphs or pages back, you can save time by choosing option **B**.

CAUTION

Searching backward through a long file may produce disk-full problems if your file is very long. To search the whole file, first use **^KS** to return the cursor to the beginning of your file. ⟶ *9-3*

Whole Words Only

W

Use **W** to look for **W**hole words only. Similar but different words or phrases are left alone. For example, **St. Paulette** contains the character string **St. Paul**, and a standard search will locate this phrase, unless you specify whole words only by choosing option **W**.

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CAUTION

If **St. Paul** lies at the very beginning of your file, the string won't have a space in front of it; under option **W**, WordStar won't consider it the string you want to locate. Always check the first word of a file when you choose **W**.

Upper or Lowercase

U

Use **U** to change your instructions to read, "The difference between **U**pper and lowercase doesn't matter this time." You'll see all occurrences of the string, regardless of which letters are capitalized.

No Approval Needed

N

Use **N** (**N**o approval) to replace occurrences of your string automatically. In a find-and-replace operation (^QA) without options, you must approve each replacement of your present string. If you know that you want to replace each and every occurrence of your string, choose option **N**. WordStar will perform the replacement automatically, no questions asked.

Option **N** has no effect on **^QF**.

Global Replacement

G

Use **G** (**G**lobal) to search your entire file, from beginning to end. The cursor doesn't have to be at the beginning of the file; it returns automatically to start the hunt. You will see the approval prompt before each replacement:

```
REPLACE (Y/N):
```

Answer **Y** or **N**. After executing your instructions, the cursor moves to the next occurrence of your string automatically; you needn't use **^L**.

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As with all ongoing operations, you can halt a global find or find-and-replace operation with **^U** (interrupt). The cursor will stop wherever it is in your file when you interrupt. ⟶ *1-14*

There are two variations on the global theme:

1. When you choose the global option (**G**) in conjunction with the backward option (**B**), a **^QA** command sends the cursor to the end of the file and searches from there to the beginning.
2. If you use the global option (**G**) in conjunction with the no-approval option (**N**), WordStar will go to the first character in your file and change each occurrence of the string, moving on to the next without seeking your approval.

FAST GLOBAL OPERATIONS

You can speed through global operations if you don't care to watch every replacement take place. During a global search and replacement, WordStar spends most of the time showing you the changes being made.

To suppress the ongoing display, press any non-printing key (like ^X or ESC). The global operation will be completed at top speed. Why should you press a non-printing key? Because any printable character you type will be added to the end of your document.

VARYING CHARACTERS IN FIND STRINGS

You can introduce certain special cases for variations on your string by using "wild card" characters with **^QA** and **^QF**. Use them as substitute characters when you answer the prompt **FIND?**

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Any Character

^ P ^ A

Enter **^A** (Any) into your string by pressing **^P^A**. Your find operation will locate strings with any single character in place of the wild card. For example, the find string **R^AM** will locate **RAM**, **ROM**, **RUM**, **R.M**, **R2M**, **R@M**, etc.

Any Symbol

^ P ^ S

Enter **^S** (Symbol) into your string by pressing **^P^S**. Your find operation will locate strings with any character not a letter or a digit in place of the wild card. **R^SM** will locate **R&M**, **R@M**, **R#M**, **R$M**, **R%M**, **R*M**, etc.

Other Than

^ O x

Enter an exception into your find string by pressing **^O** and then the character you want ignored (*x*). You'll brand that character as **O**ff-limits. For example, defining a string**R^O**=M will find every variation of **RM** except **R=M.**

Carriage Return and Line Feed

^ N

Enter **^N** into your find string by pressing **^N**. You'll include a carriage return and line feed in your string. For example, you can answer **FIND?** with **St.**(space)**^NPaul** to locate these two words whenever the end of a line separates them.

CAUTION

The wild-card characters **^P^A**, **^P^S**, and **^N** should not be confused with the print control characters in Chapter 7. **^PA**, **^PS**, and **^PN** cannot be entered into a find string. The characters look similar on the screen but are *not* interchangeable in practice.

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SPACES AND RETURNS IN STRINGS

When you enter a character string in response to the question **FIND?**, you must be precise because WordStar will search for *exactly* what you type next. For instance, if you type **St. Paul** and then order a search without options, WordStar will examine each and every character—in order—from the cursor location toward the end of the file until it finds the first **St. Paul** with a single space between the two words.

If word wrap or justification have inserted soft spaces or soft carriage returns between the two words in order to make a line come out even, the phrase is no longer **St.**(single space and no carriage return or line feed)**Paul**, and will therefore be ignored. You didn't say you wanted to find **St.**(space space)**Paul** or **St.**(space and carriage return and line feed)**Paul**.

Character strings are taken literally.

How *do* you replace all instances of **St. Paul**, regardless of soft spaces or soft carriage returns? Search for **St.**(space) only, since this word isn't likely to show up elsewhere. Have WordStar replace **St.**(space) with **Minneapolis**. Search again (backward, if you like) for **Paul** and replace this word with a null string. When the correction is completed, use **^QQ^B** to tidy up the text. ⟶ *3-19*

FINDING SPELLSTAR FLAGS

Use **^QL** after you have flagged text with the SpellStar option for the WordStar program. If you're in the SpellStar correction phase, you only need to press **^L** to move to the next flagged word. If you have left the correction phase, you can re-enter and go directly to a previously flagged word by pressing **^QL**.

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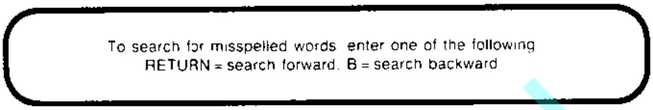
Follow this procedure:

PRESS **^QL**

SEE



```
To search for misspelled words  enter one of the following
RETURN = search forward. B = search backward
```

Press RETURN to re-enter the correction phase and move forward in the file to the next flagged word.

Press **B** to re-enter the correction phase and move backward in the file to the next flagged word.

^QL is especially useful when you have been interrupted before completing the correction phase or when you have completed the correction phase and want to double-check your work.

APPLICATION: INSERTING AN UNCOMMON PHRASE

If you intend to use a particular word or phrase often in a document—*bilateral conundrum*, for example—you can use **^QA** to make your work easier. Move the cursor to the point in your text

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where you want to insert your phrase, and follow this procedure:

STEP 1 SEE **FIND?**

RETURN

Pressing RETURN enters a null string, which effectively says, "Find the cursor's present location."

SEE **REPLACE WITH?**

STEP 2 TYPE *bilateral conundrum* RETURN

SEE **OPTIONS? (? FOR HELP)**

STEP 3 TYPE **N** (No-approval) RETURN

REPEAT THE PROCEDURE

The phrase *bilateral conundrum* will appear in your text at the cursor location. Wherever and whenever in the text you want the phrase to appear again, press **^L**.

Each time, WordStar will insert the phrase at the cursor location. If you write highly technical or legal documents or science fiction, you'll find this trick a time-saver.

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SUMMARY TABLE: FIND, FIND-AND-REPLACE COMMANDS AND OPTIONS

COMMAND	FUNCTION
^QF	Finds a string of specified characters
^QA	Finds one string and replaces it with another
^L	Repeats the last find or find-and-replace command
^QV	Returns cursor to position prior to execution of last command
	Options:
?	Lists options
n	Finds *n*th occurrence of string
B	Searches backward
W	Finds whole words only
U	Ignores difference between upper and lowercase
N	Replaces string with no approval
G	Searches entire file
	Variable characters:
^P^A	Substitutes any character
^P^S	Substitutes any symbol not a character or number
^Ox	Substitutes any character other than **x**
^N	Includes a carriage return and line feed
	With SpellStar:
^QL	Finds next flagged word

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6. FORMATTING TEXT ON THE SCREEN

CONTENTS

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It's amazing! One command does all that.
ANNUAL INCREAS

6. Formatting Text on the Screen

You can arrange the text on your electronic page as easily as you enter and correct it. The **O**nscreen formatting commands (**^O__**) presented in this chapter enable you to change margins or indentations, for example, even after typing your document. You can also modify displays on the screen, such as the ruler line, with onscreen toggle switches.

Each time you use **^O** to turn a toggle switch on or off, the **O**nscreen Menu reflects the change. You will see "now ON" or "now OFF" after the description of each command.

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TEXT ENTRY AND RE-FORMING

Various features that work as you enter lines of text include word wrap, justification, hyphen help, soft hyphenation, and line spacing.

Word Wrap

^ O W

Use **^OW** to turn **W**ord wrap on or off. (Default: *on.*) Word wrap is an aid to normal text entry, but you may want to turn it off, for instance, when you type tables. When word wrap is off, you must enter a hard carriage return at the end of each line you type.

Turning word wrap off also activates tab stops set outside the current margins. This feature may be useful, for instance, when you number paragraphs.

Justification

^ O J

Use **^OJ** to turn **J**ustification on or off. (Default: *on*.) This feature is frequently turned off to type letters. If you type a paragraph with justification on and then turn it off and re-form the paragraph (^B), you'll see the soft spaces eliminated and the right margin become uneven.

Hyphen Help

^ O H

Use **^OH** to turn **H**yphen help on or off. (Default: *on*.) This feature works during paragraph re-forming (^B), causing the cursor to pause in long words that extend beyond the right margin. When it stops in or near a syllable where the word might be hyphenated, an onscreen message offers you these choices:

1. Press the hyphen key to hyphenate at the indicated syllable break.
2. Move the cursor left or right within the word before hyphenating.
3. Press **^B** again to move the whole word to the next line and continue re-forming the paragraph.

When you turn hyphen help off, you effectively select the third choice every time you re-form paragraphs.

WHAT IS A SOFT HYPHEN?

Hyphens entered with hyphen help are always *soft* hyphens. They print only when they land at the end of a line. The distinction between soft and *hard* hyphens, which always print, is important to remember when you re-form paragraphs.

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Soft Hyphen Toggle Switch

^ O E

Use **^OE** to turn soft hyphenation on or off. (Default: *off.*) When this switch is on, every hyphen you type is a soft hyphen which will print only if it happens to land at the right margin. Turning **^OE** on or off has no effect on the soft hyphens entered with hyphen help (^OH).

Soft hyphens do not occupy an actual column of space. Thus a line which contains a soft hyphen extends beyond the right margin on the screen but not on paper. Check the status line; you'll see that both the hyphen and the character following it have the same column number.

HOW TO USE SOFT HYPHENS

In most cases, WordStar discards soft hyphens and closes up the word when re-forming a paragraph. But if the word runs past the end of a line, soft hyphens enable you to break the word as you wish and print the hyphen. You may use **^OE** when typing names and foreign words with consecutive vowels or consonants, as in *de Mon-tes-quieu*.

If a long word appears frequently in your text, turn on the soft hyphen toggle, and use **^QA** with options **G** and **N** to substitute the soft-hyphenated word for the unhyphenated word. ⟶ *5-4*

CAUTION

If you enter text while **^OE** is on, you may produce unwanted results. For example, you might type a budget report that includes both positive and negative numbers. With soft hyphen entry on, the hyphens that represent minus signs won't print.

HOW TO ENTER A HARD HYPHEN

Some words or names require a hard hyphen, for example, *Boileau-Despreaux*. With **^OE** on, you must enter a required hyphen as a special print character.

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Follow these steps to enter a hard hyphen in soft hyphen mode:

STEP 1 PRESS **^P**

STEP 2 TYPE **-**

SEE -

If your terminal supports highlighting, soft hyphens are highlighted. With soft hyphen entry in effect, typing **^P-** will produce a hard hyphen that may appear on screen as a soft hyphen. If your terminal does not provide highlighting, use the print display toggle switch (^OD) to determine whether hyphens are hard or soft. ⟶ *6-18*

^OD has no effect on the hyphens which you enter when you re-form a paragraph with hyphen help. However, if **^OD** is off, all other soft hyphens will be hidden. If you type a hyphen with **^OE** on and **^OD** off, you'll see the cursor do a funny jump forward and back, and you won't see the hyphen entered. Since that hyphen does not occupy an actual column space, the cursor returns to the column of the invisible hyphen, and you enter the next character right 'on top of' the hidden hyphen.

Check the Onscreen Menu (^O) to see if a toggle switch is on or off.

Line Spacing

Use **^OS** to specify Spacing between lines. For normal text entry and re-forming, the default is single spacing. When you give the command, you'll see the following prompt:

```
ENTER space OR NEW LINE SPACING (1-9)
```

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Type a number to change the spacing before or after you enter text. Press the SPACE bar to leave the spacing as previously specified. Word wrap and paragraph re-forming will conform to the line spacing you enter.

^OS also affects hard carriage returns. For example, when the command **^OS 5** is in effect, each RETURN you enter will result in five hard carriage returns.

NOTE: If your system includes a letter-quality printer, use the dot command **.LH 16** to double-space the printed page. → *7-27*

MARGINS

The border you leave to the left and the right of your text can be changed at any time. You can reset the margins and then re-form paragraphs or center text between those margins. Word wrap will use the new margins to format text as you enter it. You can also release the margins and place text outside the current margins.

Left Margin

^ O L

Use **^OL** to set a new **L**eft margin. You will see this prompt:

```
LEFT MARGIN COLUMN NUMBER (ESCAPE for cursor column)?
```

Enter a number, or press ESCape to set the margin to the current cursor position, shown in the **COL** entry of the status line. The left margin can be set at any column, 1-239. WordStar begins with the left margin set at column 1.

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If you set the left margin to a column number higher than 1, you'll create a wide border to the left of the paragraph. As you edit on the screen, your cursor will still move to column 1 after a carriage return or when you use **^E** or **^X** to cross a line containing only a hard carriage return. As soon as you type any character other than a period, though, the cursor will jump to the specified left margin and resume normal text entry.

If the first character you type is a period, the cursor moves to the right one space at a time, so that you can enter a dot command. → *7-7*

Right Margin

^ O R

Use **^OR** to set the **R**ight margin. You will see this prompt:

```
RIGHT MARGIN COLUMN NUMBER (ESCAPE for cursor column)?
```

Enter a number, or press ESCape to set the margin at the current cursor column position. The right margin is initially set at column 65 (to produce printed text 6 1/2 inches wide), but you can set it at any number higher than the left margin, up to 32,000. In practice, the upper limit for the right margin is determined by available memory in your computer.

LIMITS ON MARGIN SETTINGS

Since most printers cannot print a line with more than 160 characters, you should stay within this limit for printed results.

If you plan to type very long lines, try to limit text editing to columns 1-240. Some WordStar commands do not operate efficiently beyond column 240.

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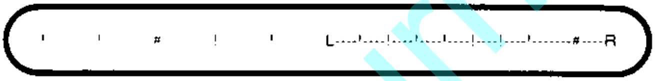
Margin Release

Use ^**OX** to release current margins. You'll reset the left margin at column 1, remove any right margin, and turn word wrap off. Margin release remains in effect until you turn it off by entering a hard carriage return or another ^**OX**. When margin release is in effect, you'll see **MAR REL** in the status line.

^**OX** activates any tab stops that lie outside the currently set margins. The ruler line displays **!** and **#** characters without hyphens to indicate tab stops outside the margins, as in the following illustration:

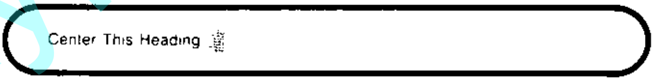


```
!     !     #     !     !     L---!----!---!----!----!----!---!-------#----R
```

Centering Text

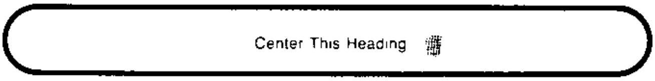
Use ^**OC** to Center text between currently set margins on the line containing the cursor. After you type the text to be centered, position the cursor anywhere in the same line, and enter ^**OC**. You'll see the words move to the center of the line. Spaces entered before or after the text will be ignored.

Type this:



```
Center This Heading
```

Press ^**OC** and see this:



```
                    Center This Heading
```

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TABS AND INDENTATION

You may want to indent paragraphs or align columns within the borders of your text. You can use various tabbing commands to arrange your text on the screen.

Variable Tabbing

^ O V

Use **^OV** if you want to turn off **V**ariable tabbing. (Default: *on*.) Variable tabbing is standard for most text entry and formatting; the alternative is fixed tabbing, which is the default in non-document mode. ⟶ *10-5*

Variable tabbing means that you can set regular and decimal tab stops any place you want. These tab stops always appear in the ruler line. Even if you turn variable tabbing off, the ruler line continues to show variable tab settings, *not* fixed tabs.

Regular Tab Stops

^ O I

Use **^OI** to set a tab, just as you would to **I**ndent a line on a typewriter. You'll see the following prompt:

```
For decimal tab stop enter "#" and decimal point column
SET TAB AT COLUMN (ESCAPE for cursor column)?
```

Enter a number, 1-240, to indicate the column where a tab is to be set. Otherwise, press ESCape to set a tab at the cursor's current column, as indicated by the **COL** display of the status line.

You'll see an exclamation point (!) appear in the ruler line at the column you specify.

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Use **^ON** to clear a tab stop. You'll see the following prompt:

```
CLEAR TAB AT COL (ESCAPE for cursor col, A for all)?
```

Enter a number, 1-240, to indicate the column where a tab is to be cleared. Otherwise, press ESCape to clear a tab at the cursor's current column, as indicated by the **COL** display in the status line.

The characters # and ! in the ruler line show where tabs have been set. If you want to clear a tab but aren't certain what column it's in, move the cursor to the column—using the tab key, if you like—and then press **^ON** and press ESCape.

Enter the letter **A**, rather than a column number, to clear **A**ll tabs with one command.

Use **^I** to skip the cursor to the next tab stop. You can use tab stops only by pressing **^I** or the tabulator key; you don't stop at them as you type or space past them with other keys.

With insertion on, tabbing adds a space character in every column the cursor passes over, pushing remaining text on the line to the right. With insertion off, tabbing moves the cursor to the next tab stop without affecting existing text.

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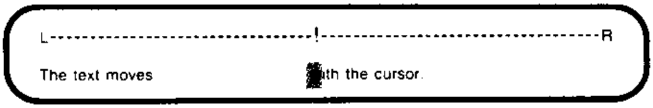
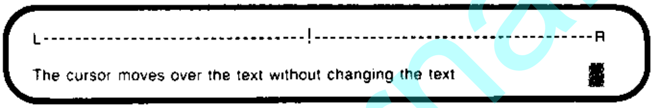
Here is an example:

INSERTION ON:



```
L-------------------------------!--------------------------------R
The text moves                  █ith the cursor.
```

INSERTION OFF:



```
L-------------------------------!--------------------------------R
The cursor moves over the text without changing the text        █
```

With ^I, you skip only to tab stops within current margins, except when word wrap is off (^OW) or the margins are released (^OX). With margins released, you can use ^I to skip to every tab stop that is set.

If skipping to the next tab stop takes the cursor past the last character of the document, pressing ^I will extend the document with enough spaces to allow it to reach the next stop. If the next tab stop is not on the current line, pressing ^I will generate a carriage return. As long as you press ^I, you'll continue to extend the document with spaces and carriage returns, even with insertion off.

Decimal Tab Stops

Decimal tab stops provide decimal point alignment for columns of numbers. Here is an example:

Regular Tab	Decimal Tab
.05	.05
760.00	760.00
11.95	11.95
1243966.41	1243966.41
3.14159265	3.14159265

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Use the character # to set a decimal tab stop. Follow this procedure:

PRESS **^OI**

SEE

```
For decimal tab stop enter "#" and decimal point column.

SET TAB AT COLUMN (ESCAPE for cursor column)?
```

ENTER # and the column number

You'll see the symbol # appear in the ruler line at the column you specify.

When you use **^I** to skip to a decimal tab stop, the cursor stops in the column where the decimal point is to appear. The word "decimal" appears in the status line to indicate that right alignment is in effect.

WHAT IS RIGHT ALIGNMENT?

Right alignment means that the characters you type appear to the left of the cursor. Right alignment continues until you enter a decimal point, press the SPACE bar or RETURN key, or enter another tab (^I) command. When you end right alignment with a decimal point or a space, the decimal or space will appear in the tab stop column, and you'll resume normal text entry.

If you try to enter too many characters at a decimal tab stop, WordStar will turn off right alignment. Instead of running into a previously entered column of characters on the left, your new entry will continue in the tab stop column and then as normal text from left to right.

CAUTION

Avoid setting a decimal tab in column 1. If you enter a fractional number, you'll end up with a period which will be interpreted as a dot command beginning in the first column. ⟶ *7-7*

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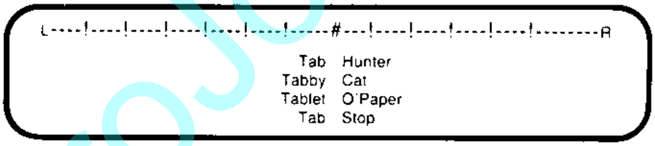
When you set a decimal tab near the right margin, be sure there is enough space for the longest possible entry between the decimal position and the margin. Otherwise, word wrap will carry part of a number to the next line.

USING DECIMAL TABS OUTSIDE MARGINS

You can set decimal tabs outside current margins, but you must release the margins (^OX) before tabbing. Setting a decimal tab stop left of the left margin can be handy when, for example, your text uses paragraph numbers.

ALIGNING ALPHABETIC ENTRIES

Since right alignment at a decimal tab stop can be terminated by either a period or a space, you can enter alphabetic characters at a decimal tab. For example, you might align a column of names by the first name:



```
L----!----!----!----!----!----!-----#---!----!----!----!----!--------R
                                 Tab Hunter
                               Tabby Cat
                              Tablet O'Paper
                                 Tab Stop
```

EUROPEAN DECIMAL OPTION

Many countries follow the convention of representing the decimal point with a comma rather than a period. If you change the period to a comma (or some other character) in your WordStar installation, the comma will terminate right alignment at decimal tab stops.

Indenting Paragraphs

^ O G

Use ^**OG** to reset the left margin to a tab stop; the effect is temporary indentation. As you enter text, word wrap will automatically return the cursor to the temporary left margin. This margin remains in effect until you press RETURN.

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Each time you enter ^**OG**, the left margin moves to the next tab stop. For example, the standard ruler line has tab stops set at columns 6, 11, 16, 21, and so on. Pressing ^**OG**^**OG** sets the temporary left margin at column 11. ^**OG** is also useful when entering or reformatting text to the left of the margin.

The following paragraph illustrates the use of ^**OG**:

- The carriage return that ended the previous sentence moved the cursor to column 1 (at the edge of the wide left margin). Typing the bullet (•) skipped the cursor to the left margin, where WordStar started positioning text. Then ^**OG** moved the left margin to the next tab stop. There was no need to move the cursor; typing the first word of this paragraph skipped the cursor to the new left margin. WordStar will continue to use the new margin until a carriage return terminates this paragraph.

Terminating the paragraph restores the left margin shown in the ruler line.

RE-FORMING WITH ^OG

If you re-form a paragraph while a temporary margin is in effect, ^**B** uses the temporary margin. If the paragraph ends with a hard carriage return, ^**B** releases the temporary margin after re-forming the paragraph.

Because ^**OG** uses tab stops only to establish a new left margin, the command treats regular and decimal tab stops the same. Right alignment is not activated when the left margin happens to fall at a decimal tab stop. However, if you intentionally move the cursor left of the margin and tab back to the decimal stop, right alignment is activated.

Temporary margins are particularly useful for entering text, such as outlines, in which the first line of each paragraph requires only a small amount of text to the left of the margin.

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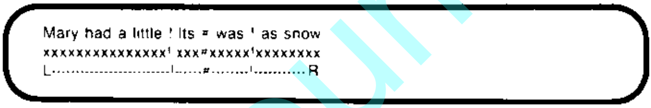
CHANGING THE SCREEN DISPLAY

Some WordStar features help you to gauge how your work will fit on the printed page. These options, the ruler line and the page break display, can be turned on or off.

Ruler Lines

You can use a line from the text area as the model for a new ruler line. The following text lines are all valid for setting a new ruler line:



```
Mary had a little ! Its # was ! as snow
xxxxxxxxxxxxxxx! xxx#xxxxx!xxxxxxxx
L--------------!----#-----!--------R
```

The first two lines are equivalent; they set the margins and three tab stops. The last line sets the same margins and tab stops, but the hyphens also clear any other tab stops that may be set. When you need specific tab stops as you enter text, you'll avoid confusion by using a format similar to the third line for your ruler line.

The standard ruler line (default) sets the left margin at column 1, the right margin at column 65, and tab stops at every fifth column (columns 6, 11, 16, 21, and so on through column 56). While editing, you can alter the ruler line by changing margins (^OL and ^OR) and tabs (^OI and ^ON).

^ O F

Use **^OF** to change ruler lines quickly by setting the ruler line equal to another line in your text file. Follow this procedure:

STEP 1 Position the cursor anywhere in the desired text line.

STEP 2 PRESS **^OF**

STEP 3 SEE the ruler line change to the same margins as in the text line.

If the line happens to contain the characters ! and #, **^OF** will set tabs at the corresponding columns.

In a text line, a hard hyphen is the only other character that is significant in the **^OF** command. Each hyphen represents a text column without a tab stop. Thus a hyphen in the text line clears a tab stop in the corresponding column of the ruler line.

HOW TO PREVENT RULER LINES FROM PRINTING

One way to prevent the printing of a ruler line typed into your text is to connect it to a non-printing comment line. Before typing your ruler line, position the cursor in column 1 of a blank line; then follow this procedure:

TYPE ..

PRESS **^P** RETURN

SEE hyphen (-) in the flag column and cursor in the second blank line

TYPE your ruler line RETURN

Another way to store a ruler line is to keep it in a separate file. When you want to change margins and tabs, use **^KR** to read in the file containing the ruler. Then use **^OF** to change the ruler line, and delete the line in your text. ⊂→ *4-14*

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^ O

Use **^OT** to turn the ruler line display on and off. (Default: *on*.)

Page Breaks

^ O P

Use **^OP** to turn the display of **P**age breaks on and off. (Default: *on*.) When on, this toggle switch inserts a line of hyphens, followed by the letter P in the flag column, to indicate when page breaks will occur in the printed text. Here is an illustration:

```
------------------------------------------------------------------------P
```

This toggle switch also changes the status line display. When it's on, the status line shows **PAGE** and **LINE** numbers. When it's off, the status line shows the total number of **F**ile **C**haracters (FC = nnnn) and **F**ile **L**ines (FL = nnnn) up to the current cursor position.

^ O D

Use **^OD** to turn the **D**isplay of print controls on and off. By suppressing the controls, you can see how columns and margins will line up when printed.

Be sure to turn print control display on when editing text that contains print controls. If you edit without displaying the controls, you can easily delete an important command.

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SUMMARY TABLE: FORMATTING COMMANDS

COMMAND	FUNCTION
^OW	Turns word wrap on/off (default: on)
^OJ	Turns justification on/off (default: on)
^OH	Turns hyphen help on/off (default: on)
^OE	Turns soft hyphenation on/off (default: off)
^P-	Enters a hard hyphen while soft hyphenation is on
^OS	Sets spacing between lines
^OL	Sets left margin
^OR	Sets right margin
^OX	Releases margins
^OC	Centers text on line in which cursor is located
^OV	Turns variable tabbing on/off (default: on)
^OI	Sets tab stops
^ON	Clears tab stops
^I	Skips cursor to next tab stop
^OG	Sets temporary margin at tab stop indicated
^OF	Copies format of a text line into ruler line
^OT	Turns display of ruler line on/off (default: on)
^OP	Turns display of page breaks on/off (default: on)
^OD	Turns display of print controls on/off (default: on)

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7. DESIGNING THE PRINTED PAGE

CONTENTS

SUMMARY TABLES

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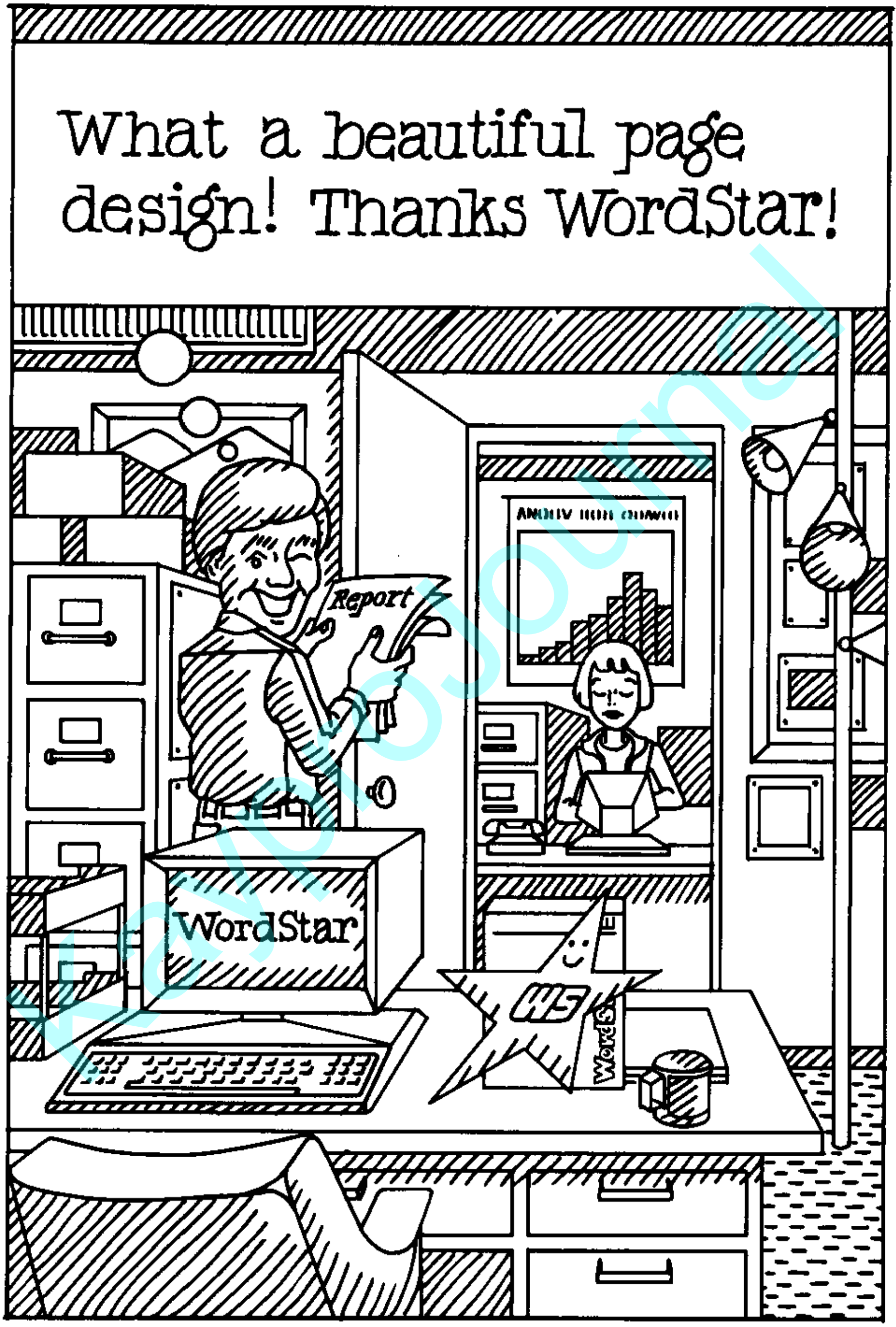

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7. Designing the Printed Page

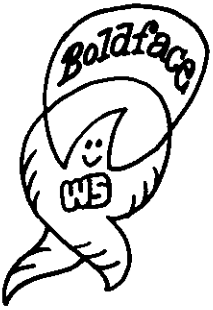
As you work inside a WordStar file, you prepare text for the printed result. With print controls and dot commands, you give instructions about the appearance of your document.

Results will vary, depending upon your printer's capabilities. If you print the sample file, PRINT.TST, which is on your distribution disk, you'll see how WordStar's printing effects work. Whether you have a draft-quality or letter-quality printer, the commands described in this chapter should help you produce the kind of copy you want.

PRINT CONTROLS AND DOT COMMANDS

WHAT IS A PRINT CONTROL?

A print control is a command entered into a WordStar file by holding down the control key as you type **P** and then another letter. You won't see the **P** on the screen, but you will see the control symbol (^) and the letter. On the printed page, you'll see only the results of the executed command, such as boldfacing or underlining.



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HOW TO ENTER PRINT CONTROL COMMANDS

Follow these steps to enter a print control into a file. (^PB is the boldfacing command described later in the chapter.)

STEP 1 PRESS **^P**

STEP 2 TYPE **B**

SEE **^B**

In the previous example, **^B** does not print but tells the printer to begin boldfacing at that location and continue until another **^B** is encountered.

Consider the following points when using print controls:

- Many print controls are toggle switches. When you enter the print control for underlining (^PS), for example, you turn that switch on. You must enter **^PS** again to turn the switch off at the appropriate place, or WordStar will underline every character you enter. ↪ *7-8*
- A print control forces lines of text to extend past the margin. This extension is only a temporary onscreen distortion; print controls occupy space on the screen but not on paper. Use **^OD** to turn off the display of print controls and see the actual alignment of your text. ↪ *6-18*
- If you re-form a paragraph which contains print control characters, the characters will stay with the words they precede and follow.
- You can use print controls anywhere in a file, line, or word.
- You can delete print control characters just as you delete ordinary characters.

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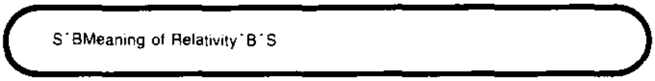
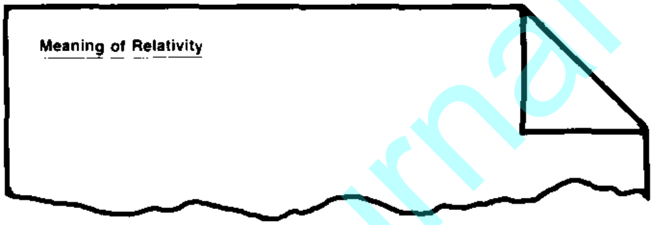
- You can combine several print control characters to create several special effects. If you enter both boldface *and* underline commands, for example, the results will look like this:

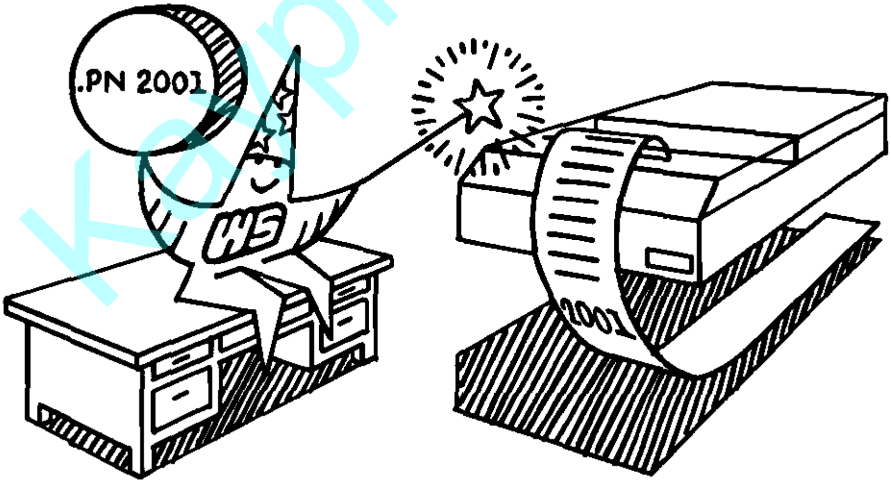


S^BMeaning of Relativity^B^S



Meaning of Relativity

WHAT IS A DOT COMMAND? A dot command is a print command which is entered into a WordStar file by typing a period ("dot") in the first column, followed by two characters in upper or lowercase. This two-letter code, which the program recognizes, can be followed by more characters—often whole numbers or words.



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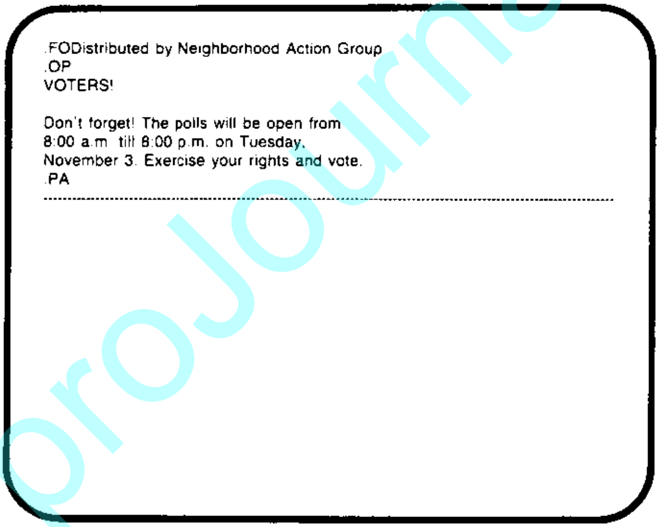
Sometimes, as in the dot command for a page break, there is no text after the command. When there is text, it varies from command to command. Words could indicate whether a toggle switch is on or off or could provide text for headings and footings. A number (*n*) might specify the length of your page or the column in which you want a page number to appear, for example.

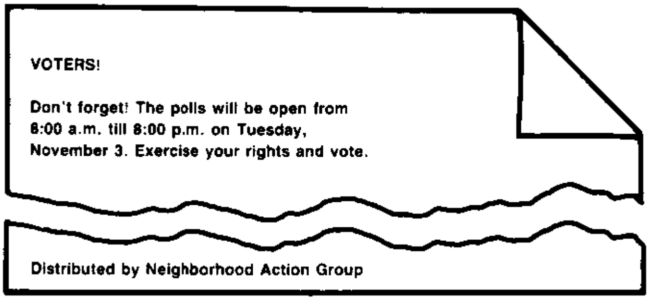
The following example shows the placement of dot commands in a document.



```
.FODistributed by Neighborhood Action Group
.OP
VOTERS!

Don't forget! The polls will be open from
8:00 a.m. till 8:00 p.m. on Tuesday,
November 3. Exercise your rights and vote.
.PA
------------------------------------------------------------------------
```

Here's what the document would look like when printed:



VOTERS!

Don't forget! The polls will be open from
8:00 a.m. till 8:00 p.m. on Tuesday,
November 3. Exercise your rights and vote.

Distributed by Neighborhood Action Group

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Follow these guidelines when using dot commands:

- Always begin a dot command in the first column. Then type the required two-letter code followed by an optional space.

- End the line which *precedes* a dot command with a hard carriage return.

- Always follow a dot command with a hard carriage return.

- Use dot commands as needed in a document. Once entered, a dot command stays in effect on every page you print unless you turn it off or return to the default.

HOW TO ENTER DOT COMMANDS

To enter a dot command, keep in mind the following points:

- Even if the left margin is set at a column other other than the first, when the first character typed in a line is a dot, it will appear in the first column, allowing you to enter your dot command. (If you later re-form the document with ^QQ^B, however, the dot commands will move to the new margin.)

  For example, if your left margin is set at 5 and you begin a new line by typing a period, the period will appear in column 1.

- You see a dot command on the screen, but it does not print. In fact, no line (except dot commands for headings and footings) that begins with a period in column 1 ever prints, unless you suppress page formatting when you print.

⊂⟶ *9-22*

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- Most dot commands are entered at the beginning of a file. If you enter some dot commands at other places in the file, you may see a warning message on the dot command line and a question mark in the flag column. ⟶ *B-2*

- The placement of some dot commands is both logical and strategic. For example, the command for a new page is placed in the exact spot in the text where you want one page to end and another to begin.

- Dot commands take up space on the screen but not on your printed page. Notice that the status line displays the same number for a dot command line as the line below. The column number, however, is accurate.

NOTE: Don't be alarmed to see "a" instead of "an" in front of dot commands beginning with vowels—**.OP**, for example. Simply read such a command as "a dot OP command."

SPECIAL EFFECTS

The special effects that enhance your printed page are often created by print controls which are toggle switches and must be used in pairs. If you use a single print control to turn on a special effect and fail to use another to turn it off, you'll accidentally "enhance" the rest of your document.

You can use any number of special effects in sequence.

Underscoring

^ P S

Use **^PS** before and after any letters, words, or phrases that you want underlined (underScored). **^PS** does not underline blank spaces.

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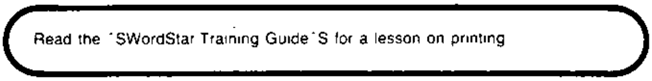
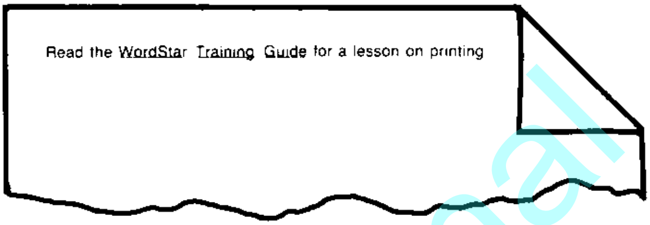
Here is an example:



Read the ^SWordStar Training Guide^S for a lesson on printing



Read the WordStar Training Guide for a lesson on printing

To produce continuous underlining of both characters and spaces, use one of the following methods:

First method:

STEP 1 PRESS **^PS** (at beginning and end of section to be underlined)

STEP 2 TYPE underline (in spaces between words)

Although on the screen you see only the underlining you entered, the entire section will be underlined when you print.

Second method:

STEP 1 PRESS **^P** RETURN (at end of line to be underlined)

STEP 2 TYPE underline (continuously across the entire line)

WordStar will print this line under the previous line when you print your document. (Other uses of ^P RETURN are described later in this chapter.)

⟶ *7-13*

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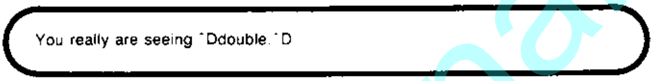
Double Striking

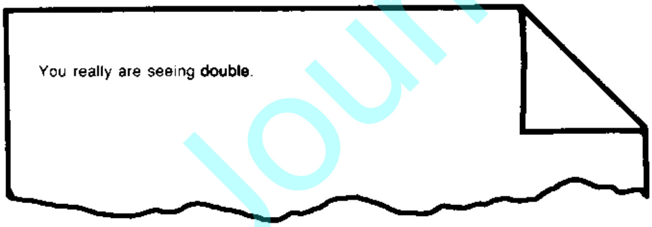
^ P D

Use ^**PD** to produce **D**ouble striking, a light boldface for emphasizing words or phrases. If your printer has a carbon ribbon and you want sharp dark print, you can use double striking on an entire document. Enter ^**PD** before and after the words you want to emphasize.

Here is an example:



```
You really are seeing ^Ddouble.^D
```



You really are seeing **double**.

Boldfacing

^ P B

Enter ^**PB** before and after the words you want to emphasize with **B**oldfaced print. On letter-quality printers, ^**PB** offsets the print head and strikes over characters. On draft-quality printers, ^**PB** causes multi-striking.

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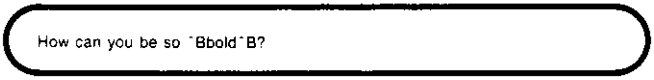
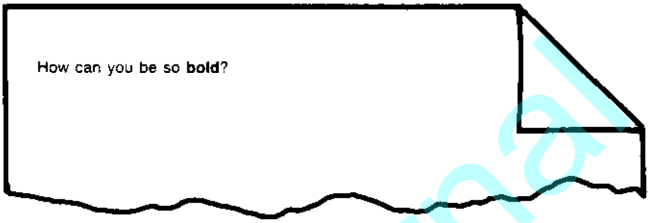
Here is an example:



How can you be so ^Bbold^B?



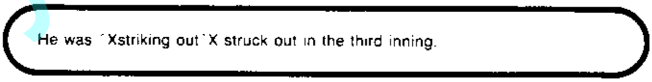
How can you be so **bold**?

^PB is a toggle switch. Don't forget to turn boldfacing off, or your whole document will be outrageously bold.

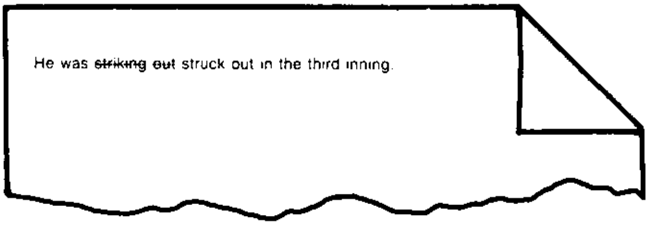
Striking Out

Use **^PX** before and after characters to be crossed out with hyphens but still readable. **^PX** is useful for making corrections visible. Revisions of legal documents, for example, often include deleted text with a line through it.

Here is an example:



He was ^Xstriking out^X struck out in the third inning.



He was ~~striking out~~ struck out in the third inning.

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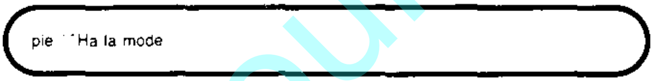
NOTE: **^PX** prints hyphens over characters but not blank spaces.

Printing Over a Character

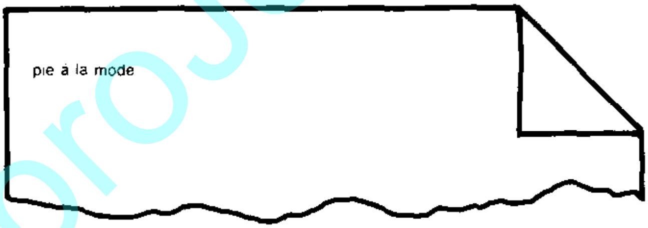
^ P H

Use **^PH** to instruct the printer to backspace and print a character where one already exists. Insert the command immediately after the character to be printed over. You can use this feature to put an accent mark over a letter or to create a special symbol that does not exist on your keyboard.

See this example:



pie `^Ha la mode



pie à la mode

If you enter a series of **^PH** commands several characters will land on top of an existing character.

Look at this example:

TYPE **H**

PRESS **^PH**

SEE H^H

TYPE **I**

PRESS **^PH**

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SEE H^HI^H

TYPE **N**

PRESS **^PH**

SEE H^HI^HN^H

TYPE **Z**

SEE H^HI^HN^HZ

In the previous example, the letters H, I, N, and Z produce this symbol on paper: ▓

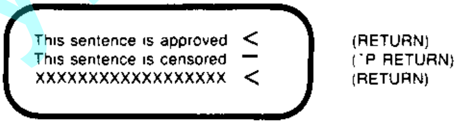
Printing Over a Line

^ P RETURN

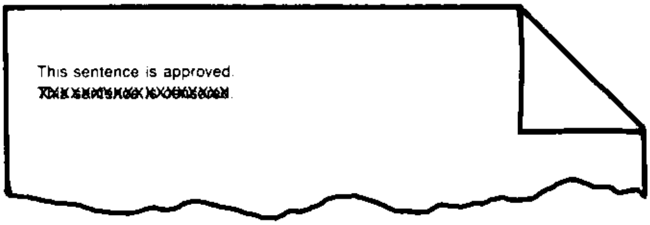
Use **^P RETURN** to make a line of text print on top of the preceding line. This command forces the printer to print one line over the preceding line. Use **^P RETURN** at the end of the line you want to print over and repeat the command to overprint more than one line.

When you use **^P RETURN** you will see a hyphen (-) in the flag column on the right side of your screen.

Here is an example:



```
This sentence is approved  <      (RETURN)
This sentence is censored  -      (^P RETURN)
XXXXXXXXXXXXXXXXXX         <      (RETURN)
```



This sentence is approved.

~~This sentence is censored.~~

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Use ^**P RETURN** with MailMerge when creating three-column mailing labels. See the Appendix to the MailMerge manual for instructions.

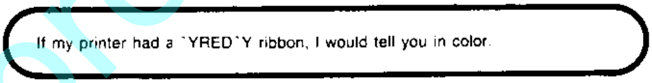
When you assign one line to overprint another, the two lines are, in a sense, connected. To delete one line without deleting the other requires that you delete the ^**P RETURN** (a hyphen in the flag column). Position the cursor in the last column of the first line; then press ^**T**. You'll see the hyphen disappear and the second line move up. Use ^**Q DEL** to delete the "first" line (on the left) or ^**QY** to delete the "second" line (on the right).

Selecting Ribbon Color

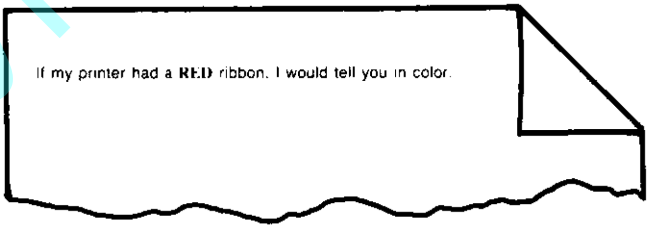
Use ^**PY** to select an alternate ribbon color if you have a letter-quality printer with a two-color ribbon.

Use ^**PY** in pairs to turn the feature on and off, or you're in for some colorful surprises.

Here is an example:



If my printer had a ^YRED^Y ribbon, I would tell you in color.



If my printer had a **RED** ribbon, I would tell you in color.

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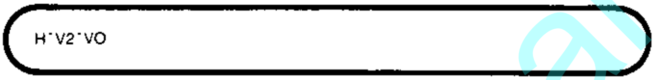
Using Subscripts

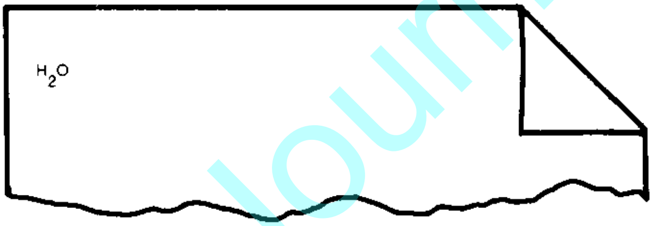
^ P V

Use **^PV** to print subscripts for scientific notation and mathematical equations. Characters between **^PV** commands will be printed below the given line of text.

Here is an example:



```
H^V2^VO
```



H_2O

If you have a letter-quality printer capable of incremental spacing, subscripts print 3/48 inch below the given line. Most draft-quality printers will roll up one full line. Some, however, have half-line feed capability, which WordStar can use for subscript.

If you have a draft-quality printer that rolls up one full line, you must double space your text. Then WordStar can print subscripts in the intervening blank lines. If you don't double space, **^PV** will have no effect.

. S R

If you have a letter-quality printer, use **.SR**, followed by a number, to adjust the distance the printer **R**olls for subscripts and superscripts. The number (*n*) tells the printer to roll *n*/48 inch. The default is 3/48 inch or .SR 3.

Put **.SR** in the first column above any text that contains **^PV** or **^PT**. To return to the default, use **.SR 3** after the same text.

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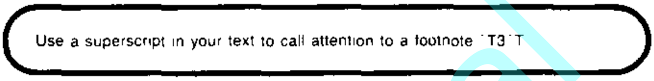
Using Superscripts

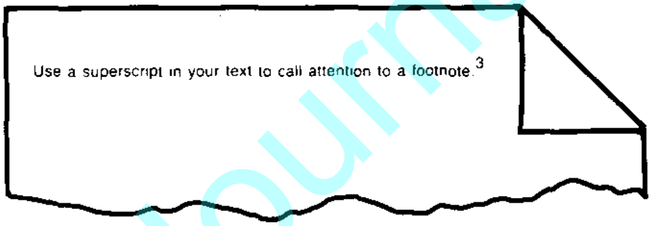
^ P T

Use **^PT** before and after the characters which you want printed above a given line of text. Superscripts are useful for footnotes and mathematical equations.

Here is an example:



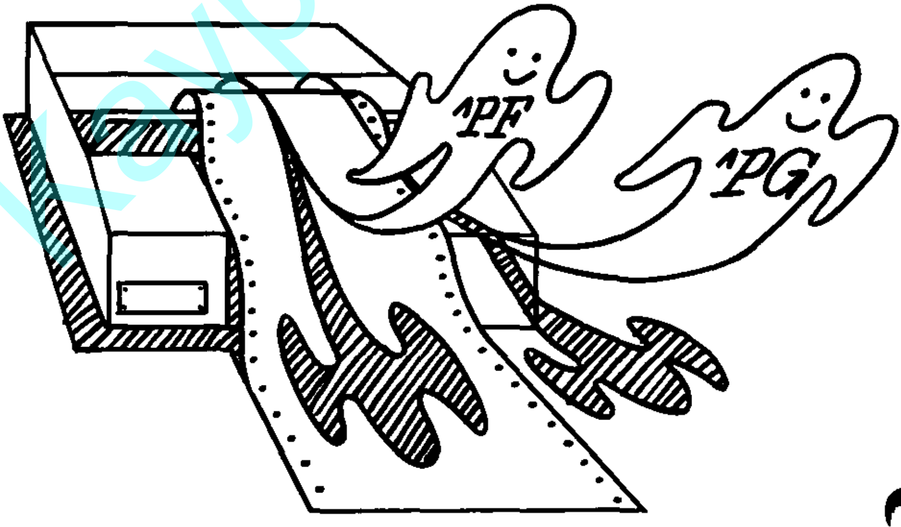
Use a superscript in your text to call attention to a footnote ^T3^T



Use a superscript in your text to call attention to a footnote.^{3}

Read the preceding section for instructions on using **.SR** with superscript commands.

Using Phantom Characters



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Use ^**PF** or ^**PG** in a document to print a phantom character.

These characters are not as ghostly as they sound but they *are* invisible, in a sense. If you have a letter-quality printer you probably have two phantom characters, neither of which appear on your keyboard. When you enter these print controls with print display on (^OD) you see ^**G** or ^**F**. But if print display is off, you see a symbol which varies from system to system. Also, the character that prints in place of a phantom character depends upon your print wheel.

CAUTION

Draft-quality printers are not equipped to respond to ^**PF** and ^**PG**.

NOTE: Unlike most print controls (except ^PO), phantom characters do occupy space. Each takes up one character position, on both the screen and on paper, whether print display is on or off.

^ P F

^**PF**, which is called "phantom space," prints the character for code 20 hex. On some print wheels, this character is the cent sign (¢). Read your printer manual or try ^**PF** to find out what phantom lurks inside your computer.

^ P G

^**PG**, which is called "phantom rubout," prints the character for code 7F hex. Try it to see what character your printer will show you. ^**PG** may be a double underline, or, if your print wheel is bilingual, the German umlaut.

LAYOUT

In addition to special printing effects, WordStar provides many other features to help you produce an attractive printed page. The program will automatically arrange text and space on paper for you. But you can also design your own layout by issuing commands to change certain layout features. For example, when you give a command to alter the standard setting of the width of printed characters or the distance between lines of text, you can change the page design dramatically.

WHAT IS A STANDARD PAGE?

The following are the program defaults for an 8 1/2 x 11 inch page, as shown in the illustration of the standard page.

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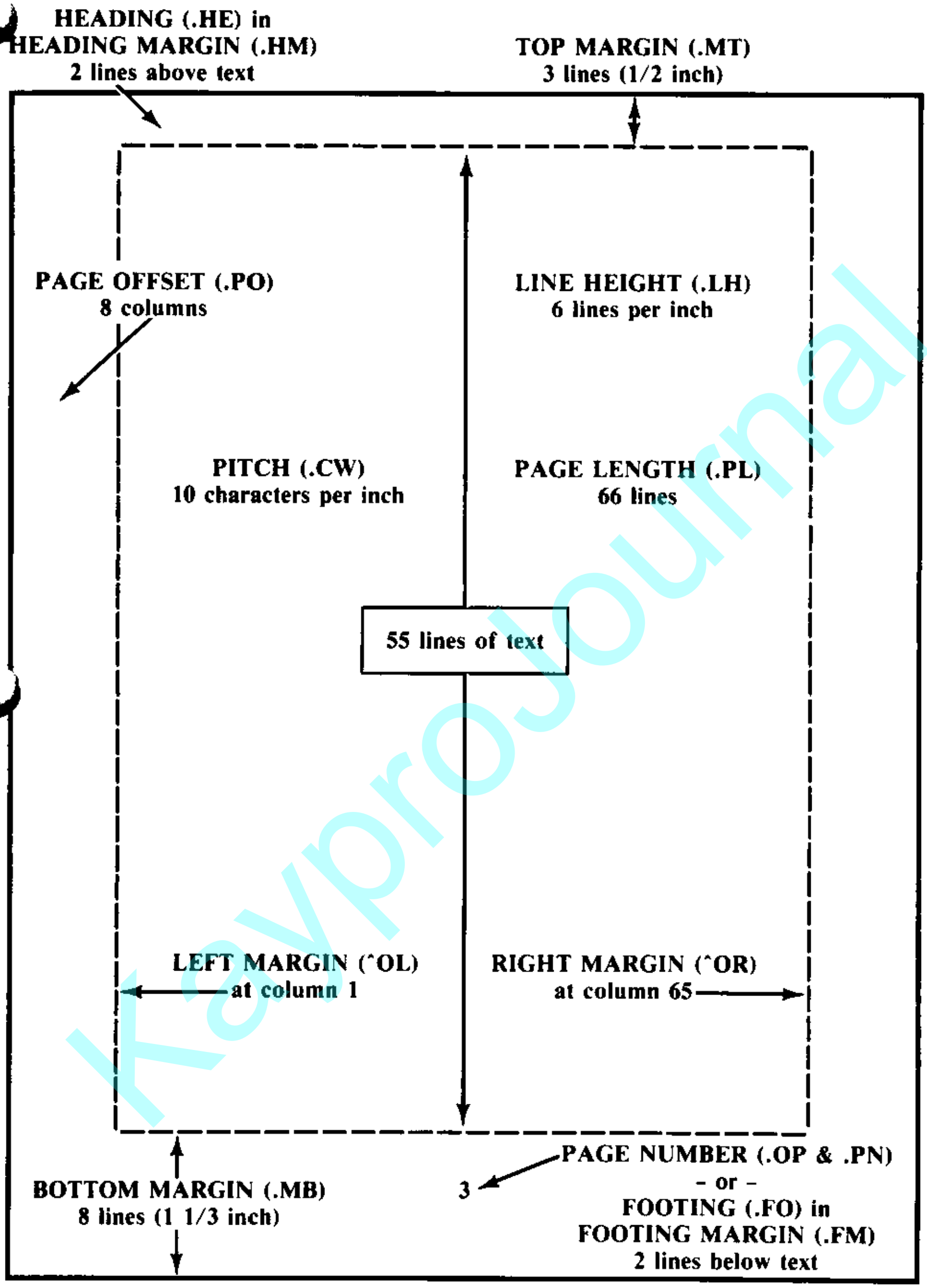

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STANDARD PAGE
(With Commands for Changing Layout)

If you want to change this layout, use the commands described in the sections which follow. Often you'll see only the command and not the change on screen, but when you begin to print, presto! Everything will fall into place.

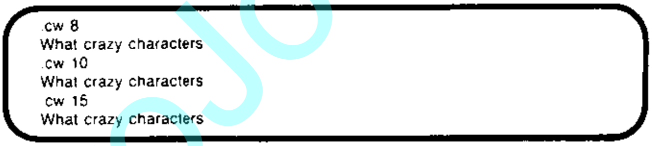
Most layout commands are dot commands.

Character Pitch

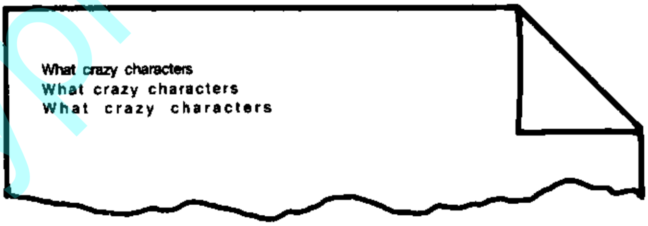
. C W

Use **.CW**, followed by a number, to change type size (Character **W**idth or pitch). If your printer is capable of microspacing, this command will increase or decrease the number of characters printed per inch. The number (*n*) sets the width of the space in which a character is typed to *n*/120 inch.

See the following example:



```
.cw 8
What crazy characters
.cw 10
What crazy characters
.cw 15
What crazy characters
```



```
What crazy characters
What  crazy  characters
What   crazy   characters
```

The standard character pitch in WordStar is 12/120 inch or **.CW 12**. This measurement corresponds to 10 characters per inch, which is normal pitch or pica type. After a change, enter **.CW 12** to return to the default.

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Large numbers spread characters out, and small numbers squeeze characters together.

Since spaces are inserted in your text as space characters, they are also affected by changes in character pitch with **.CW**. If your left margin is indented following a **.CW**, for example, the layout will be distorted when you print the page.

Although you can use any number up to 255 after a **.CW** command, a practical range is shown in the following table. Refer to the right margin, as indicated in the table, to stay within the boundaries of a piece of paper which is 8 1/2 x 11 inches.

Dot Command	Characters Per Inch	Right Margin
.CW 4	30	195
.CW 5	24	156
.CW 6	20	130
.CW 8	15	98
.CW 10	12	78
.CW 12	10	65*
.CW 15	8	52
.CW 17	7	46
.CW 20	6	39
.CW 24	5	32

* WordStar standard

NOTE: This table offers only a sampling and doesn't include all the possible choices between 4 and 24.

The larger the number, the farther apart the characters will be.

On letter-quality printers, you can use the print controls **^PA** and **^PN** to alternate between pitches. You will alternate between pica type (10 characters per inch) and elite type (12 characters per inch), unless you have specified a different pitch with a **.CW** command.

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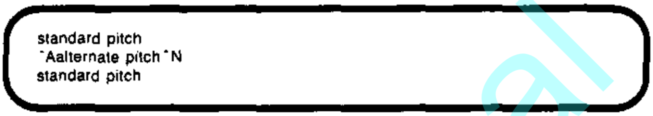
In the following example, ^**PA** and ^**PN** are used to alternate between pica and elite type. Notice that space characters and margins following these commands would also expand or shrink with the indicated pitch. To change pitch within one line of text, without affecting the margin, the commands must appear on the same line:



```
standard pitch
^Aalternate pitch^N
standard pitch
```

standard pitch
alternate pitch
standard pitch

^ P A

Use ^**PA** to tell WordStar to select an **A**lternate character pitch. WordStar requires a corresponding command, ^**PN**, to return to the standard pitch. If you use **.CW** immediately after ^**PA**, the pitch set by the dot command will be the alternate pitch. If you do not use **.CW**, the alternate pitch will be elite type (12 characters per inch).

^ P N

Use ^**PN** at the place in your text where you want to return to **N**ormal character pitch. If you use **.CW** immediately after ^**PN**, the pitch set by the dot command will be the standard pitch. If you do not use **.CW**, the standard pitch will be pica type (10 characters per inch).

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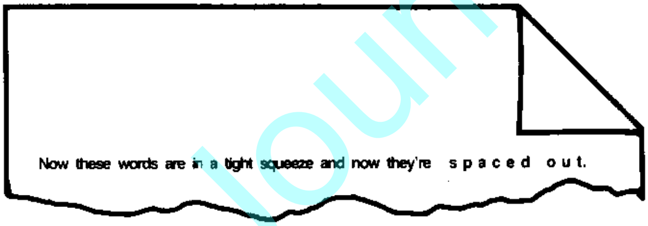
In the following example, pitch alternates between 6 characters per inch (.CW 20) and 15 characters per inch (.CW 8). Notice that **^PA** and **^PN** are used in two places: at the top of the file to set the pitch at the values specified by **.CW** and in the text to alternate the pitch of the last two words in the sentence.

```
^A
.CW 20
^N
.CW 8
Now these words are in a tight squeeze and now they're ^Aspaced out^N.
```


Now these words are in a tight squeeze and now they're spaced out.

Spaces

When you design your page, the spaces are as important as the text. Examples include the spacing of certain words in a paragraph and columns when you re-form a paragraph or a table. Spacing can make the difference between a clear or confusing presentation, and certain WordStar commands help you to control where blank space falls on the page.

Use **^PO** for a non-break space when you want to keep two words together as you re-form a paragraph. **^PO** keeps two words together with justification on or off during paragraph re-form.

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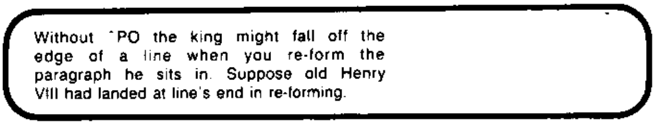
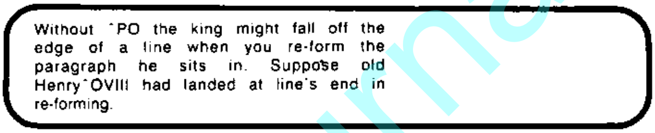
Look at this example:



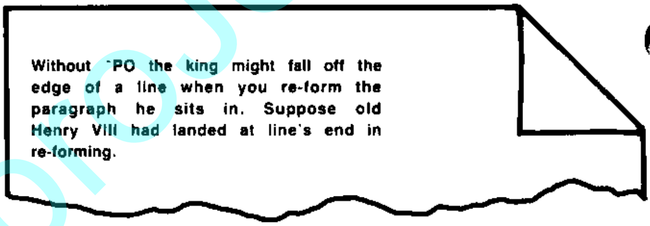
```
Without ^PO the king might fall off the
edge of a line when you re-form the
paragraph he sits in. Suppose old Henry
VIII had landed at line's end in re-forming.
```

If you enter **^PO** to keep **Henry** and **VIII** together, the screen will look like the following:



```
Without ^PO the king might fall off the
edge of a line when you re-form the
paragraph he sits in. Suppose old
Henry^OVIII had landed at line's end in
re-forming.
```

The paper results of **^PO** would be the following:



```
Without ^PO the king might fall off the
edge of a line when you re-form the
paragraph he sits in. Suppose old
Henry VIII had landed at line's end in
re-forming.
```

If you have a letter-quality printer, use **.UJ OFF** to turn off microJustification when you begin typing a table. **.UJ OFF** insures that soft spaces do not push columns out of alignment when the page is printed. Remember to use **.UJ ON** when the table is complete.

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Columns that appear perfectly straight on the screen become ragged on paper because of a letter-quality printer's capability of microspacing. Some of these printers take instruction from WordStar to distribute space in 1/120-inch increments between words and letters.

Lines formed with word wrap or re-formed with **^B** (with justification on) have soft spaces automatically inserted between words. When these lines are printed, the microspacing feature of some printers causes further justification (microjustification). In most cases, this process improves the appearance of your text, but it often pushes tabular material out of alignment.

The WordStar default for letter-quality printers is justification on, unless you use this dot command to turn it off.

Vertical Page

You can adjust the number of lines per page, the number of lines per inch, and the size of the top and bottom margins on your page. The flexibility of the program thus enables you to design pages other than the standard 8 1/2 x 11 inches and to build intricate forms.

Align your paper properly in the printer to get the vertical page layout you want.

DOT COMMANDS FOR VERTICAL PAGE

The following dot commands, described fully in this section, control vertical page layout:

.PL	Page Length
.LH	Line Height
.MT & .MB	Top and Bottom Margins
.HM	Heading Margin
.FM	Footing Margin

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You can put these commands anywhere in your file between lines of text. However, because **.LH**, **.PL**, **.MB**, **.MT** affect the page break display on your screen, putting them at the beginning of your document lets you see the page breaks as they will occur in your printed document.

If you put the commands elsewhere in your text, you'll see a warning message on the line and a question mark in the flag column, but you can leave the command where it is—if that's where you want it.

. P L

Use **.PL n** to specify **P**age **L**ength by number of lines. If your page has more or less than 66 lines (11 inches), indicate its length with **.PL**, followed by the total number of lines on the page. Remember, six lines to the inch is the default. If your paper is legal size (14 inches), for example, your dot command would be **.PL 84.**

Out of the total lines for a specified paper length, the number that will actually print depends on the other commands you give WordStar. If no others are given, WordStar tells the printer to leave the standard margins. If you use **.MT**, **.MB**, **.HM**, or **.FM**, WordStar will subtract the number of lines specified in each command from the total length in the **.PL** command; be sure to enter **.MT** and **.MB** commands before entering **.PL**.

CAUTION

If your draft-quality printer prints more or less than six lines to the inch, you must use **.PL** every time you print. Multiply the number of lines to the inch by the number of inches on the paper and use this number with **.PL**.

The paper length specified must be equivalent to actual paper length, unless your printer allows you to print with the "Use Form Feeds" option. ⟶ *9-22*

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. L H

Use **.LH n** to specify line height by *n*/48 inch. Thus, to change the default, which is six lines per inch or 8/48 inch, type the appropriate number after **.LH**. **.LH 8** would be 8/48 or 1/6 inch, for example. **.LH** works only on letter-quality printers.

The following table offers a sample of line heights. Note that using a number smaller than five causes overprinting. Notice, too, that **.LH 16** is twice the WordStar standard, that is, half as many lines per inch. **.LH 16** provides an easy way to produce a double-spaced document when it's printed. If you want to have double-spaced text on the screen as well as on paper, use **^OS**.

Dot Command	Lines Per Inch
.LH 5	9.6
.LH 6	8
.LH 8	6*
.LH 10	4.8
.LH 16	3
.LH 24	2

* WordStar standard

If you change line height, be sure to enter **.LH 8** to return to the default.

Line height affects page length and top and bottom margins. If you enter a command to change line height *before* you enter the other commands, **.PL**, **.MT**, and **.MB** will be interpreted according to the new line height. If you change line height *after* giving one of these commands, however, the margins and paper length won't be affected by the new setting and will be interpreted according to the default line height.

Here is an example: If you enter **.LH 6** *before* **.MT 4**, your top margin will measure 1/2 inch (4 lines of 6/48 inch each). But if you enter **.LH 6** *after* **.MT 4**, your top margin will measure 4/6 inch (4 lines of 8/48 inch).

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. M T

Use **.MT n** to specify the number of blank lines at the **T**op of the page. The default is three blank lines and includes the page heading and the heading margin. To increase the amount of text on the page, decrease the top margin; to decrease the amount of text, increase the top margin.

A dot command stays in effect until you turn it off or change its value. If you have changed the top margin for some of your pages, be sure to use **.MT 3** to return to the default.

. M B

Use **.MB n** to specify the number of blank lines below your text at the **B**ottom of the page. The default is eight blank lines and includes the page number or footing and the footing margin.

. H M

Use **.HM n** to specify the **H**eading **M**argin, i.e., the number of blank lines from the page heading to the body of the text. The default is two blank lines. If you use **.HE** to specify a single-line heading, there will be two blank lines below the heading, making a total of three blank lines at the top of the page—the default for the top margin.

CAUTION

Heading lines are counted as part of your top margin. If you add a heading without adjusting the default margin (three lines), two blank lines will appear between the header and your text.

. F M

Use **.FM n** to specify the number of blank lines between the body of your text and the **F**ooting or page number. This command positions the footing within the bottom margin. The default of two blank lines is unaffected even when you change the bottom margin.

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Headings and Footings

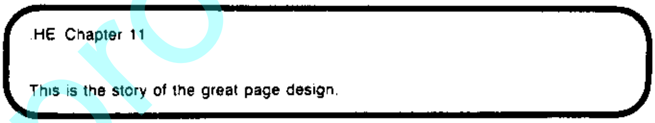
Headings and footings are single lines of text which are included in the top and bottom margins with the heading and footing margins. You only need to enter these dot commands once, at the start of the file, and your headings and footings will be repeated on every page of a document. The default is no heading and automatic page numbering as footing.

. H E

Use **.HE** to insert a single line of **Heading** within the top margin of the page. After typing **.HE**, beginning in the first column, type a space (optional), then text or spaces. You can also use special print controls for custom page numbering. ⟶ *7-31*

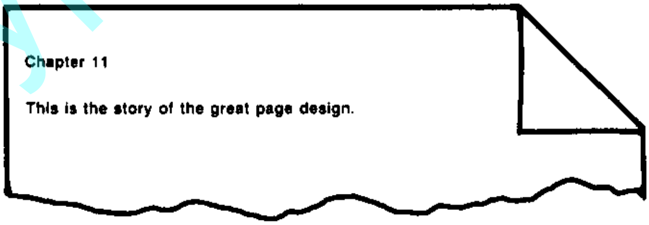
When you want to return to the default of no heading, use **.HE** alone. If you want the heading to appear flush with the left margin, do not type more than one space between **.HE** and the text.

Here is an example:



.HE Chapter 11

This is the story of the great page design.



Chapter 11

This is the story of the great page design.

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Notice that the printed text appears in a position four spaces to the left of its screen position. On the screen the heading is pushed over four spaces by the dot command, which does not print, and by the space (optional) following it.

A dot command occupies space on the screen but not on paper.

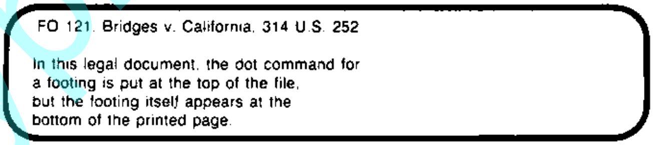
You can move the heading closer to or farther from the body of the text by changing the heading margin.

.FO

Use **.FO** to put a single line of **Fo**oting within the bottom margin below the text. After typing **.FO**, beginning in the first column, enter a space (optional), then text or spaces. You can also use special print controls. ⟶ *7-31*

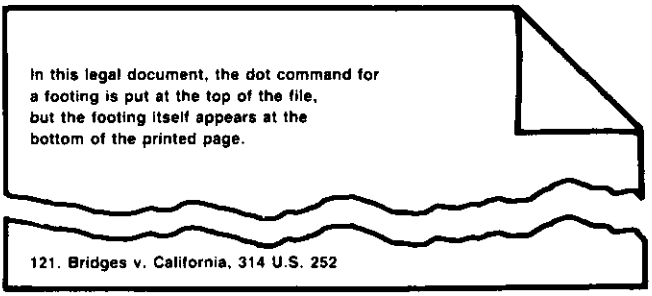
The footing appears on every page until you enter **.FO** alone to return to the default, a centered page number. If you want the footing to appear flush with the left margin, do not type more than one space between **.FO** and the text.

Here is an example:



.FO 121. Bridges v. California, 314 U.S. 252

In this legal document, the dot command for
a footing is put at the top of the file,
but the footing itself appears at the
bottom of the printed page.



In this legal document, the dot command for
a footing is put at the top of the file,
but the footing itself appears at the
bottom of the printed page.

121. Bridges v. California, 314 U.S. 252

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If you change the footing margin, the footing moves up or down on the page, but the number of lines of text on the page remains the same.

No footing will be printed if the bottom margin is set to zero.

When a command for a heading or footing is given, the character pitch currently in effect stays in effect. If you later change the pitch in the text with **.CW**, neither heading nor footing will be affected. However, if you use **^PA** or **^PN** within the heading or footing, the pitch in effect at the time the heading or footing is printed will affect the command lines as well as the text.

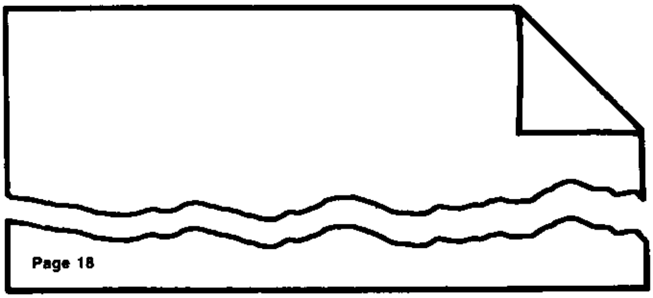
The print control commands for special effects like boldfacing can be used in headings and footings without affecting the body of the text. Conversely, special effects in the text do not affect headings or footings.

There are three special print controls which work only in headings and footings.

^ P #

Use **^P#** to print the current page number in a heading or footing. Here is an example:

```
FO Page #
```



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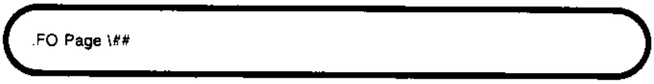
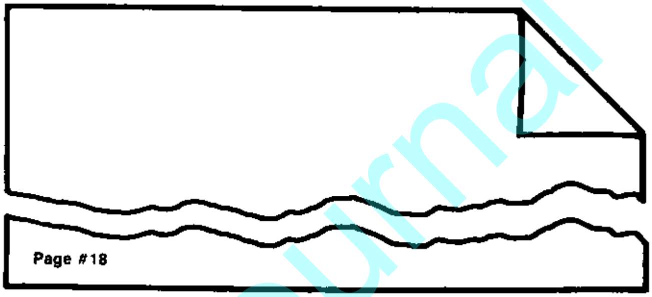
^ P \

Use **^P** \ to specify that the next character entered is to be printed exactly as it appears on the screen. Here is an example with the back slash:



```
.FO Page \##
```

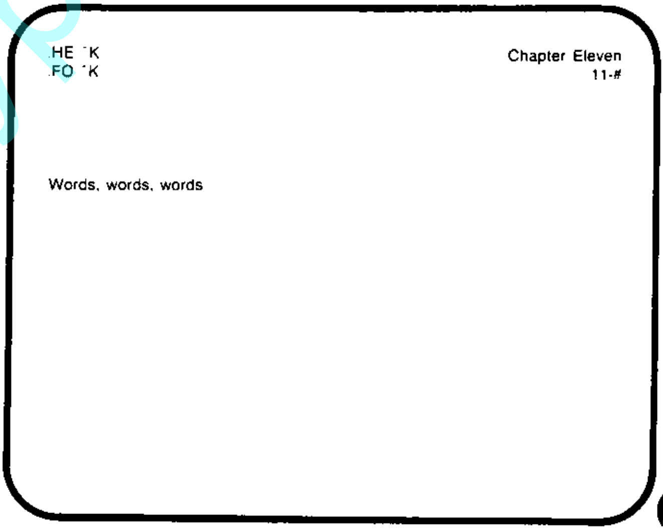


Page #18

^ P K

Use **^PK** to print headings and footings for even-numbered pages on the left and for odd-numbered pages on the right.

The following example illustrates how **^PK** works on odd and even numbered pages.



```
.HE ^K                                        Chapter Eleven
.FO ^K                                                  11-#



Words, words, words
```

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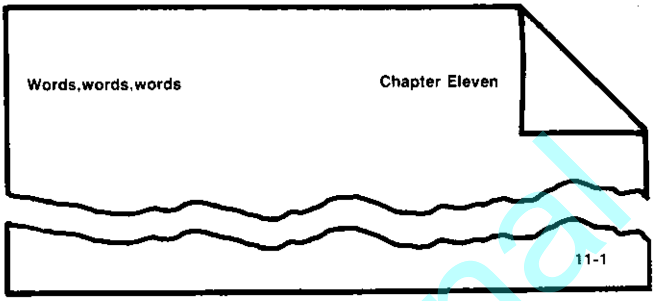
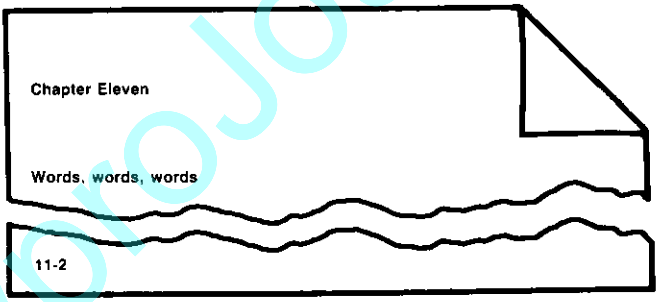
Odd numbered pages will look like the following illustration:



Even numbered pages will look like the following illustration:



Pages

WHAT IS A PAGE BREAK?

WordStar lets you decide where one page ends and the next begins. With no commands from you and with 8 1/2 x 11 inch paper in the printer, WordStar will begin a new page every 66 lines. Because vertical margins account for eleven of these lines, the page break display on your screen shows up at line 55.

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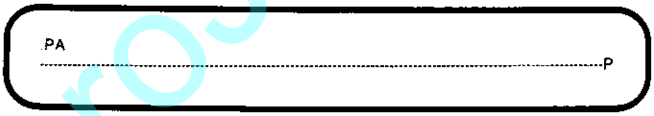
Two WordStar commands, **.PA** and **.CP n**, can help you to avoid page breaks that would produce the following awkward results:

- The first line of a paragraph stranded at the bottom of the page
- The last line of a paragraph sitting alone at the top of the following page
- A chart or a table cut in two

. P A

Use **.PA** to insert a **PA**ge break wherever you want it.

When it encounters **.PA**, WordStar directs the printer to roll a new page. Type **.PA**, beginning in the first column on any line in a document file, and then press RETURN. The dotted line of the page break display immediately appears on the next line.



```
.PA
-------------------------------------------------------------------P
```

CAUTION

You can turn off the display of page breaks with **^OP**, but the breaks will still occur.

The status line at the top of your screen always reports the cursor position. When you type **.PA**, the status line reports the line number at which you are commanding a page break. If you move the cursor just below the page break display, the status line reports the new page number and starts again at line 1.

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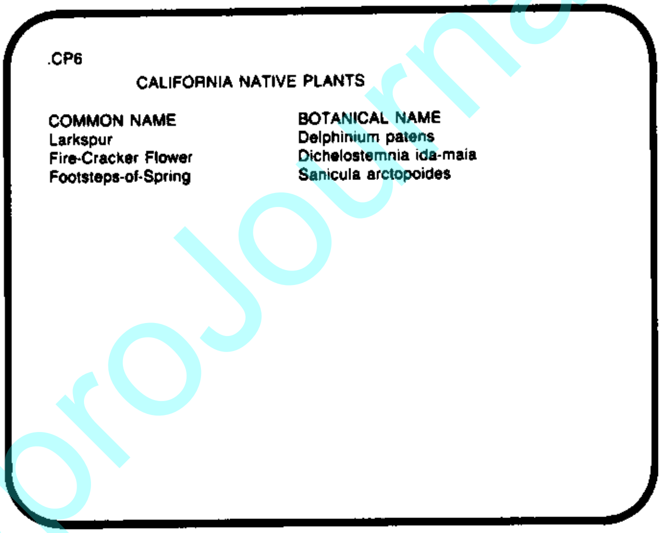
. C P

Use **.CP n** to insert a **C**onditional **P**age break. **.CP n** tells WordStar: "Unless there are *n* lines remaining for text on this page, print the next *n* lines of text on the next page."

If less than *n* lines remain on the page, a page break display appears below the **.CP** command to indicate where the new page begins.

Here is an example in which **.CP** prints all the lines of a chart on one page:



```
.CP6
           CALIFORNIA NATIVE PLANTS

COMMON NAME                    BOTANICAL NAME
Larkspur                       Delphinium patens
Fire-Cracker Flower            Dichelostemnia ida-maia
Footsteps-of-Spring            Sanicula arctopoides
```

In this example, the six lines of the table will always print on the same page.

When you do a lot of editing, **.CP n** is a safeguard. No matter how much you change your document, the lines you want kept together stay with the **.CP** command.

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PAGE NUMBERING

Three dot commands, **.OP**, **.PN**, **.PC**, offer you page numbering options. The default is sequential numbers printed in column 33 (30 if your screen is 64 columns wide).

.OP

Use **.OP** to **O**mit **P**age numbers. When WordStar prints your letters and memos, put **.OP**, beginning in the first column, at the top of your file. Even if your document has several pages, none will be numbered. This command is unnecessary if you use a footing. Your footing can specify numbered or unnumbered pages. ⟶ *7-31*

.PN

Use **.PN** to restore **P**age **N**umbers after you have used **.OP** to omit them. Don't worry about setting the number; WordStar automatically picks up sequential numbering. Suppose, for example, that you have a ten-page document file; use **.OP** at the beginning of the file and insert **.PN** on page 6. When you print, you'll see five pages unnumbered and five pages numbered consecutively, 6, 7, 8, 9, 10.

Use **.PN n** to set the page number at *n*. WordStar automatically puts sequential numbers on subsequent pages. For example, if you put **.PN 217** at the top of a page, **218** will automatically be printed on the next page.

NOTE: When you choose the option that allows you to begin printing at a specified page number, use the number from the sequence specified by the **.PN** command. For example, if you put **.PN 25** at the top of a file and want to print the third page of that file, type **27** in response to the page number prompt. ⟶ *9-22*

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. P C

Use **.PC n** to specify the **C**olumn number in which the **P**age number appears at the bottom of the page. **.PC n** will only work when you are not using a footing and have not omitted page numbers. The character pitch used is that of the character pitch in effect when the command is given.

PRINTER PERFORMANCE

Much of your printer's performance depends upon the printer itself. However, WordStar can control mechanical aspects of printing, such as pauses and movement of the print head.

Bidirectional Printing

. B P

Use the toggle switch **.BP** to turn **B**idirectional **P**rinting on and off. Bidirectional printing proceeds in two directions. Letter-quality printers save time by printing left to right and then back again, right to left. **.BP OFF** or **.BP 0** turns bidirectional printing off, and **.BP ON** or **.BP 1** turns it on again. **.BP OFF** (or 0) is helpful if you're printing tables or if the character registration or paper feed mechanisms on your printer are not operating well.

Page Offset

. P O

Use **.PO n** to specify **P**age **O**ffset, the column in which the print head actually begins to print. This command offsets the entire document to the specified column (*n*). The default is eight columns from the left edge of the paper. To move the text to the left edge of the printer carriage, use **.PO 0** at the start of the document.

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Starting and Stopping

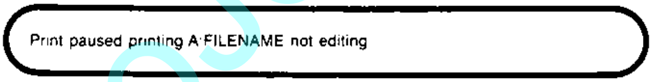
HOW TO MAKE THE PRINTER PAUSE

You can start and stop your printer with its own toggle switches, or you can control it from the Opening Menu with **P** or the Main Menu with **^KP**.

^ P C

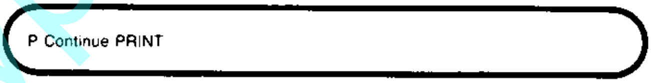
Use **^PC** to pause anywhere in the printing of a document file—in the middle of a line or several times in the same line. At lines containing **^PC**, WordStar automatically suspends bidirectional printing so that printing will pause in the correct place. Imagine what would happen if you placed **^PC** before a phrase to be printed in red and print head approached from right to left. The print head would reach the command and pause—too late for a ribbon change.

When you print the document which contains **^PC**, you will see this message above the Opening Menu:



```
Print paused printing A:FILENAME not editing
```

On the Opening Menu you will see:



```
P Continue PRINT
```

To resume printing, type **P**.

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Special Features (User Patches)

^ P Q
^ P W
^ P E
^ P R

Your printer may have special features, such as mechanisms for feeding individual sheets of paper or changing type fonts. Once installed, these features will be activated as the program encounters one of the corresponding print controls, **^PQ**, **^PW**, **^PE**, or **^PR**. Until then, however, the four commands will not function. If your system can support these modifications, read the WordStar Installation Manual.

COMPATIBILITY WITH OTHER PROGRAMS

Three rarely used commands **^PI**, **^PJ**, and **^PL**, make WordStar compatible with other word-processing software. Since other programs cannot recognize WordStar code, these commands use characters from the ASCII, which are rarely used for normal word processing; you won't see them on the Print Menu.

Fixed Tab

^ P I

Use **^PI**, the ASCII fixed-tab character, to shift to fixed tabbing. **^PI** enters **^I** as one unit, eight characters long, into a file. The effect is the same as pressing **^I** in non-document mode. ⟶ *10-11*

Line Feed

^ P J

Use **^PJ**, the command for the ASCII line-feed character, to direct the printer to move to the line below without returning to column 1. You'll see **J** in

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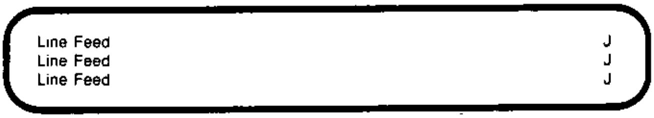
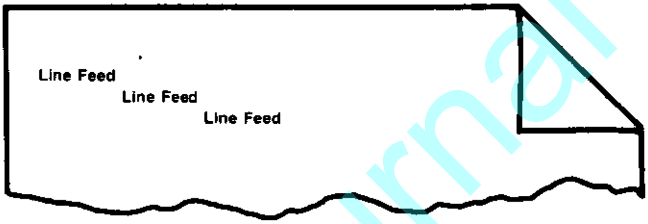
the flag column at each line feed, as in the following example:



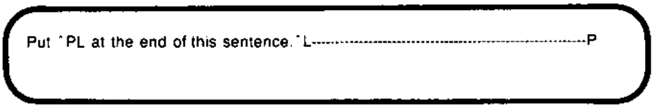
```
Line Feed                                                    J
Line Feed                                                    J
Line Feed                                                    J
```



A line feed advances the paper in your printer one line. Unlike the carriage return on a typewriter, which causes a RETURN *and* a line feed, a carriage return on a computer can be distinct from a line feed. To make WordStar compatible with other text programs, you may want to give a separate command for a line feed.

Form Feed

Use **^PL**, the command for the ASCII form-feed character, to direct the printer to roll up the distance of the form being printed, usually a standard 8 1/2 x 11 inch page. **^PL** causes a page break to occur on the screen, beginning at the column where **^PL** is entered. Look at the following example:



```
Put ^PL at the end of this sentence.^L--------------------------------------------P
```

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COMMENT LINES

Use two dots, beginning in column 1, to add lines of text which will not print. You can also use multiple comment lines in succession and type up to a practical limit of 240 characters after the two dots.

Here's an example:

```
.. Edited by J.R. 12/9/82
```

Use **.IG** to add a line of text which WordStar will **IG**nore at print time. Like the two dots, **.IG** can be used as often as you like in a file and has a limit of 240 characters.

Here's an example:

```
.IG Print two double-spaced copies.
```

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SUMMARY TABLE: PRINT CONTROL COMMANDS

COMMAND	FUNCTION
	Special Effects:
^PS	Underlines all characters (not spaces) between first and second occurrence
^PD	Double strikes all characters between first and second occurrence, producing a light boldface
^PB	Boldfaces all characters between first and second occurrence
^PX	Prints hyphens (---) over all characters (not spaces) between first and second occurrence
^PH	Causes next character to print over character in same column
^P RETURN	Causes next line to print over present line
^PY	If printer allows, prints characters between first and second occurrence in alternate ribbon color
^PV	If printer allows, prints characters between first and second occurrence a fractional line below other text, producing subscript
^PT	If printer allows, prints characters between first and second occurrence a fractional line above other text, producing superscript
^PF	For letter-quality printers, prints a character not seen on keyboard (phantom character)
^PG	For letter-quality printers, prints a character not seen on keyboard (phantom rubout)
	Layout:
^PA	For letter-quality printers, sets pitch at 12 characters per inch (elite)
^PN	For letter-quality printers, sets pitch at 10 characters per inch (pica) or—with ^PA—at pitch set by .CW
^PO	Inserts a non-break space between two characters, preventing word wrap or paragraph re-forming from separating two words

-continued-

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SUMMARY TABLE: PRINT CONTROL COMMANDS (continued)

COMMAND	FUNCTION
	Layout, (continued):
^P#	In heading (.HE) and footing (.FO) lines only, prints the current page number
^P	In headings and footings only, prints the symbol immediately following the slash, rather than interpreting it as a program function
^PK	In headings and footings only, causes text or page numbers to alternate position on left-and-right or odd-and-even pages
	Others:
^PC	Stops printing until you press P again at Opening Menu
^PI	Inserts a fixed-tab space, eight characters wide
^PJ	Inserts a line feed while printing the present line
^PL	Inserts a page break while printing the present line
^PQ	Special feature (User patch 1)
^PW	Special feature (User patch 2)
^PE	Special feature (User patch 3)
^PR	Special feature (User patch 4)

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SUMMARY TABLE: DOT COMMANDS

COMMAND	FUNCTION
	Layout:
.CW *n*	For letter-quality printers, sets character width to n/120 inch (default: 12/120 inch, 10 characters per inch)
.UJ OFF	Turns microjustification off to print all spaces exactly as they appear on screen (default: on)
.UJ ON	Turns microjustification on, distributing spaces in a line by 1/120 inch increments
.PL *n*	Identifies number of lines on entire page (default: 66 lines, 6 lines per inch on an 11-inch page)
.LH *n*	For letter-quality printers, sets line height to *n*/48 inch (default: 8/48 inch, 6 lines per inch)
.MT *n*	Sets number of lines from top of page to beginning of text (default: 3)
.MB *n*	Sets number of lines from end of text to bottom of page (default: 8)
.HM *n*	Sets number of blank lines between heading (.HE) line and first line of text (default: 2)
.FM *n*	Sets number of blank lines between last line of text and footing (.FO) line (default: 2)
.HE *text*	Prints one given line of text as heading on every page until .HE is used again without text or with a new line of text (default: no heading)
.FO *text*	Prints one line of text as footing on every page until .FO is used again without text or with a new line of text (default: page number, centered)
.PA	Starts new page at indicated line (default: 55 lines of text before a page break)
.CP *n*	Specifies number of lines in which no page break is to occur; *n* lines will stay together on subsequent page
.OP	Omits page numbers (default: consecutive page numbers)

-continued-

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SUMMARY TABLE: DOT COMMANDS (continued)

COMMAND	FUNCTION
	Layout, (continued):
.PN	Returns to accurate page numbers after .OP
.PN *n*	Sets page number at *n* and numbers subsequent pages consecutively
.PC *n*	Sets column at which page number prints when no footing (.FO) is specified (default: center column)
	Others:
.SR *n*	For letter-quality printers, rolls the printer carriage *n*/48 inch before printing a sub or superscript
.BP OFF	For letter-quality printers, prints every line from left to right (default: on)
.BP ON	For letter-quality printers, permits alternate lines to print right to left
.PO *n*	Sets number of columns to indent all lines of document from printer's left margin — in addition to all other indentation in the file (default: 8)
.. *or* .IG	Identifies line of text immediately following as .IG onscreen comment line only, not to be printed

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8. WORKING WITH TABLES

CONTENTS

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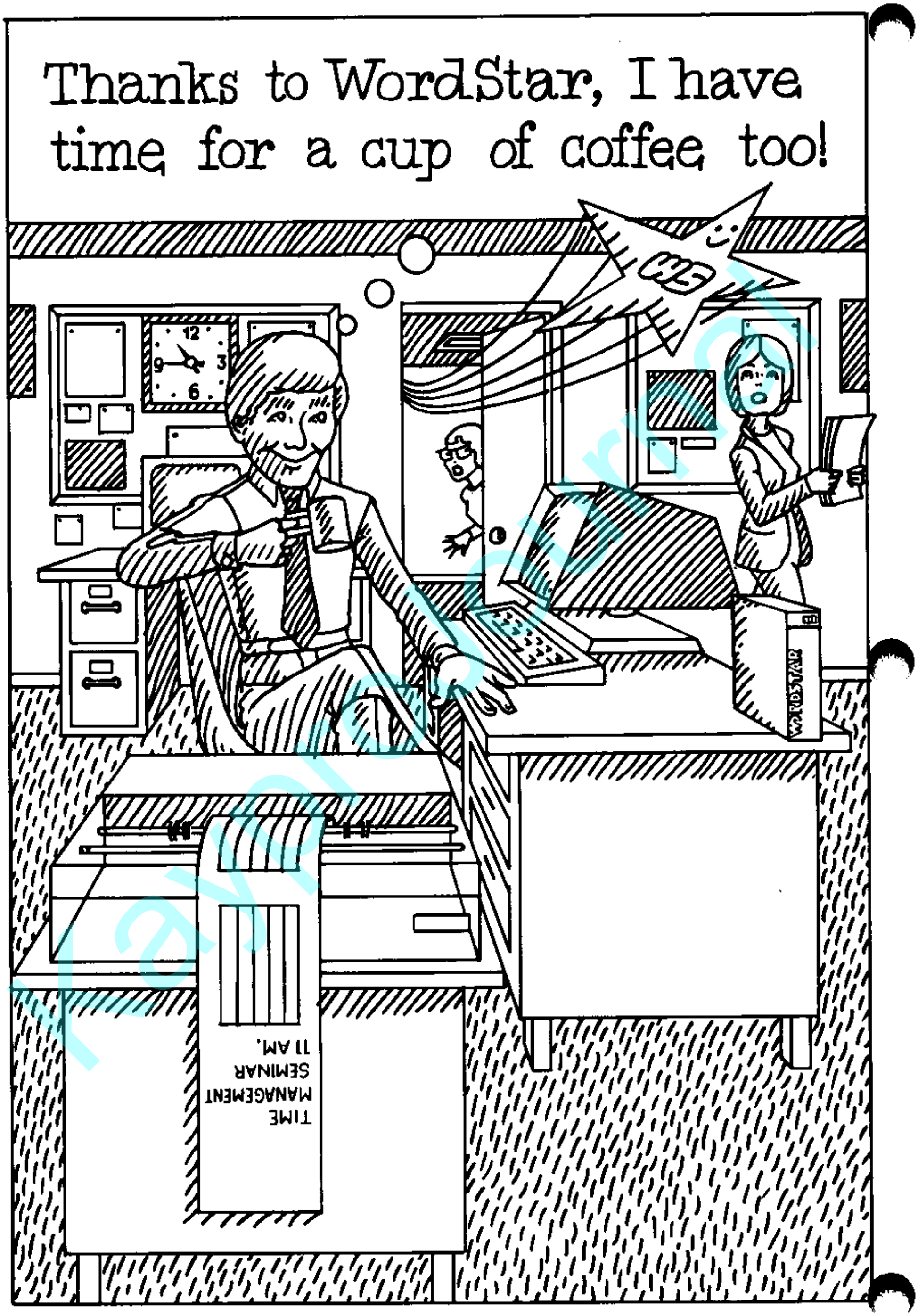
Thanks to WordStar, I have time for a cup of coffee too!
WS
12
3
6
9
WORDSTAR
TIME MANAGEMENT SEMINAR 11 AM.

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8. Working with Tables

During normal text entry, you use various WordStar features, such as tabs, decimal tabs, and margin settings. When you enter tabular material, however, your editing will be more precise if you turn off or adapt many features, such as insertion and word wrap.

GENERAL GUIDELINES

Follow these general guidelines:

- Turn insertion off (^V). When this toggle switch is off, a change in one column will not affect other columns on the same line. ⊂⟶ *3-12*
- Turn word wrap off (^OW). When this toggle switch is off, your format will not be ruined by words "wrapping" into the wrong column. ⊂⟶ *6-3*
- Release the margins when necessary (^OX). With insertion off and the margins released, corrections or additions to one column will not affect another. ⊂⟶ *6-9*
- Define a ruler line for the table. If you are editing an existing table, be sure the ruler line matches the data. Reset the margins, if necessary, (^OL and ^OR). Clear all tab stops (^ONA), then set the tab stops needed for this table (^OI). ⊂⟶ *6-7*
- If you need to redefine this ruler line several times, type a copy of it into the text. Then you can reset the ruler line with **^OF** rather than change tabs and margins each time. ⊂⟶ *6-17*
- If you are editing a table that requires decimal tab stops, use **^I** or the tab key to get to the stop. You'll activate the right alignment feature as you move the cursor. Be sure to turn insertion off before tabbing. ⊂⟶ *6-11*
- Use **^KN**, column mode, to simplify moving, copying, and deleting information. ⊂⟶ *4-10*

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USING PRINT CONTROLS

HEADINGS

Table headings frequently require special printing effects such as underscoring (^PS) or boldfacing (^PB). The commands for these effects push text to the right on the screen, making it difficult to align column headings properly. To avoid confusion, simply type the headings and enter print control commands *after* aligning headings. ⊂→ *7-29*

You can also use **^OD** to turn print controls off and double-check the alignment. ⊂→ *6-18*

NOTE: Turn the print controls back on (^OD) to make sure that you entered balanced pairs of print commands.

When underscoring a heading, especially one with multiple lines, remember that WordStar underscores only characters, not blanks. You must type underscores in the spaces between words.

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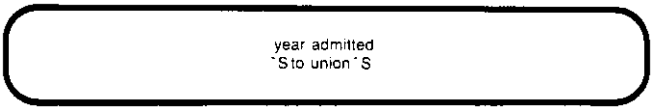
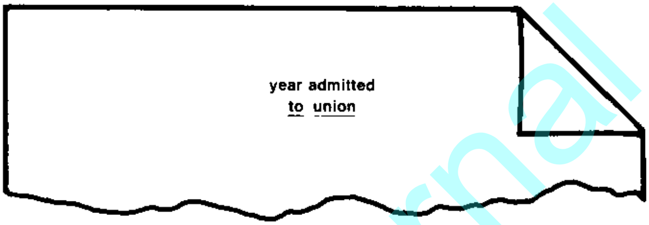
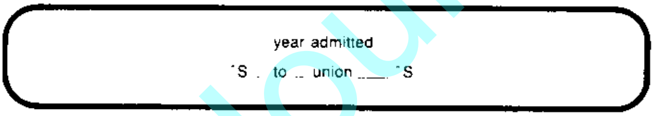
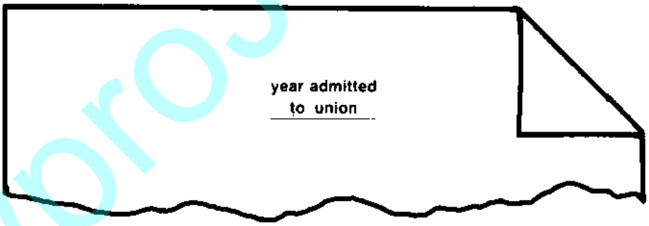
Look at the following examples on screen and on paper:









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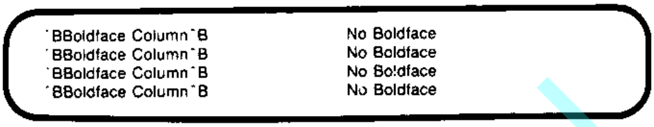
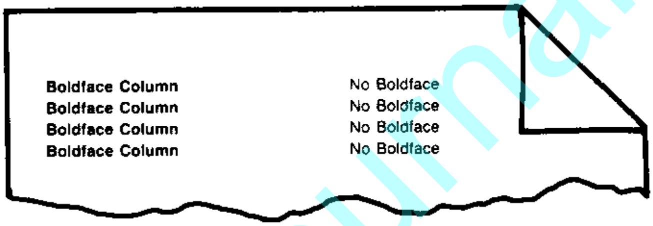
If you use the same or similar headings for several different tables, you can save copies of the headings in a separate file and avoid retyping.

COLUMNS

To make sure that the print control commands for a single column affect only that column you must enter a pair of commands on *each line* of the column that requires special printing, as in these examples:

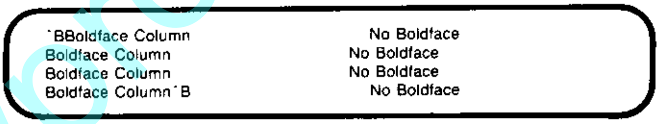


```
^BBoldface Column^B          No Boldface
^BBoldface Column^B          No Boldface
^BBoldface Column^B          No Bo!dface
^BBoldface Column^B          No Boldface
```

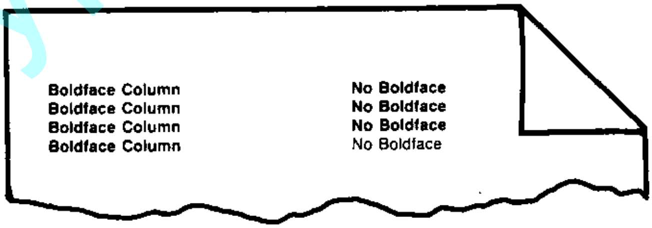


Boldface Column No Boldface
Boldface Column No Boldface
Boldface Column No Boldface
Boldface Column No Boldface

If you place the beginning command on one line and the end command several lines below, you may accidentally boldface or underline information in other columns. Look at these examples:



```
^BBoldface Column              No Boldface
Boldface Column              No Boldface
Boldface Column              No Boldface
Boldface Column^B              No Boldface
```



Boldface Column **No Boldface**
Boldface Column **No Boldface**
Boldface Column **No Boldface**
Boldface Column No Boldface

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AVOIDING MICROJUSTIFICATION AND WORD WRAP PROBLEMS

When you use a letter-quality printer to produce a table, you may find that your carefully entered columns are out of alignment on the page, even though they are letter-perfect on the screen. Word wrap and microjustification, which usually work together to produce attractive final copy, have had the reverse effect in this case. (Microjustification is inactive on draft-quality printers.)

Here are several ways to prevent microjustification from affecting your tables:

- Use **.UJ** to turn off justification temporarily. Insert **.UJ OFF** before you type your table and **.UJ ON** when you finish. ↪ *7-24*
- Use **^OW** or **^OX** to turn off word wrap temporarily. ↪ *6-3*
- Set the margins much wider than the table to avoid activating word wrap. Since no item can reach the margin, you will also have to end each line with a hard carriage return. If a line should accidentally word wrap, do not correct it. Turn word wrap off, delete the line (^Y), and then re-enter it. Attempting to correct the line may leave a soft carriage return embedded in the text, and this carriage return could activate microjustification.

RESCUING TABLES

To rescue a table that you have accidentally re-formed with a **^B** command, follow these steps:

STEP 1 Set the margins much wider than the original table.

STEP 2 Re-form the table with **^B**.

You'll have to re-enter the table if the columns are still completely out of alignment after this step.

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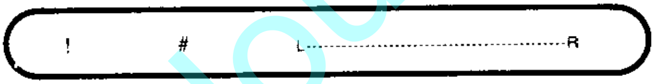
STEP 3 If re-forming brings the table close to alignment, correct any minor problems by adding or deleting spaces.

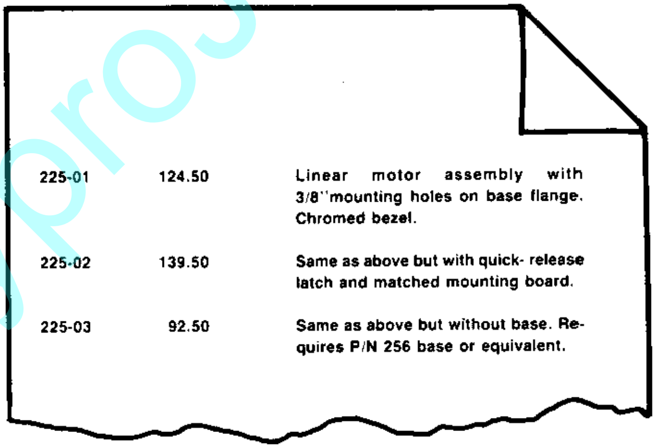
STEP 4 Surround the table with **.UJ** commands to eliminate any soft carriage returns inserted when you press **^B**.

ENTERING TABLES WITH MULTI-LINE ITEMS

Frequently columns in a table contain items that require more than one line, as you see in the following example:



```
    !        #         L-----------------------------------R
```



225-01	124.50	Linear motor assembly with 3/8"mounting holes on base flange. Chromed bezel.
225-02	139.50	Same as above but with quick- release latch and matched mounting board.
225-03	92.50	Same as above but without base. Requires P/N 256 base or equivalent.

To align unequal columns, use slightly different procedures, depending upon where the multi-line items appear—in the last column, in the first column, or in several different columns.

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Multi-line Items in the Last Column

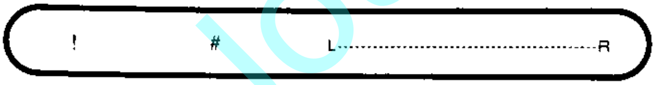
The previous example shows a table with multi-line entries in the last column. Either of two methods will work for this type of table.

The first method requires that you set temporary margins (^OG) as you build tables. Then you can allow word wrap to align column boundaries.

The second method requires more preparation but speeds up entering long tables. Follow these steps:

STEP 1 Press **^OX** to release margins and to display tab stops to the left of left margin.

STEP 2 Define the WordStar ruler by clearing all tab stops and then setting just those you need, as you see here:



```
       !             #            L-------------------------------R
```

(This ruler was set for the table in the previous example.)

STEP 3 Tab to the first stop and type the first item. Tab to the second tab stop and type the second item.

STEP 4 PRESS **^OX** to restore margins.

STEP 5 Tab to the third stop, and type the third item. RETURN

STEP 6 Repeat steps 2-5 until you complete the table.

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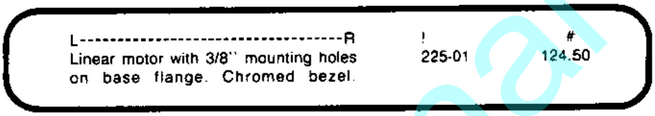
Multi-line Items in the First Column

When you are typing a table with multi-line items in the first column, follow these steps:

STEP 1 Define the WordStar ruler by clearing all the tab stops and then setting the ones you need, as you see here:



```
L----------------------------------R          !               #
Linear motor with 3/8'' mounting holes        225-01          124.50
on  base  flange.  Chromed  bezel.
```

NOTE: Make sure to set the right margin a few columns short of the first tab stop.

STEP 2 Type the first item of the first entry, allowing word wrap to position the text within the margins.

STEP 3 Move the cursor to the end of the first line, release the margin (^OX), tab to the second tab stop, and type the second item. Continue tabbing and entering until you have completed the entry for each column. *Don't press RETURN.*

STEP 4 Move the cursor past the right margin in the last line of the first column, then press RETURN twice. Repeat steps 2-4 until you have completed the table.

CAUTION

Be sure the cursor is past the right margin before you press RETURN. Otherwise, margin release won't be cancelled.

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Several Multi-line Items

You can create a table with several multi-line items by avoiding word wrap after the first multi-line item has been typed.

One way to avoid word wrap is to type the first line in each item of the entry, then the second line, and so on. End each entry line with a hard carriage return before the line overflows into the next column.

Also, you can type multi-line items one below the other and then move them into place with column mode (^KN and ^KV). In this case, word wrap will not push your other entries out of alignment.

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9. FILES, DISKS, PRINTOUTS

CONTENTS

SUMMARY TABLE

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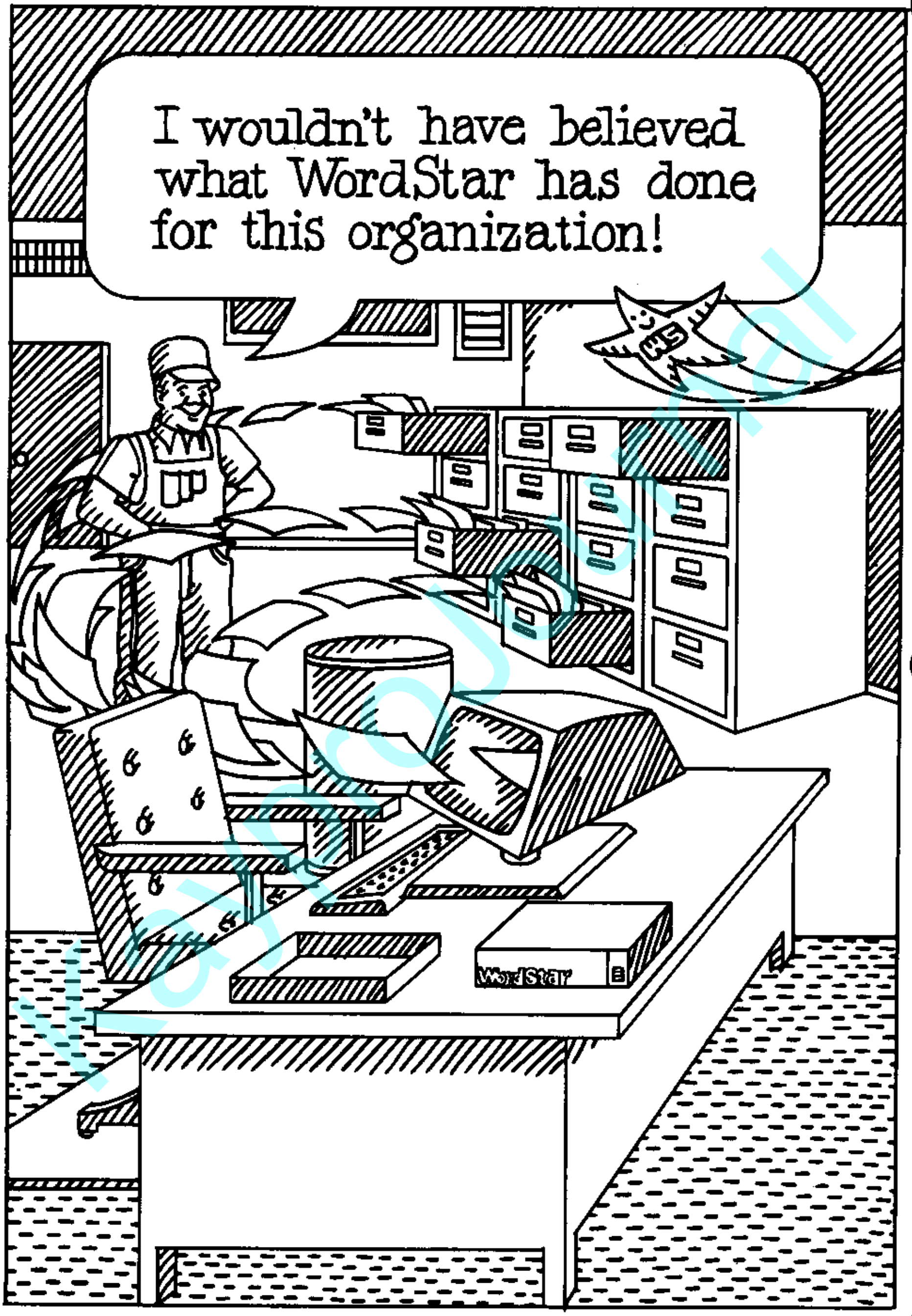
I wouldn't have believed what WordStar has done for this organization!
WS
WordStar
B

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9. Files, Disks, Printouts

In addition to editing your work inside WordStar document files, you use many program features which work on whole files as units. You can save, copy, rename, and delete files; you can work on alternate disk drives or run other programs; and you can print the contents of one file while editing another.

CAUTION

When you're working with whole files at the Opening Menu, it's best to think through what you want to do before issuing commands. An accidental "Delete File" operation, for instance, could create a lot of extra work for you.

SAVING FILES

WHY SAVE YOUR FILES?

The ability to save your files is one of the advantages of a word-processing system over a typewriter. You never have to type anything twice—provided you save your work.

Your computer is reliable, but if normal power is interrupted, any work you have not stored will normally be lost. Saving your work periodically allows you to retrieve a recent copy, should the latest version suddenly become garbled or non-existent.

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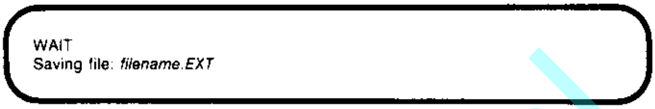
^ K S

Save-and-Resume Command

Press **^KS** to save and reSume work on the same file. The current version of your file will be written onto the disk, and the cursor will go back to the beginning of your file. Enter this save command at any point while working in your file.

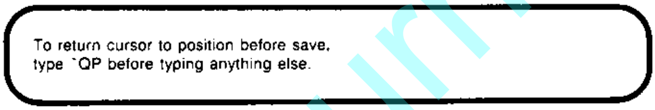
PRESS **^KS**

SEE



```
WAIT
Saving file: filename.EXT
```

When your file has been saved, you'll see the following prompt:



```
To return cursor to position before save,
type ^QP before typing anything else.
```

Press **^QP** if you want to return to your **P**lace in the file before you used **^KS**. Otherwise, resume work at the beginning of your file; the prompt will disappear from your screen.

You can speed through the save-and-resume operation by holding down the control key and pressing the keys **KSQP** in quick succession. After the WAIT-Saving message has appeared on your screen, your work is protected, and you're still at the same place in your file.

Returning to Opening Menu

Press **^KD** if your work in the current file is **D**one and you're ready to move on to another task. You save your current file and return to the Opening Menu.

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Leaving the Program

^ K X

Press ^**KX** if your work is complete, and you want to e**X**it to your operating system. You save the current file, and the cursor appears at your operating system prompt. (A portion of the text you save with ^**KX** may remain on the screen, but you can't edit it.)

Abandoning the Current File

^ K Q

Press ^**KQ** to **Q**uit editing the current version of a file without saving your changes. The current copy disappears, but the original file—without your latest changes—remains on your disk.

Suppose a misdirected command produces confusion in the working copy of your file. Abandoning the current version in favor of the original is probably easier than trying to undo a major mistake. Press ^**KQ**. If no changes were made to the file, you'll see this prompt:

```
Abandoning unchanged file A:filename.EXT
```

The cursor will return to the Opening Menu. If changes were made, you'll see this prompt:

```
Abandon edited version of file A:filename.EXT? (Y/N):
```

Answer **Y** if you're sure you want to quit. You have a chance to think about it first, though.

^**KQ** throws out *all* of the current version, not just the ruined portions. If you have entered other new text that you do want to save, use ^**KW** to copy it as a block to a separate file. Then quit the current editing session. ⟶ *4-13*

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If you answer **N**, the cursor will return to where it was in the file when you pressed **^KQ**; nothing is changed. If you answer **Y** and abandon the current edited version of your file, the cursor will return to the Opening Menu.

Backup (.BAK) Files

HOW TO CREATE A .BAK FILE

When you open an existing file from the Opening Menu, a *working copy* is written into your computer's working memory. The permanent file remains on your disk, unaltered.

After editing, when you press **^KS**, **^KD**, or **^KX**, the working copy is written onto the disk and assumes the name of the previous permanent file. The old file becomes a WordStar backup file with the extension .BAK (*filename.BAK*). Here's what happens to your disk:

1. *Filename.BAK* (if any) is erased.
2. Your permanent *filename.EXT* (without current changes) is renamed *filename.BAK.*
3. Your working copy of *filename.EXT* (including current changes) is written from RAM; it becomes the "permanent" file for your next editing session.

The first time you save a new file, you'll have only one permanent file. After subsequent save commands, however, each subsequent permanent file becomes the next backup file.

NOTE: You can't edit .BAK files; they're saved in compressed form to conserve memory space. You can rename them, though, before editing. In this chapter you'll learn how to use .BAK files to recover files.

⟶ *9-11*

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WordStar helps protect your work by creating a .BAK file at every opportunity. If, however, power irregularities interrupt your work or a magnet affects the disk, your file could still be lost. Avoid these mishaps by making additional copies on separate disks. See your operating system manual for procedures.

Pressing ^**KS**^**QP** takes only moments of your time and protects the work you're editing. You should also consider copying your work file to a separate disk every so often. Add ^**KO** to the end of the ^**KS**^**QP** procedure. Hold down the control key and press **KSQPKO** in quick succession.

OTHER FILE FUNCTIONS

You can copy, rename, or delete a file from the Opening Menu or from the Main Menu while you're editing a file. Your operating system probably has commands to perform all these functions, too, but you must exit from WordStar to use them. In most cases, the WordStar commands are more convenient.

Reading the Directory

Use **F** at the Opening Menu to switch the **File** directory for your currently logged disk drive on or off.

Use ^**KF** to read the directory while editing a file. Whenever you need to review file names while editing a file, you can press ^**KF**. You'll see part of the text area on your screen replaced by the directory. When you find the file name you need, use ^**KF**, a toggle switch, to remove the directory from your display.

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Copying Files

O

At the Opening Menu, type **O** to c**O**py a file.

^ K O

Use **^KO** to copy one file while you're editing another. You can't copy the current version of the file you're editing, but you can copy the version without your most recent changes on the disk.

You *can* copy the current version of the file you're still editing, using **^KW.** Insert block markers at either end of the text you want copied, and **W**rite the block to another file. ⟶ *4-13*

HOW TO COPY

When you enter either **O** or **^KO**, you'll see the following prompt:

```
Name of file to copy from?
```

TYPE *filename.EXT* (a valid file currently on your system)

SEE

```
Name of file to copy to?
```

TYPE *filename.EXT*

If you tell WordStar to copy into an existing file, you'll see this prompt:

```
file A:filename.EXT exists -- overwrite (Y/N):
```

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If you type **Y**, the current file *A:filename.EXT* is erased and replaced by the file you're copying. Be sure you want the current file to be deleted before you answer **Y**.

Press **N**, ESCape, or RETURN to answer No; you'll return to the "copy to?" prompt. Use **^U** to cancel the operation entirely.

You may copy files to and from disks other than the logged disk by entering the full name of the file, e.g., *B:filename.EXT*.

You can copy only one file at a time.

Renaming Files

E

At the Opening Menu, type **E** to r**E**name a file.

^ K E

Use **^KE** to rename one file while editing another. You can't rename the file you're currently editing.

When you enter either of these commands, you'll see the following prompt:

```
Name of file to rename?
```

You can rename a file on another disk by entering the full name of the file, e.g., *B:filename.EXT*. You cannot, however, change disk assignments while renaming a file; use the file-copying command instead.

If you enter an invalid file name or the name of a file not on your disk, this message will appear:

```
File A:filename not found
```

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If you enter a valid file name at the first prompt, a second prompt appears:

```
New name?
```

When you rename a file, you may also want to rename the corresponding .BAK file.

You can cancel the renaming command by pressing ESCape or RETURN as your only response to one of these prompts, or you can use **^U** to interrupt.

Renaming a file does not affect disk storage requirements.

Deleting Files

Y

At the Opening Menu, type **Y** to delete a file.

^ K J

Use **^KJ** to delete one file while you're editing another. You can't delete the file you're currently editing.

When you enter either of these commands, you'll see the following prompt:

```
Name of file to delete?
```

TYPE *filename.EXT* RETURN

CAUTION

Be very careful with this command. You can easily delete the wrong file by mistake, especially when several files have similar names. If you change your mind, cancel the deletion command by pressing ESCape or RETURN as your only response to the prompt, or use **^U** to interrupt.

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Using **Y** and **^KJ** commands, you can only delete one file at a time. Deleting *filename.EXT* leaves *filename.BAK* on your disk. When you intentionally delete a document, you should also delete the backup file to conserve disk space. On the other hand, if you accidentally delete a file, the .BAK file allows you to recover the deleted text.

Recovering a Deleted File

Use .BAK files to recover files you accidentally delete. The process is simple. To recover the erased file *filename.EXT*, press **^KO** (while editing a file) or type **O** (at the Opening Menu). You'll see the following prompt:

```
Name of file to copy from?
```

TYPE *filename.BAK* RETURN

SEE

```
Name of file to copy to?
```

TYPE *filename.EXT* RETURN

You can use almost any extension (.EXT), or none at all, in the second file name, but avoid **.BAK**. You can't edit a .BAK file. You should also avoid extensions like .COM or .OVR which appear in program names; check your operating system manual for others.

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CHANGING THE LOGGED DISK DRIVE

L

At the Opening Menu, type **L** to change the Logged disk drive, the disk drive where the computer's work is currently being done. You'll want to work on a second drive whenever your currently logged disk is getting too full.

^ K L

Use ^**KL** to change the logged disk drive while you're editing a file.

When you enter either of these commands, you'll see the following prompt:

```
The Logged disk drive is now A:
New Logged disk drive (letter, colon, RETURN)?
```

CAUTION

Enter the letter of another disk drive in your system and press RETURN. If you enter the letter of a drive not on your system after you type **L** or ^**KL**, you'll cause an error which requires you to restart your system.

RUNNING WORDSTAR OPTIONS

At the Opening Menu, you can use any optional WordStar programs you may own. Simply enter the appropriate command:

M = MailMerge
S = SpellStar

Here are brief descriptions of each:

M

- MailMerge helps you merge files, print any number of files in a chain, bring datafile information into form letters for personalized mailings, and more.

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S

- SpellStar enables you to proofread a document automatically and find typing errors or misspelled words.

For detailed information, see the appropriate reference manual.

If you accidentally start to run a program you don't own or one that's on another disk, you'll see an error message. Press ESCape, and change disks.

→ *B-9*

If you change your mind about running the program, use ^U before completing your response to the first prompt in the program option. Otherwise, use appropriate menu choices within the program to return to the WordStar Opening Menu.

RUNNING OTHER PROGRAMS

R

Type **R** at the WordStar Opening Menu to **R**un another program, such as a utility supplied with your operating system.

You cannot leave WordStar while a file operation, such as copying or printing, is in progress. The **R** command will take effect after the operation is completed.

To run a program while the cursor is at the Opening Menu, follow this procedure:

TYPE **R**

SEE **COMMAND?**

TYPE the program name RETURN

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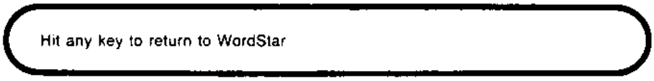
When you're finished with the other program, you'll see the following message:



```
Hit any key to return to WordStar
```

Press any key to return to the WordStar Opening Menu.

A typical use for the **R** command is to run the system utility that checks the amount of space available on the disks you are using.

X

Type **X** at the Opening Menu to e**X**it from WordStar. You'll return to your operating system and see the cursor at the operating system prompt.

You cannot leave WordStar while a file operation, such as copying or printing, is in progress. The **X** command will take effect after the operation is completed.

STOPPING WORK

After you exit to the operating system and are ready to quit work for the time being, remove all floppy disks and turn the system off. Be sure that disks are labeled properly and stored safely. Don't leave them in disk drives when the system is turned off; your files may become unreadable.

Although you don't have to exit to the operating system (X or ^KX) before turning off your computer, it's a good habit to develop. You can use your power switch any time, but you may lose files or data. When you leave WordStar first, you know that all file operations are completed before you shut down.

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DISK MAINTENANCE

If your computer is equipped with a hard disk, you may want to skip the following discussion. Chances are, though, that you'll use floppy disks sooner or later.

Disk files in a personal computer system serve the same purpose as filing cabinets in the traditional office; they store information so you can retrieve it easily. Unlike paper files, however, disk files require special care in labeling and storage.

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Storage

COMFORTABLE CONDITIONS

Store your disks under conditions that *you* would find comfortable. Protect them from extreme heat or cold, dryness or dampness, and dust. Be especially careful to avoid strong magnetic fields. In a home environment, magnetic fields may be generated by TV sets, appliances, motors, magnets, hi-fi speakers, etc. Don't leave your disks on top of a speaker. Store them upright—vertically—in a box or container that keeps excess dust away.

Never lay a sleeveless disk on any surface, and keep the "underside" of a disk (the side your disk drive uses to write and read data) clean.

Security

PROTECTION FROM ACCIDENTS

A single-user system, such as a personal computer, does not pose many of the security problems of a multi-user system. Still, the information in your files is valuable and needs protection from accidents.

Place strips of thin tape (write-protect tabs) over the notch in a disk's side to allow reading from *but not writing to* a disk. Also, check your operating system for a command that will change a file from **R/W** (**R**ead or **W**rite) to **R/O** (**R**ead **O**nly) and back again. Use this function to protect individual files against accidental changes.

Finally, if several people use your computer and you want to protect the contents of your personal disks, don't let others use them. Disks themselves are inexpensive; keep enough on hand for everyone.

Labels

THE FIRST USE AND UPDATES

Label a floppy disk the first time you use it, and keep updating the label as files grow. Don't write directly on a disk's protective cover; write on a separate label and transfer it to the disk. You can change the label—gently—as the disk files change. If you group related files on the same disk, you'll be able to find a particular file more easily.

Capacity

HOW TO AVOID A "FULL" DISK

Unlike a filing cabinet, which almost always seems to have a little more room, a disk which is full is really *full*. Either you'll be unable to add more data, or worse, you'll inadvertently erase other files when you try.

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Whenever a file has outlived its usefulness on one disk, delete it or copy it to another disk. Remember the following guidelines for the best use of disk space:

- To avoid exceeding disk capacity, use the operating system command that measures either space in use or remaining space on any disk in the disk drive.
- Check to see how much disk space you have before creating or editing any large file. If you need to change disks to gain space, do so *before* you enter a new file. Changing disks at other times can lead to garbled or lost data.
- Leave yourself and your system room to work. Keep in mind that WordStar may use several temporary files during an editing session.

FILE SIZE AND DISK CAPACITY

If your computer system limits the number of files on a disk, use a system utility rather than WordStar to check the number of files. Your WordStar directory does not list some program and system files which *do* take up space on your disk.

You can use WordStar to check the size of your current file. Use **^QC** to go to the end of the file and **^OP** to turn off the page break display; then read the status line:

- **FC=** the number of characters from the beginning of the file to the current cursor location.
- **FL=** the number of lines from the beginning of the file to the cursor line.

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Remember the following rules regarding file size:

- Try always to have enough disk space to store three copies of the file you're editing. Remember that you actually create two copies of the file (the permanent file and the .BAK file) if you save your text as frequently as you should. The additional space provides a safety margin for WordStar temporary files while you're editing.
- Whenever possible, break up a very large document into several smaller files.
- Avoid files that are near the maximum size for a single file—8,192,000 characters. Many computer systems can't handle them.

TEMPORARY FILES

Very large files don't fit in the memory of a typical personal computer. For portions of your file, WordStar creates temporary files, usually with the extension .$$$ (*filename.$$$*). You don't usually need to be concerned with temporary files. If you're working with a very large file, however, the temporary files can exhaust all remaining disk space.

WordStar never alters your permanent file (the one on the disk) until you save your work. If you want to return to the beginning from the end of a long file (^QR), WordStar is forced to write most of the document to a temporary file. ⟶ *3-8*

CAUTION

When you use ^**QR**, a sluggish response time probably means that it's time to break up your large file. If you cannot divide file contents despite limited disk space, simply avoid ^**QR**. Return to the beginning of the file by saving it with ^**KS**. Saving the file is safer and faster since most of the text may already be in a temporary file that can be renamed as the newly saved file.

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OTHER SHORTCUTS

Try the following commands to move quickly through large files:

- Before a global find-and-replace command (^QA) in a long file, save it with **^KS**.
- Perform block movement and copying commands in large files with the block writing (^KW) and reading (^KR) commands.
- Always save the file (^KS) rather than moving backward through a long file.

WHEN TO CHANGE DISKS

You can change disks safely at the following times:

- when the screen tells you to do so
- if you're at the Opening Menu and not printing
- at your operating system prompt

You may need to reset your system if you open the door to your disk drive at any other time.

PRINTING FILES

P

At the Opening Menu, type **P** to **P**rint a file.

^ K P

Use **^KP** to print one file while you're editing another. Momentary interruptions caused by WordStar doing two jobs at once do not affect your editing. Although simultaneous printing and editing functions each take a little longer, the net effect can still save time.

CAUTION

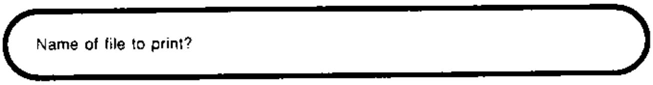
Your computer may not have enough memory to edit and print at the same time. If not, you'll see an error message before your second command is cancelled.

→ *B-4*

Turn Printing On

HOW TO START PRINTING

Type **P** at the Opening Menu, or press **^KP** while editing a file; you'll see the following prompt:

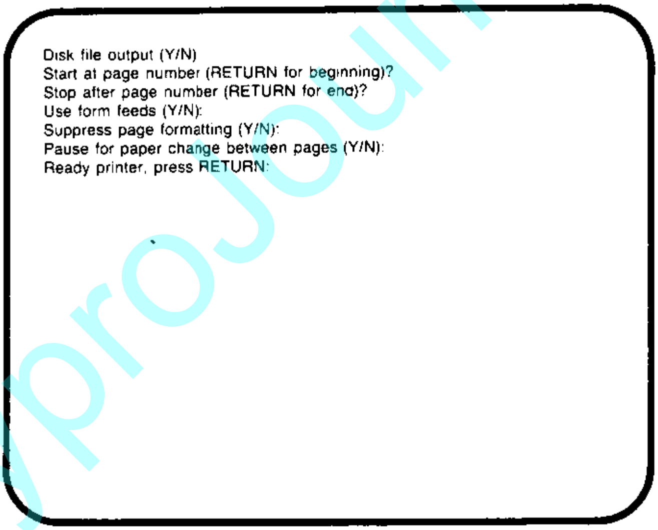


```
Name of file to print?
```

TYPE *filename* RETURN

SEE list of print options, one at a time

Here's the whole list:



```
Disk file output (Y/N)
Start at page number (RETURN for beginning)?
Stop after page number (RETURN for end)?
Use form feeds (Y/N):
Suppress page formatting (Y/N):
Pause for paper change between pages (Y/N):
Ready printer, press RETURN:
```

When each option appears, you can respond as indicated or press RETURN for the default. If you want defaults in response to every option on the list, press ESCape instead of RETURN after typing your file name. Printing will begin without the appearance of the options list.

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If you name a file that is not on your logged disk drive, you'll see an error message:

```
file A:filename.EXT not found.
```

Enter a file name that WordStar can locate. If the file *filename.EXT* exists only on another disk drive, for instance, you can enter *B:filename.EXT*.

Turn Printing Off

HOW TO STOP PRINTING

P and **^KP** are toggle switches that initiate or halt printing. If you try to print the same file you're editing, you'll see an error message. ⟶ *B-18*

If you press **P** or **^KP** during printing, you'll interrupt the operation. Although WordStar stops sending text to the printer immediately, printing may continue briefly; many printers have a buffer memory to empty. When you stop printing, you'll see the following prompt:

```
"Y" to abandon print, "N" to resume, ^U to hold:
```

Type **Y** if you don't want to continue printing the current file.

Type **N** to resume printing immediately.

Press **^U** to suspend printing. The current position in the file is marked so that printing can resume at the same place later. You might want to hold printing, for example, if your system runs too slowly when you print and edit at the same time. You can enter any number of other commands before you resume printing. When you're ready, enter **P** or **^KP**.

When the printout is complete, you'll probably have to issue a form-feed command to your operating system or to your printer.

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Print Options

The six print options offer you special functions such as pausing between pages, beginning or ending at a page number of your choice, and others.

After you respond to each option prompt, the next appears. If you're concerned with only the first few, press ESCape instead of RETURN to skip the remaining prompts.

OUTPUT TO DISK

```
Disk file output (Y/N):
```

Type **Y** to direct output to a disk file rather than a printer. You'll see the following prompt:

```
Output file name?
```

TYPE *filename.EXT*

The resulting file will be a modified image of the printed text file; many formatting commands will not take effect. (^KO is usually a quicker way to copy the file.) Default: No. ↪ *9-8*

Enter any response other than **Y** for normal output to the printer.

PAGE NUMBERS

```
Start at page number (RETURN for beginning)?
```

Type a particular page number, followed by RETURN or ESCape.

Type 0 or 1 or press RETURN alone to start printing at the beginning of the document.

If you enter anything but a number, the prompt will stay on your screen. Default: **1**.

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When you tell WordStar to start printing near the end of a long document, say on page 30 of 35 pages, there will be a significant pause before printing starts. WordStar formats, but does not print, the entire document up to page 30 before printing.

NOTE: If you use **.PN** to renumber the pages in your document, the printed pages will be numbered according to your command. ↪ *7-36*

```
Stop after page number (RETURN for end)?
```

Type a particular page number, followed by RETURN or ESCape. Use this option in conjunction with the start-page option to print selected pages of a document. Default: **end**.

FORM VS. LINE FEED

```
Use form feeds (Y/N):
```

Type **Y** if the length of your page varies; the printer will advance to the top of each page before printing it.

This form-feed option sends a single machine-language character (OC hex) to the printer, rather than the usual series of line-feed characters. Some printers ignore form-feed signals; check your manual.

Enter any response other than **Y** for normal instructions. WordStar will send to the printer the correct number of line-feed characters to advance the paper to the top of the next page. Default: No.

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CHECKING DOT COMMANDS

```
Suppress page formatting (Y/N):
```

Type **Y** to see dot commands printed, as if they were text, instead of performing their page formatting function. This option can be useful for proofreading. Default: No.

Your text and dot commands will print out, line after line, right across folds in the paper unless you force page breaks with **^PL**; print control characters *do* work. ⟶ *7-40*

ONE PAGE AT A TIME

```
Pause for paper change between pages (Y/N):
```

Type **Y** if you need to use single sheets—letterhead, for example—instead of continuous paper. At the end of each printed page, you'll see the message **PRINT PAUSED** in the status line on your terminal. After you change paper, resume printing by pressing **P** (if at the opening menu) or **^KP** (if editing a file).

Enter any response other than **Y** to print continuously. Default: No.

Inserting **^PC** into your file will cause the printer to pause at that point. ⟶ *7-38*

GO!

```
Ready printer, press RETURN:
```

Check the printer to be certain that it's plugged in, turned on, and ready to print. Be sure the paper is correctly positioned. When everything is ready, press RETURN (or any key) to begin printing.

Printing usually begins at once, but it may be delayed if you choose a starting point other than page 1. During printing, you'll see the Opening Menu or the file you're editing, depending on where you started.

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SUMMARY TABLE: FILE OPERATIONS COMMANDS

COMMAND	FUNCTION
	While editing a file:
^KS	Saves work and returns to present file
^QP	Returns cursor to position before last command
^KD	Saves work and exits to Opening Menu
^KX	Saves work and exits to operating system
^KQ	Abandons without saving work in present file
^KF	Turns disk file directory on/off (default: off)
^KO	Copies a file
^KE	Renames a file
^KJ	Deletes any file except the present file
^KL	Changes logged disk drive
^KP	Starts or stops printing
	At the Opening Menu:
F	Turns disk file directory on/off (default: on)
O	Copies a file
E	Renames a file
Y	Deletes a file
L	Changes logged disk drive
M	Runs MailMerge
S	Runs SpellStar
R	Runs another program and returns to WordStar
X	Exits to operating system
P	Starts or stops printing

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10. NON-DOCUMENT FILES

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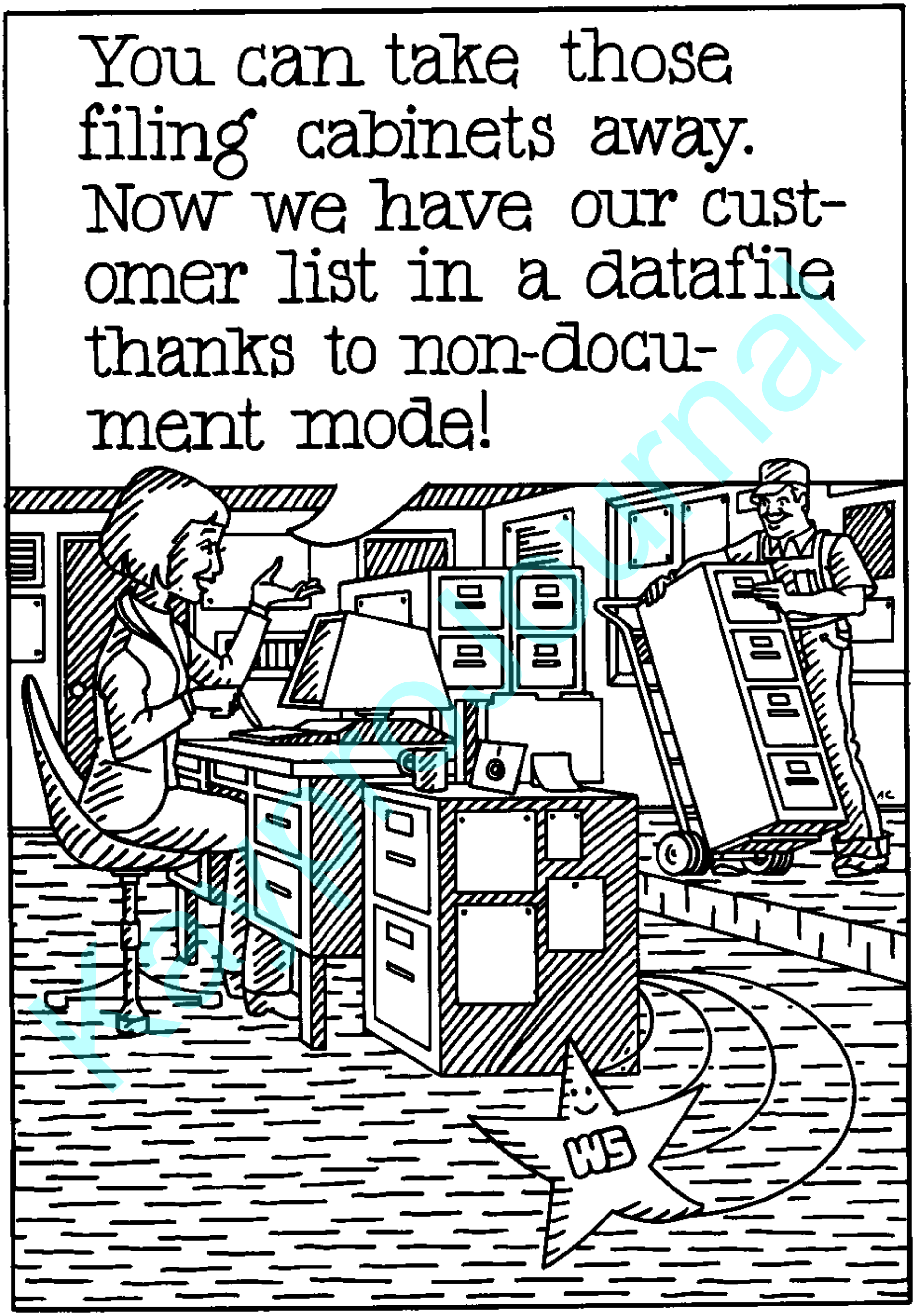
You can take those filing cabinets away. Now we have our customer list in a datafile thanks to non-document mode!
WS
AC

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10. Non-Document Files

The WordStar non-document mode enables you to create files, such as datafiles or computer programs, for use outside WordStar. In document mode, many special features assist you in your word processing; in non-document mode, the same features are switched off or altered to simplify your work with data.

DEFINING NON-DOCUMENTS

Non-document files are simply lists of data. They can be mailing lists, accounting entries in an electronic ledger, or the ordered instructions that make up a computer program.

Document files are different; WordStar adds computer-language bits of information to your document text to operate special functions, such as word wrap and hyphen help. If these bits of information were inserted in non-document mode, the resulting files would be misread by some software. You don't need to exit from WordStar to create non-document files, but you should keep the changed functions in mind.

Non-document datafiles serve as common reservoirs of data that link various kinds of software together.

In WordStar, any file not created in document mode is a non-document.

CAUTION

Computer programs written in hexadecimal code are neither document nor non-document, but a third category, non-text. Do not attempt to edit them with WordStar. Read the appropriate assembler or compiler manual for instructions on editing such files.

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USING NON-DOCUMENTS

N

To edit in Non-document mode, press **N** instead of **D** at the Opening Menu. You can still open any file on your disk, even a file written in document mode. But because WordStar handles non-document files differently, you should avoid editing document files in this mode.

You can take advantage of non-document features to write and edit files to use with many programs. Here are some examples of non-document files:

EXAMPLES OF NON-DOCUMENT FILES

- Datafiles created for use with MailMerge, DataStar, ReportStar, and CalcStar. (Follow the directions in your MicroPro manuals to write files for these programs.)
- Computer programs in text form
- Any file not created with WordStar
- Any file created in WordStar non-document mode

WordStar can manipulate all text files once they're converted to WordStar's language. Converting non-documents to document mode will be covered later in this chapter.

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CHARACTERISTICS OF NON-DOCUMENT MODE

ALTERED FEATURES

In non-document mode, many word processing features are turned off. You can turn some of them back on, but if you do, you defeat the purpose of the mode. Here are the changes in standard features of document mode:

- No right margin
- Word wrap off
- Hyphen help off
- Justification off
- Ruler line display off
- Pagination not working
- Page break display not working
- Paragraph re-forming (^B) not working
- Dot command errors not checked or flagged
- Variable tabbing replaced by fixed tabbing

UNCHANGED FEATURES

Here are some standard features that do not change:

- Left margin at column 1
- Print control display on
- Soft hyphen entry off
- Insertion unchanged from last editing session

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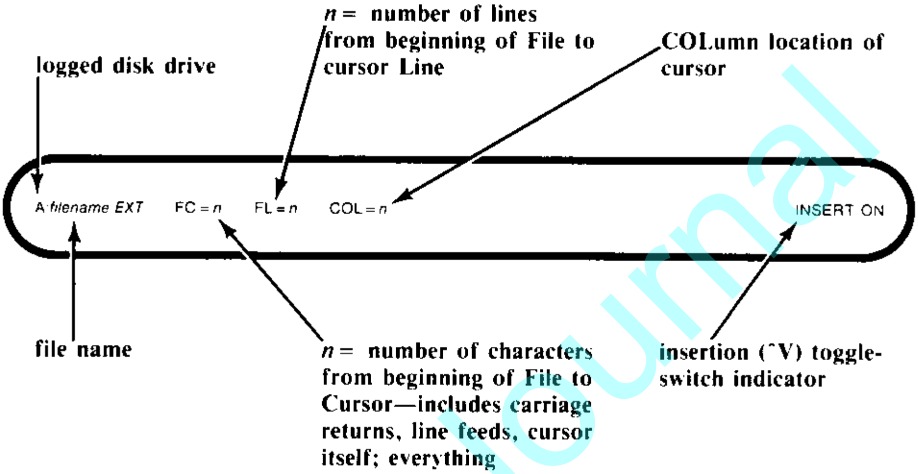
The Non-Document Screen

The top of your screen looks different in non-document mode. The status line is altered, as this illustration shows:


logged disk drive
n = number of lines from beginning of File to cursor Line
COLumn location of cursor
A:filename EXT
FC = *n*
FL = *n*
COL = *n*
INSERT ON
file name
n = number of characters from beginning of File to Cursor—includes carriage returns, line feeds, cursor itself; everything
insertion (^V) toggle-switch indicator

A handy way to find the length of your file is to press ^**QC**, which moves the cursor to the end of the file. Then read **FC** = *n* and **FL** = *n* in the status line.

ENTERING NON-DOCUMENT DATA

You'll use non-document mode mainly to create data storage files for use with other software. Non-document mode follows industry conventions of language, and your non-document datafile must follow a few conventions of form if it's to be read correctly by WordStar.

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Data-handling programs, like DataStar, observe the convention of commas (which determine where one item of information ends and a new item begins) and hard carriage returns (which determine where one grouping of items ends and a new one begins). You should be careful to build datafiles in a form that is both clear to you and consistent with the software you're using. The following discussion illustrates these conventions.

NON-DOCUMENT DATAFILES

One example of a non-document file is a datafile that can be used by MailMerge to personalize each form letter that you write with WordStar. The non-document file provides variable data—names and addresses, for example—which MailMerge inserts in appropriate places in the letter.

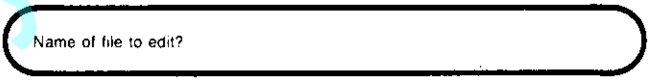
The items that make up a datafile are distinguished from each other and organized in specific ways. An individual item of data—a name or an address, for example—occupies a data *field*. A grouping of related data items (such as name, address, city, state, and zip code) is called a data *record*. Fields are separated by commas and records by carriage returns.

HOW TO CREATE A DATAFILE

To create a datafile for use by MailMerge, open a non-document file at the WordStar Opening Menu:

STEP 1 TYPE N

SEE



```
Name of file to edit?
```

STEP 2 TYPE *filename* RETURN

SEE blank "text" area below status line

STEP 3 TYPE first item of data,comma,next item,comma,etc.

NOTE: See your MailMerge manual for further information.

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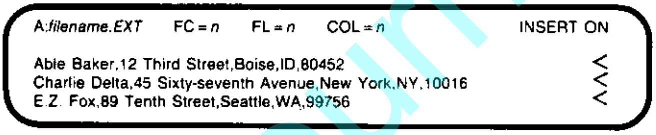
If you lack data for any particular field, don't skip the field. Type two commas in a row (,,) to indicate that the data field between them is intentionally empty.

Continue to enter items separated by commas until you have entered all related data and thus completed one data record. Press RETURN to separate this record from the next.

Repeat this procedure until you have typed all your data. The result should look like the following example:

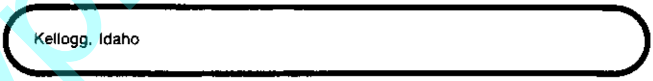


```
A:filename.EXT     FC=n     FL=n     COL=n                    INSERT ON

Able Baker,12 Third Street,Boise,ID,80452                          <
Charlie Delta,45 Sixty-seventh Avenue,New York,NY,10016            <
E.Z. Fox,89 Tenth Street,Seattle,WA,99756                          <
```

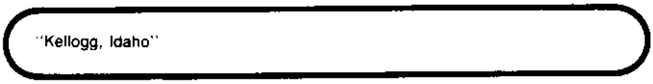
Commas in Data Fields

Surround any item of data which *contains* one or more commas with quotation marks. The data will be read as a single item and not as two. For example, the following phrase contains two items of data:



```
Kellogg, Idaho
```

Add quotation marks to indicate that there is only one item of data:



```
"Kellogg, Idaho"
```

The program reads the comma in this case, not as a separator, but as part of the data.

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NOTE: Datafiles created with DataStar are compatible with WordStar and MailMerge. DataStar automatically supplies the appropriate commas and hard carriage returns.

The Screen as a Window on Your Work Page

When you want to type lines of text or data that extend past the right edge of your screen, simply continue typing; word wrap is normally off in non-document mode. Unless you end a line with a hard carriage return, your view will scroll past the last column on screen. When you want to read a datafile, a plus mark (+) in the flag column reminds you that a line extends out of sight. Use your normal cursor commands to begin scrolling.

How long a line can you type? Theoretically, you can use several thousand columns, but for your own convenience in editing, you'll probably use far fewer. Extremely long lines also slow down the program's speed in reading.

CONVERTING NON-DOCUMENTS TO DOCUMENT MODE

When you want to edit a non-document file in document mode, you must reformat it. If you have a file created with another program, for instance, you may need to convert carriage returns *within* a paragraph from hard to soft. In document mode, hard returns always indicate the end of a paragraph.

You can use either document or non-document mode to convert hard carriage returns. The capability of paragraph re-forming—not available in non-document mode—makes document mode a better choice.

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Simply position the cursor at the beginning of the first paragraph you're converting, and then follow these steps:

HOW TO CONVERT FILES

STEP 1 PRESS ^**QA**

SEE

```
FIND?
```

STEP 2 PRESS ^**N** RETURN

SEE

```
REPLACE WITH?
```

STEP 3 TYPE a single space RETURN

SEE

```
OPTIONS? (? FOR INFO)
```

STEP 4 TYPE **N** RETURN

(Your **N** entry tells WordStar to replace without asking for your approval.)

WordStar finds the first carriage return and changes it to a single space, joining the first and second lines. Then press ^**L** to find and change the next carriage return. Continue pressing ^**L** until you reach the end of the paragraph.

CAUTION

Don't convert the final return.

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You've created a single, very long line with a hard carriage return at the end. To WordStar, the line is a paragraph. If you've been working in document mode, press ^**B**.

As you watch, WordStar will rework the paragraph, justifying text between the margins and then positioning the cursor at the end.

Press ^**L** to reach the first carriage return in the next paragraph. Repeat the procedure for every paragraph you want to convert.

FIXED TABBING

WHAT IS FIXED TABBING?

Fixed tabbing is a standard feature in non-document mode. Because it is a feature designed mainly for programmers, it should be used with caution by others. Most operating system editors and MicroPro's WordMaster program operate with fixed tabs.

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Fixed tabbing and variable tabbing (the default for document mode) differ in the following ways:

VARIABLE TABS	FIXED TABS
Defaults	
Tab stops every 5 columns (1, 6, 11, 16, 21, etc.)	Tab stops every 8 columns (1, 9, 17, 25, 33, etc.)
Tab stops can be reset	Tab stops cannot be reset
Insertion On	
TAB inserts 5 individual spaces	TAB inserts 8 "connected" spaces
Spaces inserted by TAB are deleted 1 at a time	Spaces inserted by TAB are deleted 8 at a time
New text entered to the left of a stop pushes old text to the right 1 space at a time	New text entered to the left of a stop pushes old text to the right 8 spaces at a time
Insertion Off	
TAB moves cursor 5 spaces to the right	TAB moves cursor 8 spaces to the right
New text overprints old text and tab stops	New text overprints old text and tab stops

Any text that follows a *variable* tab stop lies at the right edge of five individual spaces. Any text that follows a *fixed* tab stop lies at the right edge of a "single character" eight columns wide.

When you delete a fixed tab stop, the cursor jumps to the left across this single character of eight spaces. When you press TAB while the cursor is to the left of a fixed stop, any text following that stop jumps one eight-space character to the right.

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Text entered with insertion on also pushes text that follows fixed tab stops to the right. With insertion off, new text overprints tab stops and spaces alike, as always.

Use ^**OV**, a toggle switch, to turn fixed tabbing on and off in document or non-document mode.
⟶ *6-10*

Use ^**PI** to enter an **I**ndividual fixed tab into your file when you're otherwise using variable tabs.
⟶ *7-39*

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APPENDICES

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Appendix A

Program Specifications

WordStar and its options, MailMerge, and SpellStar operate only if the following specifications are met. Most WordStar specifications apply also to the options. Any special requirements are noted below. For information regarding specific versions of WordStar and its options, see your dealer.

WordStar

OPERATING SYSTEM	CP/M (version 2.0 or higher) CP/M-86 MP/M MS-DOS PC-DOS
CPU MEMORY	For 8-bit microcomputers: 56K of memory (RAM) or 50K of program memory For 16-bit microcomputers: 64K of memory (RAM) except CP/M-86: 80K (RAM)
VIDEO TERMINAL	WordStar requires an addressable cursor or byte-addressable, memory-mapped video. Minimum screen size is 16 lines by 64 characters. Maximum screen size is 57 lines by 120 characters.
PRINTER	WordStar can take advantage of most of your printer's capabilities, whether letter or draft quality.
DISK STORAGE	WordStar can operate with one drive containing at least 120K. Use 5 1/4" or 8" disks, depending on your hardware. For convenience, two floppy disk drives are recommended.

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MAXIMUM FILE SIZE	8 megabytes on CP/M, CP/M-86, and MP/M. Unlimited on MS-DOS and PC-DOS.

SpellStar

DISK STORAGE	MicroPro recommends that you run SpellStar with two floppy disks of at least 128K each, although you can check a very small document with a small dictionary on one disk of at least 128K.

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Appendix B
ERROR MESSAGES

The following list shows error, warning, and informational messages that may appear on your terminal screen as you work in WordStar. The messages, listed alphabetically here, include explanations and recommendations for appropriate action.

Occasionally you'll see the description "Fatal Error" in a message—a colorful way of saying that you're going to lose the work done in your current editing session. Simply reset your system before continuing. The loss will be minimal if you're in the habit of saving your work often.

Some messages require that you press the ESCape key before continuing. Doing so ensures that WordStar does not proceed to the next command, even if you have typed ahead. Pressing the ESCape key does not affect your document.

```
!!!
```

or NOISE from terminal

Situation. You are typing too fast, and there is no more space to store characters for later processing. Keystrokes are being lost.

Action. Stop typing or release the key you're repeating. When the computer has stopped making entries, continue editing.

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```
@@@@
```

Situation. WordStar has tried to display a message from the file WSMSGS.OVR, which isn't available. All or part of many error messages will appear, including the error number, if any, followed by @@@@. Menus, however, will be completely unavailable.

Action. Copy the WSMGS.OVR file off your distribution disk onto disk drive A or the drive you are currently using.

```
                                                              ?
```

Situation. A question mark appears in the flag column, highlighted, opposite incomplete or apparently invalid dot commands.

Action. Check for correct letters, missing numeric arguments, or numbers greater than 255, except with the **.PN** command. The question mark appears as you enter a command; disregard it until your command is complete.

```
Allow print to finish before editing a file.
Your system does not have enough memory to
permit simultaneous editing and printing.
```

Situation. You can't select **D** or **N** from the Opening Menu while printing because there is not enough memory available to perform both functions at once.

Action. See the WordStar Installation Manual for memory requirements.

```
BDOS ERR R/O
```

Situation. This operating system message or something similar may appear when you change disks at an inappropriate time or neglect to type **^C** after changing disks.

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Action. Refer to the section on changing disks in your operating system manual.

```
Can't display page breaks in a non-document file
```

Situation. The command to display page breaks (^OP) has no effect in non-document editing.

Action. Proceed with your editing.

```
Can't edit a file of type .BAK or .$$$.
— rEname or cOpy before editing
```

Situation. When the **D** or **N** command is selected from the Opening Menu, you cannot enter a file name that ends in **.BAK** or **.$$$**. The Opening Menu remains on the screen.

Action. Rename the file or, for a file of moderate size, open a new file, and then read the **.BAK** or **.$$$** file into it with the additional file reading command (^KR). (Copying too large a file may give you a disk-full error.)

```
Disk d: not ready
```

Situation. This operating system message or something similar may appear when the disk drive contains no disk or the drive door has not been closed. WordStar requires that a disk be in every drive you address.

Action. After inserting a disk and closing the drive door, wait a few seconds before giving a command.

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```
End edit (^KD) before starting print
Your system does not have enough memory to
permit simultaneous editing and printing.
```

Situation. You can't give the print command (^KP) during an edit, or your operating system's available memory isn't enough for WordStar.

Action. Run the operations at different times.

```
*** ERROR E5: That place marker is not set
*** Press ESCAPE Key
```

Situation. The marker indicated wasn't set during current editing.

Action. Press the ESCape key to continue. Set the mark using ^**K 0-9**.

```
*** ERROR E6  Block beginning is not marked
              (or marker is undisplayed).
*** Press ESCAPE Key
```

Situation. The beginning mark has not been set on the block of text you're attempting to move (^KV), copy (^KC), delete (^KY), or write (^KW). This message will also appear if the beginning mark is hidden by either ^**KB** or ^**KH**.

Action. Set the beginning mark using ^**KB**, or redisplay the marker with ^**KH**.

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```
*** ERROR E7: Block end is not marked
              (or marker is undisplayed).
*** Press ESCAPE Key
```

Situation. The end mark has not been set on the block of text you're attempting to move (^KV), copy (^KC), delete (^KY), or write (^KW), or the mark is hidden with **^KH**.

Action. Set the end mark using **^KK**, or redisplay the marker with **^KH**.

```
*** ERROR E8: Block end marker is before block beginning marker
*** Press ESCAPE Key
```

Situation. When the end marker is placed earlier in the document than the beginning marker, WordStar can't find the block to move, copy, delete, or write.

Action. Correct the markers and then reissue the command.

```
*** ERROR E9: Block too long -
              Move or delete in two smaller blocks
***Press ESCAPE Key
```

Situation. The amount of text between markers is more than WordStar can move or delete. The larger the memory on your system, the larger the block WordStar will move or delete. (The block-write command isn't subject to any size limitation.)

Action. Divide the large block into smaller pieces, and move or delete them one at a time.

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```
*** ERROR E10: Cursor is not in range for column move/copy
*** Press ESCAPE Key
```

Situation. If you have given a number of special control commands, the cursor could possibly be located in a position to the left of the left margin. The cursor must lie between the left margin and column 240.

Action. Move the cursor within the range and reissue the column-move or copy command.

```
*** ERROR E11: That file exists on destination disk.
               Delete existing file first,
               or use a different disk.
*** Press ESCAPE Key
```

Situation. You cannot copy the file you're editing on the specified disk because that disk contains a file with the same name.

Action. Use the rename command to change one of the file names, or insert a different disk to accept the destination file.

```
*** ERROR E12: Disk is full *** Press ESCAPE Key
```

Situation. You have run out of space on your current disk.

Action. The following suggestions permit you to save your work when you receive this message:

1. If the cursor position is near the beginning of a large file when you receive this message and you haven't already tried to save the file, you may be able to move the cursor nearer the end. Then try to save the file with **^KS**.

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2. If this message appears when the cursor is toward the end of the file or while saving the file, delete (^KJ) any unnecessary files or any files that you can replace later from another disk. Then continue editing.

3. If deleting files doesn't allow you to finish the editing and you don't have much work to lose, stop editing, make more disk space available by moving some files, and repeat your editing.

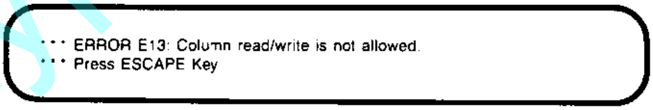
4. If you have made substantial changes and don't want to lose your editing but can't get enough disk space to finish, take one of the following actions:

   a. Use the block-write command (^KW) to put changed portions of the file on any extra space on your other disk drive. Recombine the document in later editing.

   b. Delete unchanged portions of the document, then recover them from the .BAK file or from a previous backup copy.

5. If the disk-full message results from a block-write command (^KW), the above suggestions won't work. Delete (^KJ) the incomplete file. Then arrange additional disk space, repeat the block-write command, and continue editing.

   If the message reappears when you press ESCape, your editing is lost. To avoid running out of space, use the system's file status utility frequently to check your file sizes and disk space.



```
*** ERROR E13: Column read/write is not allowed.
*** Press ESCAPE Key
```

Situation. Column read/write commands are not a feature of the WordStar program.

Action. You can duplicate the effects of column-read or write commands by using column mode (^KN), block writing (^KW), and block reading (^KR).

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```
*** ERROR E38(-42): Bad overlay file, or
wrong version overlay file *** Press ESCAPE Key
```

```
*** ERROR E43(44): Wrong version overlay file
*** Press ESCAPE Key
```

Situation. You cannot use an incorrect or damaged version of the WSOVLY1.OVR file.

Action. Make a new copy of WSOVLY1.OVR from your distribution disk. If the problem persists, call your dealer.

```
*** ERROR E46: Overlay file WSOVLY1.OVR not found
*** Press ESCAPE Key
```

Situation. The WSOVLY1.OVR file is not on your current disk.

Action. Check your directory, and if necessary, make a new copy from your distribution disk.

```
*** ERROR E47: File (MAILMRGE.OVR or SPELSTAR.OVR) not found
               (The separately supplied file MAILMRGE.OVR or
               SPELSTAR.OVR) is required for use of chosen function.)
*** Press ESCAPE Key
```

Situation. You can only choose **M** or **S** at the Opening Menu when the corresponding file is available on disk drive A or on your currently logged disk drive.

Action. Check your directory. Make a new copy from your distribution disk if necessary.

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```
ERROR E52: Program is an empty file! *** Press ESCAPE Key
```

Situation. You have entered an invalid program name while using **R** at the Opening Menu. You may have a bad copy of the program, or a system error may have occurred, leaving only your program name.

Action. Copy the program from the original disk and run it again.

```
*** ERROR E53: Program too big for
    memory available under WordStar
*** Press ESCAPE Key
```

Situation. Your system does not have enough memory to run the specified program while in WordStar.

Action. Exit from WordStar to run the program.

```
*** FATAL ERROR F23: Invalid screen height or width
```

Situation. An error made in installation has set the screen to an unacceptable height or width.

Action. See the WordStar Installation Manual for instructions on custom installations.

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```
*** FATAL ERROR F25: Insufficient memory or your operating
system is not relocated to make all RAM available
```

Situation. Not enough memory is available to operate WordStar. 56K is the minimum memory requirement.

Action. See your dealer.

```
*** FATAL ERROR F27: Diskette directory is full
```

Situation. You have exceeded the number of file directory entries a disk can hold. This number depends on your system, but it's often 64 on single-density disks.

Action. Keep track of the number of files per disk, especially if you have many small files. Large files (over 16K) require an additional entry for each 16K. When counting files, remember that WordStar generates two working files each time you save a file.

```
*** FATAL ERROR F28: Close failure
                     System failure, or you changed disks
```

```
*** FATAL ERROR F29: Rename failure
                     System failure, or you changed disks
```

Situation. If either of these messages appears, WordStar has encountered one of three problems:

1. An operating system error has occurred.
2. You have changed the disk in a drive while editing.
3. You have deleted either the input file or the work file with **^KJ**.

Action. Exit from WordStar, turn the computer off, then on, and reboot. If this doesn't work, call your dealer.

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```
File A:filename in use by WordStar.
```

Situation. You cannot rename, copy to, or delete a file currently being edited.

Action. Complete your current operation and then proceed to rename, copy, or delete the file.

```
File A:filename not found.
```

Situation. The file named in response to the copy, delete, rename, write, or print command does not exist.

Action. Enter the corrected name, including the disk drive, if necessary, or press RETURN to discontinue the command.

```
File A:filename opened by another user.
```

Situation. You cannot access a file in use by another operator on your system.

Action. Proceed with another file or wait until the file is available.

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```
File A:filename already exists
```

Situation. The new file name in your rename command exists on the currently logged disk.

Action. Choose a different name, or rename the existing file.

```
File A:filename exists — overwrite? (Y/N):
```

Situation. You cannot copy one document into another, already existing document.

Action. Type **Y** to erase the contents of the existing document and proceed with the copy. Type **N** to leave the existing contents undisturbed; then specify a new name.

```
File A:filename not on same drive.
```

Situation. When using the renaming command, you have referred to a file located on another disk. Renaming will not transfer a document from one disk to another.

Action. Use the copy command to move a copy of the file to the correct disk drive.

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```
File WS.COM not found.
Cannot RUN a program unless WS.COM is available.
```

Situation. WS.COM is unavailable. It was not found on either disk drive A or on your currently logged disk drive.

Action. If WS.COM has been renamed since installation, you must re-install or rename the file WS.COM. Refer to the WordStar Installation Manual for instructions.

```
File WSMSGS.OVR not found. Menus &
messages will display as @@@@ only.
```

Situation. If the WSMSGS.OVR file, which contains message text, is not found on disk drive A or your currently logged disk drive, the characters in many messages and menus will be replaced with @@@@. The help level is reset to zero to minimize the display of messages and menus.

Action. Copy the WSMGS.OVR file from your distribution disk onto disk drive A or your currently logged disk drive.

```
Finishing print before exit
(type ^U to cancel exit command)...
```

Situation. You entered **X** from the Opening Menu, or **^KX** while editing, at the same time you were printing.

Action. Printing continues, and the exit to the operating system occurs when printing is complete.

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```
Finishing print of .BAK file before saving
(Type ^U to cancel Save command)...
```

Situation. You gave a save command while printing the .BAK file of the file currently being edited.

Action. The WordStar program waits for printing to finish, then saves the file.

```
Finishing print of same file before saving
(Type ^U to cancel Save command)...
```

Situation. You cannot give a save command (^KD, ^KS, ^KX) while printing the same file concurrently.

Action. The WordStar program waits for printing to finish, then saves the file. If printing is paused, type **^U** to cancel the save command, then enter commands to continue or abandon printing.

```
*** INTERNAL ERROR I15: Invalid copy length *** Press ESCAPE Key
```

```
*** INTERNAL ERROR I16: Invalid address *** Press ESCAPE Key
```

```
*** INTERNAL ERROR I17: Memory full *** Press ESCAPE Key
```

```
*** INTERNAL ERROR I18: Memory shortage *** Press ESCAPE Key
```

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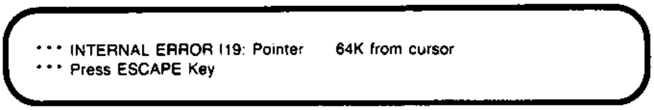
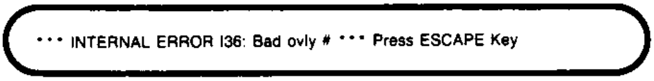


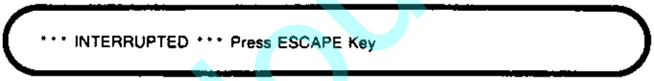
```
*** INTERNAL ERROR I19: Pointer    64K from cursor
*** Press ESCAPE Key
```



```
*** INTERNAL ERROR I36: Bad ovly # *** Press ESCAPE Key
```

Situation. These are internal errors, which rarely occur during normal operations.

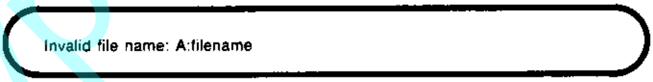
Action. Save your work immediately, and exit to the operating system. To further protect your file, make a copy of the backup file. Then re-enter WordStar and check your file. Please report these errors to your dealer.



```
*** INTERRUPTED *** Press ESCAPE Key
```

Situation. You pressed ^U to interrupt the command in progress or to discard additional characters typed ahead.

Action. Press the ESCape key and continue editing.



```
Invalid file name: A:filename
```

Situation. The name you entered cannot be accepted by WordStar. Some character in the name may not be acceptable to your system.

Action. Enter a new file name. You'll find file-naming guidelines in the reference manual and in your system documentation. The **D** command on the Opening Menu produces a summary of the information on screen.

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```
LOAD ERROR or TOO BIG
```

Situation. This operating system message or something similar may appear when you try to enter WordStar. The WordStar program will not fit in the space available.

Action. You need at least 56K of memory to run WordStar.

```
*** NOT FOUND: "__________" *** Press ESCAPE Key
```

Situation. The find (^QF), replace (^QA) or find/replace again (^L) command can't locate the specified string between the cursor position and the end of the document.

Action. If you haven't located all occurrences of the specified string, reposition the cursor and repeat the search.

```
*** Print output disk is full. Print paused. ***
```

Situation. The disk containing the print output file is full and printing is automatically halted.

Action. Use either or both of the following solutions:

1. To continue printing, make additional disk space available, then press **^KP**.
2. To abandon printing, type **PPY** at the Opening Menu, or, while editing, type **^KP^KPY**. You can then delete the disk output file which is currently incomplete.

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```
Put at file beginning for correct page break display.
```

Situation. If the page break display is on, this message will appear in the text when you enter **.PL**, **.MT**, **.MB**, or **.LH** after the beginning of a file. The command entered into the file may be misinterpreted by the print function. The message is on the screen only and is not printed.

Action. To avoid the problem, move the dot command to the beginning of your file.

```
*** WARNING: Disk full.
 Deleting old .BAK file to make space
 (Normally, the previous backup is deleted
 only after edit is successfully completed.)
```

Situation. Your disk may be filling up, or the files are so large that two to three files fill one disk.

Action. Save the document you're working on, and make more space available by deleting unwanted files or by moving some files to new disks.

```
*** WARNING: Word too long to fit margins
```

Situation. There are too many characters to fit between the currently set left and right margins with no word break. The message also appears during paragraph re-forming (^B) when a word is too long. The WordStar program looks about 10 characters beyond the margin for a break and allows the word to project into the right margin if it finds the break. If no break is found, the word is split at the margin.

Action. You can leave the line wide, or delete the excess characters.

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```
*** WARNING:
Wrong version of WSMSGS.OVR —
Some messages may be incorrect ***
```

Situation. The current file WSMSGS.OVR is from a version of WordStar other than the one you are running.

Action. WordStar continues to run, but any attempt to display a message not in the text file will yield:

```
If this displays you are using wrong version of WSMSGS.OVR.
```

```
WARNING: You are editing the same file as you are printing.
WordStar will not allow you to save the edited version
until the print has completed or has been abandoned.
```

Situation. You cannot save a file that is being printed.

Action. Save the edited version when printing is complete.

```
WARNING: You are printing the same file as you are editing.
The last saved version will be printed, not reflecting un-
saved changes. Furthermore, WordStar will not allow you to
save the file being edited while the print is in progress.
```

Situation. You cannot print (^KP) your current file until you finish editing.

Action. Finish printing before you save your current editing.

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```
You are trying to run an uninstalled WordStar.
Please run WINSTALL first.
```

Situation. The WINSTALL program has not been run correctly on your terminal and printer.

Action. See the WordStar Installation Manual for details.

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Appendix C

Glossary of Terms and Concepts

APPLICATIONS	Specific uses for a program. With WordStar, for example, you can create letters, mailing lists, proposals, resumes, reports, timetables, etc.
ASCII	American Standard Code for Information Interchange. This character coding technique enables computers made by different manufacturers to interpret patterns of bits in the same way.
BACKUP FILE	A duplicate of another file, which you create for safekeeping. A special kind of backup file, *.BAK,* is automatically created by WordStar when you save the file you've been editing. You can't edit a .BAK file.
BAUD	A measurement (in bits per second) of the speed with which information is transmitted between two computer devices, a computer and a printer, for example. If the transfer rate of a computer is 9,600 baud, 9,600 bits of information can be transmitted between the computer and the printer each second.
BINARY	Belonging to a system of numbers having 2 as its base. A bit, which is a binary digit, has a value of 0 or 1.
BIT	A short form of "binary digit." A bit is the smallest unit of data and has a value of 0 or 1.
BLOCK	A portion of text ranging in length from one word to several pages. During editing, you mark blocks in order to move, copy, or delete text.
BOARD	A short form of "circuit board," the flat piece of plastic on which electronic circuits in a computer are printed.
BOOT	Bring the operating system into your computer's memory to begin processing. To *reboot* is to rerun the program that starts your operating system. A *boot* program is a short set of instructions used to load a larger program.
BUFFER	An area for temporary storage of data. Information coming into a printer, for example, is often placed in a buffer to await processing.

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BYTE	A sequence (or group) of binary bits used to represent one character of information. On some microcomputers a byte consists of 8 bits; on others, 16 or 32 bits. Most microcomputers process information one byte at a time. (Note: A 16-bit machine processes two 8-bit bytes at a time.)
CARRIAGE RETURN	In word processing, the return of the cursor to the beginning of the next line. When you press the RETURN key, you enter a *hard carriage return*, which remains in place even when WordStar re-forms text. Word wrap adds *soft carriage returns* and deletes them automatically when text is re-formed.
CHARACTER	A single digit, letter, punctuation mark, space, or other symbol which the computer can read or write.
COMMAND	An instruction transmitted to your computer when you press specified keys. See **Control commands** and **Dot commands.**
CONTROL COMMANDS	Commands issued to the computer when you press a key (or keys) while holding down the control key.
CONTROL KEY (CTRL)	A key, often represented by the caret symbol (^), used with other keys to command the computer to perform specific functions.
CRT	Cathode Ray Tube. CRT's are like TV sets. The are used to display images, letters, digits, symbols, punctuation marks, and other data. Sometimes you will hear your terminal referred to as a CRT.
CURSOR	Usually a small rectangle or line of light on the screen, marking your place in the text. Cursor shapes differ with different operating systems.
DAISY WHEEL PRINTER	A specialty printer with a circular element resembling a daisy which rotates characters into place for printing. See **Specialty printer.**
DATA	Information stored or processed by the computer.
DATAFILE	A group of related pieces of information, called *records*, stored together on a disk. A record consists of *fields*, single items of information. If a datafile consisted of a mailing list, for example, a record might contain all the information about a single addressee. One field within that record might contain the name, another the street address, another the city, etc.

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DEFAULT	A pre-set value or condition in a program, which you can change or allow to stand.
DIRECTORY	An onscreen list of the file names on your disk. See **Disk drive.**
DISK	A round magnetic plate, resembling a phonograph record, for storing information processed by your computer. Disks are either hard or floppy.
DISK DRIVE	A part of your computer system usually built into the computer. A disk is placed inside the disk drive where information can be read from it or written onto it by the computer. Most computers have more than one disk drive, each identified by a letter or number (drive A, B, C, or 1, 2, 3, etc.). The *logged disk drive* is the disk drive currently in operation.
DOT COMMANDS	Print commands which begin with a period ("dot") typed in the first column (at left margin) of a WordStar file.
ERROR MESSAGE	A statement that appears on your screen when your computer is unable to continue processing. The message tells you what the problem is and how to solve it.
FIELD	See **Datafile.**
FILE	A storage unit for information that has been entered into your computer in the form of text, data, or programs. A file is usually stored on disk and identified by a unique name. A *document file* contains text or other information entered in document mode. A *non-document file* contains information entered in non-document mode. See **Datafile.**
FLAG	A symbol relating to text format which appears in the last column to the right on your screen, the "flag column." The symbol for hard carriage return (<) appears there, for example.
FORM FEED	The movement of one page through the platen on your printer.
FORMAT	The way you arrange text on your screen, using commands for setting margins, centering text, etc.

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FUNCTION CODES	Coded directions to the terminal or printer to perform specific actions such as setting tabs, backspacing, or positioning the cursor on the terminal screen.
HARD COPY	Your printed copy as opposed to your disk copy.
HARDWARE	The mechanical and electronic components of a computer system.
HELP SCREENS	Onscreen messages that explain how to use WordStar's features. The *help menu* directs you to various help screens. By choosing a *help level*, you can regulate how many messages and menus will appear on the screen.
HEXADECIMAL (hex)	A numbering system with a base of 16 (as opposed to the decimal system, with a base of 10). Your WordStar Installation Manual contains a chart for converting decimal numbers either to hexadecimal or to ASCII.
HIGHLIGHT	Emphasize a character, word, or block of text by making it either brighter or dimmer than the surrounding text.
HYPHEN HELP	A WordStar feature that finds places where hyphenation would improve the appearance of your text. You decide whether to hyphenate that word.
INPUT/OUTPUT	Input refers to any information coming into the computer. Output refers to processed information going out of a computer.
INSERT	Add characters or spaces to your text.
INSTALLATION	Running the WINSTALL program which is provided on your distribution disk. This program, presented in a simple question and answer format, helps you give WordStar the information it needs about your particular terminal and printer.
JUSTIFICATION	The alignment of text within given margins. The left margin is justified as you enter your text. Word wrap justifies the right margin by adding small spaces between words.
K (SPACE ON DISK)	The abbreviation for kilobyte (1,000 bytes). 1K is equal to 1,024 bytes (or 1,024 characters) of memory. The more bytes of memory a computer has, the more information it can store.

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LOAD	Transfer data or programs into a computer's memory.
MEMORY	See **RAM**, **ROM**, and **Buffer.**
MENU	A screen display that lists options or commands from which you can choose, just as you would select courses from a restaurant menu.
MICRO-JUSTIFICATION	A WordStar feature which distributes spaces (1/120 inch) between words in order to justify text to the right margin.
MODE	The set of features operating while you work on a file. In WordStar's *document mode,* for example, various program features (such as fixed tabbing and word wrap) speed up the job of word processing. In *non-document mode*, on the other hand, the same features are turned off.
OPERATING SYSTEM	A collection of programs that "runs" the computer. Using your operating system, you can tell your computer the name of the program you want to run—in this case, WordStar. The system finds WordStar and begins its operation. Your operating system also determines when and how information is sent to your terminal, printer, disk drives, and other components. The terms *Operating System* and *Control Program* are often used interchangeably.
PAGE BREAK	A place in text where one page ends and another begins. You can direct WordStar to place a page break between two blocks of text so that they will print on separate pages. A *conditional page break* occurs only after a prescribed number of text lines. For example, the dot command .cp4 directs WordStar to start a new page *if* there are more than four lines before the next carriage return.
PAGE OFFSET	A page format command which sets the number of columns that the text will be indented from the left margin when printed.
PARALLEL INTERFACE	Also called *parallel transmission*. The mode in which information is transmitted between locations one byte at a time. Parallel transmission is usually faster but more complicated than serial transmission. See **Serial interface.**
PLATEN	The roller that moves paper through the printer—like the platen on a typewriter.
PORT	A connection between the computer and another component. For example, your computer sends information to the printer through one of its ports.

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PROGRAM	A coded set of instructions which tells a computer what to do and how to do it. By changing the code, you can alter the functioning of a program. To program a computer means to write the coded instructions for its operation.
PROMPT	A question or statement that appears on your screen, indicating that the computer is ready to process your instructions.
RAM	**R**andom **A**ccess **M**emory. An area of computer memory where information can be read or written before it is saved on a disk. Data in RAM are lost when electrical power to the computer is interrupted. RAM is measured in K bytes; e.g., a computer with 32K RAM has 32,768 bytes of random access memory.
READ	Copy information from a disk or other component into RAM.
RE-FORM	Align text between right and left margins.
ROM	**R**ead **O**nly **M**emory. You cannot write in the ROM portion of your computer, only read from it. Information is stored once in ROM (usually by the manufacturer) and cannot be changed.
SAVE	Command the program to write information from RAM onto a disk.
SCROLL	Move the screen view (or "window") up, down, to the right or to the left. You can scroll one line, one column, or one whole screen at a time.
SERIAL INTERFACE	Also called *serial transmission*. The mode in which information is transmitted one bit at a time between the computer and another component (terminal or printer).
SOFTWARE	Programs written to be used on a computer.
SPECIALTY PRINTER	A letter-quality printer, often equipped with a "daisy wheel," that has capacities for backspacing and microjustification as well as interchangeable printing elements.
STANDARD PRINTER	A draft-quality printer with fixed spacing incapable of microjustification. See **Specialty printer.**
STRING	A sequence of letters, numbers, or other characters.

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TOGGLE SWITCH	A command key that, when pressed once, turns a feature on and, pressed again, turns it off.
UTILITY PROGRAM	A program designed to do a routine task. Utility programs help you move or examine files and check that the components of your computer system (computer, terminal, printer, disk drives, etc.) are set up properly. Utility programs are usually supplied to you with your operating system.
VARIABLE	A symbol representing a value that changes. In a computer program, space is set aside in memory for the symbol (X) and a value which X represents (X = 1). As you run the program, the value of the variable may change (X = 2). The new value will replace the old value in RAM.
WORD WRAP	A WordStar feature that automatically moves words to the beginning of the next line when you type beyond the right margin.
WRITE	Copy information from RAM onto a disk.

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Appendix D

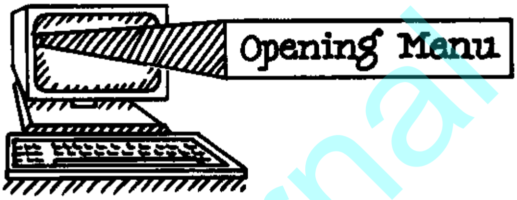
Quick Guide

The steps below will guide you through a simple path to creating a document in WordStar, saving it, and printing it.

1. **Entering WordStar**
   At the system prompt
   TYPE:

   WS RETURN

SEE

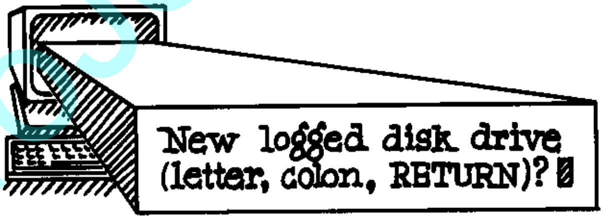


Opening Menu

2. **Changing Disk Drives**
   At the Opening Menu
   TYPE:

   - **L RETURN**
   - **(drive name): RETURN**

SEE

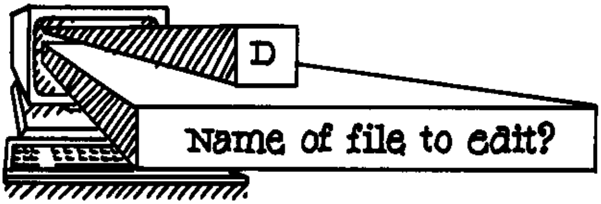


New logged disk drive
(letter, colon, RETURN)?

3. **Opening a Document**
   At the Opening Menu
   TYPE:

   - **D**
   - ***(filename)* RETURN**

SEE



D

Name of file to edit?

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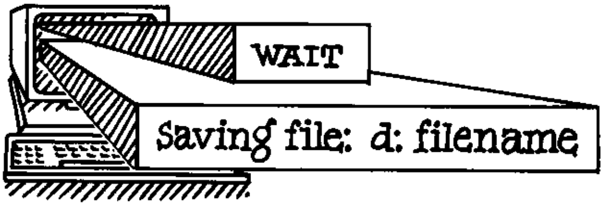
4. Entering Text and Saving Your Work

At the Main Menu

TYPE:

^KD

SEE



WAIT

Saving file: d: filename

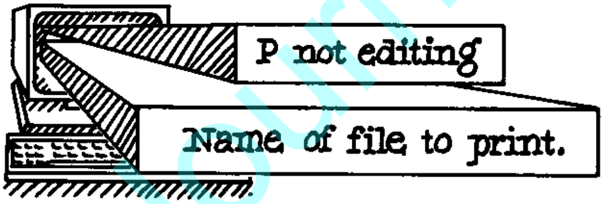
5. Printing Your Document

At the Opening Menu

TYPE:

- **P**
- **(*filename*) ESCape**

SEE



P not editing

Name of file to print.

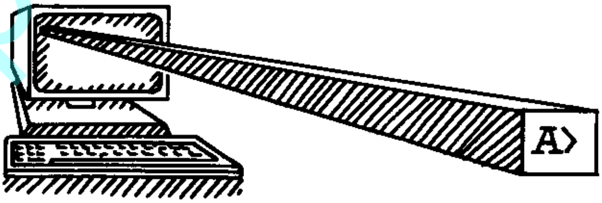
6. Leaving WordStar

At the Opening Menu

TYPE:

X

SEE



A>

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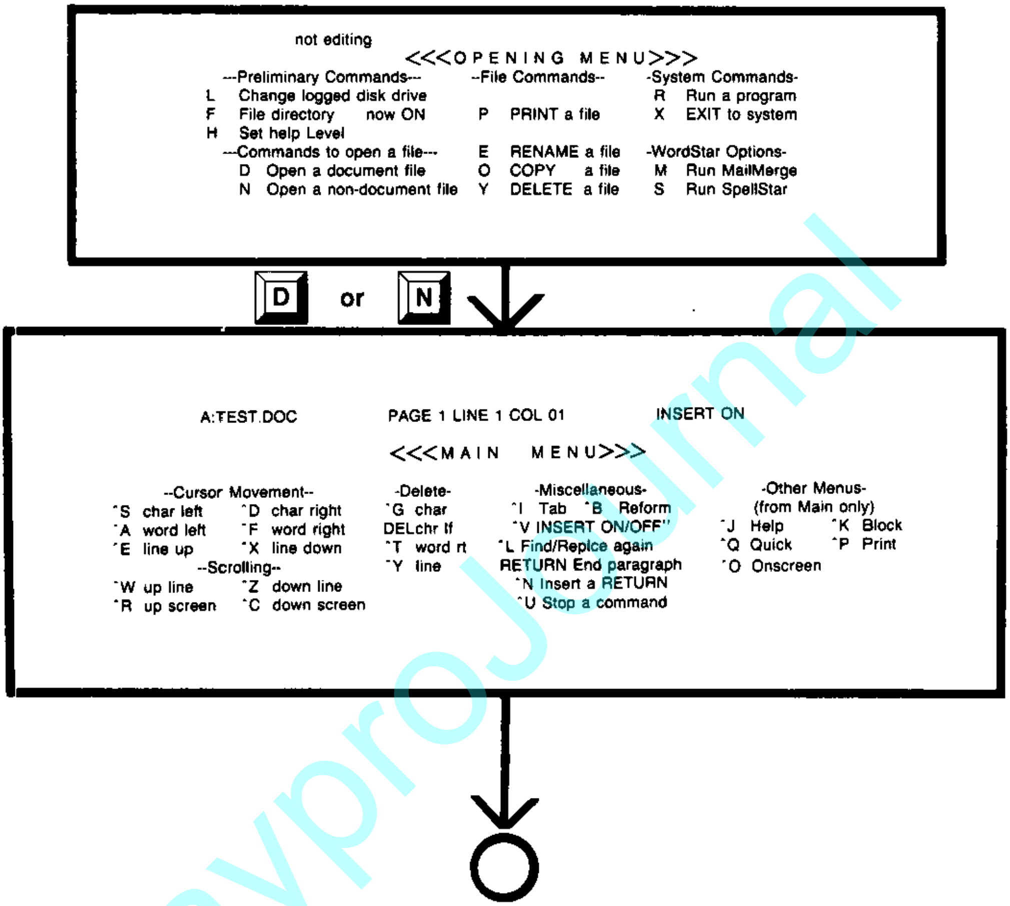
Menu Map



```
                    not editing
                           <<<O P E N I N G   M E N U>>>
      ---Preliminary Commands---         --File Commands--       -System Commands-
    L    Change logged disk drive                                 R    Run a program
    F    File directory       now ON      P    PRINT a file       X    EXIT to system
    H    Set help Level
      ---Commands to open a file---       E    RENAME a file     -WordStar Options-
         D   Open a document file         O    COPY     a file    M    Run MailMerge
         N   Open a non-document file     Y    DELETE  a file     S    Run SpellStar
```

```
         A:TEST.DOC            PAGE 1 LINE 1 COL 01              INSERT ON

                             <<<M A I N    M E N U>>>
     --Cursor Movement--            -Delete-           -Miscellaneous-            -Other Menus-
 ^S  char left     ^D  char right   ^G  char       ^I  Tab   ^B  Reform          (from Main only)
 ^A  word left     ^F  word right   DELchr lf      ^V INSERT ON/OFF"         ^J  Help       ^K  Block
 ^E  line up       ^X  line down    ^T  word rt   ^L Find/Replce again       ^Q  Quick      ^P  Print
           --Scrolling--            ^Y  line      RETURN End paragraph       ^O  Onscreen
 ^W  up line       ^Z  down line                   ^N Insert a RETURN
 ^R  up screen     ^C  down screen                 ^U Stop a command
```

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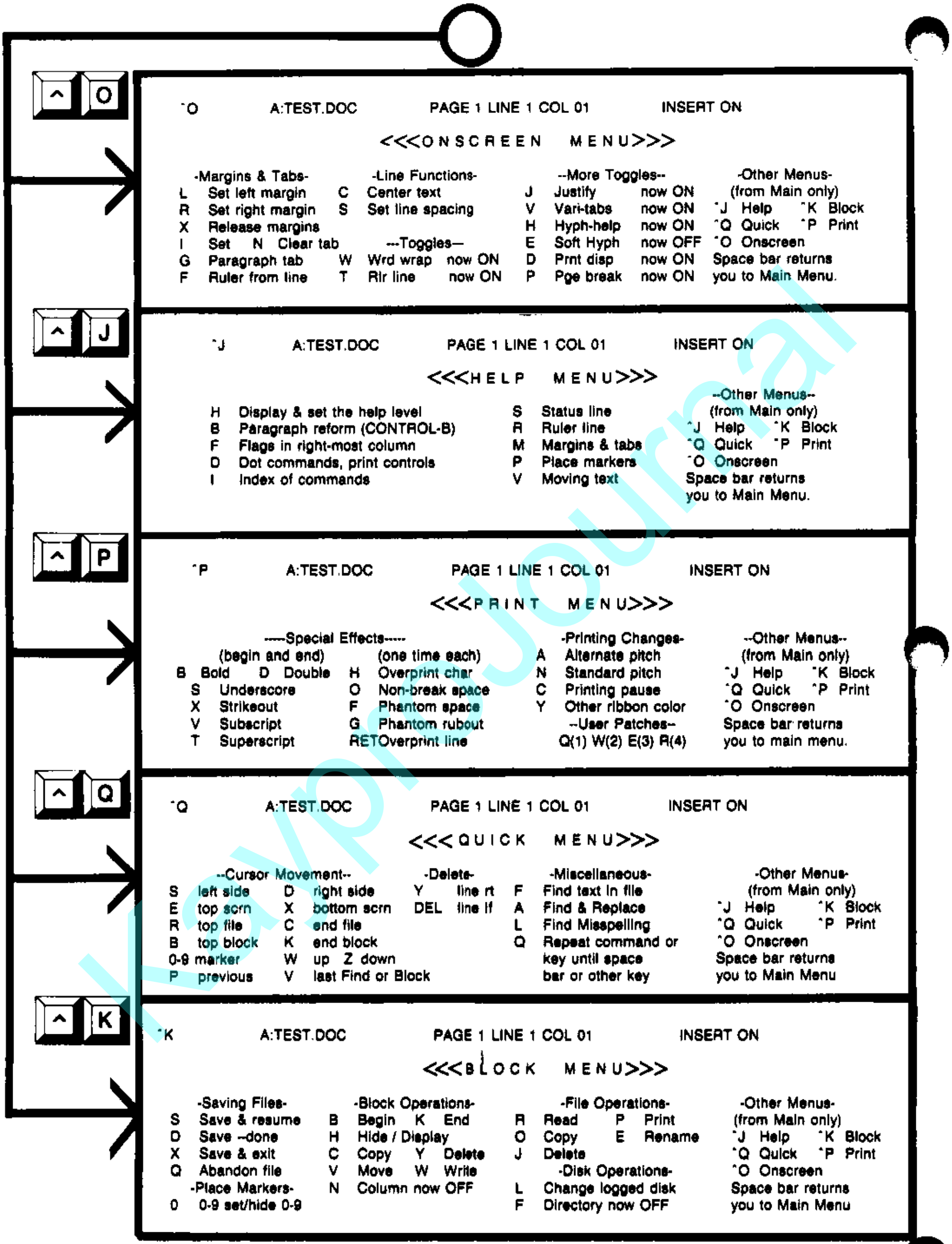

```
^O          A:TEST.DOC          PAGE 1 LINE 1 COL 01          INSERT ON

                      <<<O N S C R E E N   M E N U>>>

   -Margins & Tabs-         -Line Functions-        --More Toggles--          -Other Menus-
L  Set left margin      C  Center text          J  Justify     now ON     (from Main only)
R  Set right margin     S  Set line spacing     V  Vari-tabs   now ON    ^J Help    ^K Block
X  Release margins                              H  Hyph-help   now ON    ^Q Quick   ^P Print
I  Set    N  Clear tab       ---Toggles---      E  Soft Hyph   now OFF   ^O Onscreen
G  Paragraph tab        W  Wrd wrap    now ON   D  Prnt disp   now ON    Space bar returns
F  Ruler from line      T  Rlr line    now ON   P  Pge break   now ON    you to Main Menu.
```

```
^J          A:TEST.DOC          PAGE 1 LINE 1 COL 01          INSERT ON

                       <<<H E L P   M E N U>>>
                                                                   --Other Menus--
H  Display & set the help level             S  Status line        (from Main only)
B  Paragraph reform (CONTROL-B)             R  Ruler line        ^J Help    ^K Block
F  Flags in right-most column               M  Margins & tabs    ^Q Quick   ^P Print
D  Dot commands, print controls             P  Place markers     ^O Onscreen
I  Index of commands                        V  Moving text       Space bar returns
                                                                 you to Main Menu.
```

```
^P          A:TEST.DOC          PAGE 1 LINE 1 COL 01          INSERT ON

                       <<<P R I N T   M E N U>>>

            -----Special Effects-----              -Printing Changes-      --Other Menus--
       (begin and end)       (one time each)    A  Alternate pitch       (from Main only)
B  Bold      D  Double     H  Overprint char    N  Standard pitch       ^J Help    ^K Block
   S  Underscore           O  Non-break space   C  Printing pause       ^Q Quick   ^P Print
   X  Strikeout            F  Phantom space     Y  Other ribbon color   ^O Onscreen
   V  Subscript            G  Phantom rubout       --User Patches--     Space bar returns
   T  Superscript          RETOverprint line       Q(1) W(2) E(3) R(4)  you to main menu.
```

```
^Q          A:TEST.DOC          PAGE 1 LINE 1 COL 01          INSERT ON

                       <<<Q U I C K   M E N U>>>

      --Cursor Movement--            -Delete-        -Miscellaneous-             -Other Menus-
S  left side     D  right side     Y    line rt   F  Find text in file          (from Main only)
E  top scrn      X  bottom scrn    DEL  line lf   A  Find & Replace            ^J Help    ^K Block
R  top file      C  end file                      L  Find Misspelling          ^Q Quick   ^P Print
B  top block     K  end block                     Q  Repeat command or         ^O Onscreen
0-9 marker       W  up   Z  down                     key until space           Space bar returns
P  previous      V  last Find or Block               bar or other key          you to Main Menu
```

```
^K          A:TEST.DOC          PAGE 1 LINE 1 COL 01          INSERT ON

                       <<<B L O C K   M E N U>>>

   -Saving Files-          -Block Operations-       -File Operations-          -Other Menus-
S  Save & resume        B  Begin    K  End       R  Read      P  Print      (from Main only)
D  Save --done          H  Hide / Display        O  Copy      E  Rename     ^J Help    ^K Block
X  Save & exit          C  Copy     Y  Delete    J  Delete                  ^Q Quick   ^P Print
Q  Abandon file         V  Move     W  Write        -Disk Operations-       ^O Onscreen
  -Place Markers-       N  Column now OFF        L  Change logged disk      Space bar returns
0  0-9 set/hide 0-9                              F  Directory now OFF       you to Main Menu
```

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WordStar
Training Guide

Second Edition, Revised:
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This document was initially typed, corrected, and edited using WordStar word processing.

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Welcome to Wordstar

You are about to learn a system that will make typing much easier and more enjoyable for you. This guide will lead you step by step through all the basic procedures. In no more than two work days, you will get to practice every major feature of WordStar. (You may want to spread the two days over a week or so, rather than take this course all at once.)

This guide is divided into three parts:

- Short Course (Lessons 1-6)
- Intermediate Course (Lessons 7-12)
- Extended Course (Lessons 13-20)

If you plan to type ordinary letters, you may find all you need in the Short Course, which should take you about three or four hours to complete. If your typing tasks involve formatted pages, tables, scientific symbols, special headings, searching, or extensive rearranging of text, take the Intermediate Course (about four or five more hours). The Extended course (about another seven or eight hours) covers WordStar's many features for print formatting, especially in longer documents; MailMerge's ability to merge text, chain-print, and produce form letters; and SpellStar's aid in finding and correcting misspellings and typos in text files.

Since the lessons follow a certain order, you will have to complete them in sequence. You can go through the exercises very quickly if you wish. Or you can take time to repeat them if you need more practice. Just remember that many lessons require prior completion of earlier lessons in the guide.

There are about 50,000 different Chinese characters. But it has been said that with a knowledge of only 1,200 of them, you could read 95% of all Chinese writing. WordStar is nowhere near as difficult as Chinese, but it's the same idea. Even though there are a lot of WordStar features, you don't need to know all of them to be able to use WordStar.

Anything new seems unfamiliar at first, so it may take time to get used to the way WordStar works. But once you do, you will be happy to find how much simpler your work has become.

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Introduction

This section will help you get acquainted with Wordstar, wordprocessing, and files

WordStar

WordStar is a complete word-processing system that makes it easy for you to type any kind of letter or document. WordStar offers all the features of the most advanced electric typewriter, plus many more features not found on any typewriter. The computer that you will be using for typing probably looks something like the one shown below. It has a keyboard almost identical to a typewriter keyboard, a video screen, and two or more slots to hold diskettes.

Here are some of the ways typing has been simplified for you:

- You can make changes, insertions, or deletions at any time, even after you have typed an entire document.
- You can move words, sentences, paragraphs, or even entire chapters from one location to another.

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Typical Microcomputer

- You can see the text you have typed on the video screen just the way you entered it.
- Screen displays above your text give you information about your present location in the document, your margins and tabs, which keys to use for different tasks, and provide various other aids.

Word Processing Methods

Even though you will be using a keyboard that looks very much like a typewriter keyboard, there are some major differences between typing on a typewriter and using WordStar. To begin with, the words you enter using WordStar are not immediately printed on paper. First, they are stored in the computer's memory (what you see on the screen is an image from one small segment of computer memory). Then, after you have completed your document, you save it on one of your diskettes. Finally, after you have decided to print your document, you print it from your diskette.

Storing Text

Before you can enter text using WordStar, you have to create a file for storing the text. (If you plan to enter ordinary text, it will be a **document** file; if you plan to enter a data file or a computer program, it will be a non-document file.) You can think of this file as similar to a cabinet file, in that you can store in it any amount of information up to the limits of the system. Anything you store, you can later retrieve, and either add to or take from.

When you create a file, you must give it a name. And you must remember the exact name you give your file so you can go back to it again later. Any time you decide to make changes to your file or to print it, WordStar will ask you for the file's name. If you forget the name of your file, you can always look at the directory on the screen to find it again.

Naming Files

Here are some examples of file names you can use:

NEWSALES	Newsales	newsales	(equivalent)
LIST/497	List/497	list/497	(equivalent)
LETTER04	Letter04	letter04	(equivalent)

A file name may contain from one to eight characters, including letters, numbers, and some special characters (colons, periods, question marks, and asterisks are not allowed). WordStar makes no distinction between upper and lower case letters of the alphabet. That's why "Z" and "z," for example, are equivalent file names.

If you need to give more information about the file, you can also add a period and three more characters to the end of the name. Some examples are .TXT (for text) and .DOC (for document):

NEWSALES.TXT	Newsales.Txt	newsales.txt	(equiv)
LIST/497.DOC	List/497.Doc	list/497.doc	(equiv)
LETTER04.LTR	Letter04.Ltr	letter04.ltr	(equiv)

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BAK Files

Any time you finish a typing job under WordStar, you have to save your typing (store it in a file). And whenever you save your typing, WordStar creates for you another file to back up your current file. This other file, called the .BAK file, contains the last version of your file, and ends in .BAK. For example, if you had a file named LETTER04 (or LETTER04.LTR), WordStar would call its .BAK file LETTER04.BAK.

If you should somehow lose a file, you can always restore it from your .BAK file. This is the purpose of the .BAK file — to back you up if something goes wrong. (Once again, the .BAK file will contain everything but your most recent changes.) You will learn how to restore a lost file in Lesson 12.

Learning as You Go

If you don't understand some of the things discussed above or in Lesson 1, it doesn't make any difference. How WordStar works, how a computer works, how text can be stored on a little piece of plastic—these are things you don't even have to think about. The discussions here are just to give you a rough idea of what is going on when you start typing. Whatever you need to know, you will learn through practice at the keyboard.

Another thing: If you feel uneasy about the thought of dealing with a computer, you don't have to. Going from a typewriter to a computer is probably no more challenging than going from a bicycle to a car. The car has more switches, dials, and lights than the bicycle, and there's more to learn. But the car will take you where you're going a lot faster, especially if it's very far away. You can make mistakes on a computer, but (as long as you don't pick it up and hurl it out the window) there's no way you can damage it. So put yourself at ease and start enjoying all the conveniences your computer is bringing to you.

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Short Course

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Lesson 1

Getting acquainted with the equipment

In this lesson you are going to become familiar with your computer and the equipment connected to it.

The Keyboard

The keyboard for your computer probably looks a lot like the keyboard of your typewriter. The keys for letters and numbers are in the same locations and look the same. But there are a few other keys that you may not have seen before. A typical keyboard with these keys is shown below. Your own keyboard may be a little different.

Take a look at your own keyboard and find where the following keys are located: RETURN, SHIFT, CTRL (CONTROL), and ESC (ESCAPE). You will be using these keys fairly often, so take a moment to locate them now. (On some keyboards, the RETURN key may be called ENTER or NEW LINE.)

The Screen

The typing you do at your keyboard will appear first on a video screen, not on a sheet of paper. But unlike a sheet of paper, your screen will give you helpful information. For example, after you start typing, it will tell you the name of your file,

Typical Keyboard

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your current page, line, and column in the file, and prompts to help you along.

In the next lesson you will get your first chance to look at an actual screen display. For now, it should be enough to mention that the screen shows you information displays, error messages, and the text you are typing. To help you find your place, you will find a special character called the cursor at the location on the screen where you will type next.

Diskettes and Disk Drives

All your files will be stored on diskettes, including text files and any data files you may require. For that matter, WordStar's program files are also stored on a diskette. A disk file can hold either text, data, or a computer program. You can have WordStar's files and your typing files together on the same diskette, or you can have WordStar's files on one diskette and your typing files on another. Make sure you ask someone how the files are stored for your system. One typical set-up would be for you to have one WordStar disk, one working disk, and several backup disks kept on a shelf for emergencies. (The more you work with computers, the more you will learn to value backup disks.)

When you insert a diskette into one of those slots, you are placing it under the control of one of the system's disk drives. The disk drive actually spins the diskette at high speed, somewhat the way a record player spins a record. While the diskette is spinning, the system can either read files from it or write files onto it. (But you don't have to be concerned about this— it's all automatic.)

Be careful never to insert or remove a diskette while WordStar is busy. Make sure WordStar has completed an operation entirely, then deal with the diskette. You will be able to tell by looking at the screen. Whenever WordStar is in the middle of a task, it gives you a message to let you know (WAIT, COPYING . . ., SAVING . . ., and so on). Just wait until the message leaves the screen before doing anything with the diskette. Also, never turn off your computer while a diskette is engaged.

Whenever you are going to be away from your terminal for more than a few minutes, make sure Wordstar is idle, then remove your diskettes and return them to their protective envelopes. Never leave them unattended in the disk drives for very long.

Care of Diskettes

The diskettes that you will be using to store typing require special care in handling. If you aren't careful with them, you risk losing the information stored on them. Always follow these rules:

- Keep them in their protective envelopes any time you aren't using them.
- Avoid bending them.
- Insert them into disk drives carefully.
- Don't touch the area of the diskette that is exposed through the window of the envelope.
- Don't expose them to temperature extremes or magnetism.

The Logged Disk Drive

Each disk drive has a one-letter name, followed by a colon. If your system has two disk drives, they will probably be called A: and B:; if it has four, the other two will probably be called C: and D:. When you start up WordStar, the computer will read the program into its memory from drive A:. Disk drive A: is said to be the logged disk drive, the one the computer is

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currently looking at. (You can tell by the A prompt that appears just before you ask for WordStar. A means A: is logged.)

If you want to ask for a file that is not stored on the logged disk, you have to type the name of the drive in front of the file name (e.g., B:TEXTFILE instead of TEXTFILE). To avoid this inconvenience, you can change the logged disk drive. The simple procedure is given in the next lesson.

The Printer

When you type on a typewriter, a paper copy is produced at the same time you are typing. When you use a word processing system like WordStar, printing a paper copy is a separate task from typing at the keyboard. With WordStar you first type your text at the keyboard, next store your text on a diskette, and then print a paper copy on a printer. This printer must be connected to your computer and turned on, with its paper loaded and adjusted, before you can print your document. Ask someone to show you how to load the paper, adjust it in the platen, and change ribbons before you start printing anything.

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Lesson 2
Some basics

In this lesson, you will learn how to start and stop your computer, and how to start and stop WordStar. You will also learn how WordStar helps you when you need information.

Starting Your Computer

The following are the approximate steps you must take to start up your computer. The steps are not the same for all machines, so there may be some differences between the steps shown here and the steps required for your computer.

1. Turn on the start switch (or turn the start key).
2. Press the RESET button (not all machines require this step).
3. Press the space bar (not all machines require this step).
4. Insert your diskettes:
   a. Insert the WordStar diskette (a boot diskette containing an installed WordStar) into the first drive (usually called drive a:).
   b. Insert your work diskette into the second drive (usually called drive b:) if required.
5. "Boot" or "Reset" your computer, according to instructions from that machine's reference manual or instructions from someone familiar with the procedure.

Take a moment right now to learn the exact procedures for your machine, and write them down for reference. Later you will type them using WordStar.

Starting WordStar

Now start WordStar by following these steps:

1. After the screen prompt A>, type <u>ws</u> (for WordStar) and press RETURN. (With some systems, you may type something a little different.)
   a. First you will see the MicroPro copyright message for a few seconds.
   b. Then you will see a list of commands entitled "Opening menu" with a directory under it. This is about how your screen should look:

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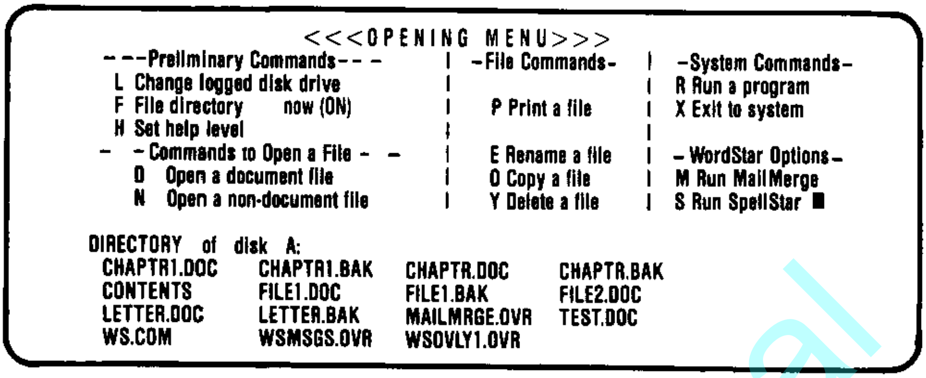

```
                    <<<OPENING MENU>>>
---Preliminary Commands---       | -File Commands-  |  -System Commands-
 L Change logged disk drive      |                  |  R Run a program
 F File directory     now (ON)   |   P Print a file |  X Exit to system
 H Set help level                |                  |
-  -Commands to Open a File -  - |   E Rename a file|  -WordStar Options-
    D  Open a document file      |   O Copy a file  |  M Run MailMerge
    N  Open a non-document file  |   Y Delete a file|  S Run SpellStar ■

DIRECTORY of disk A:
 CHAPTR1.DOC   CHAPTR1.BAK   CHAPTR.DOC    CHAPTR.BAK
 CONTENTS      FILE1.DOC     FILE1.BAK     FILE2.DOC
 LETTER.DOC    LETTER.BAK    MAILMRGE.OVR  TEST.DOC
 WS.COM        WSMSGS.OVR    WSOVLY1.OVR
```

2. If required, type L to request to change the logged disk drive. (This will be required if the WordStar programs are on one disk and your document files are on another.)
   a. When the prompt NEW LOGGED DISK DRIVE (letter, colon, RETURN)? appears, type b: and press RETURN. (In some cases, you may type c: or d:.)
   b. The "Opening" menu will return with the same list of commands (but a different directory).
3. This time press D to "create or edit a Document file" (the explanation is in the upper left-hand corner).
4. When the prompt NAME OF FILE TO EDIT? appears, type the name of your file (say Practice) and press RETURN.

Stopping WordStar

After you have finished typing (for now, a few lines for practice should be enough), you can stop WordStar as follows:

1. While holding down the CTRL key with one finger, type KD with another. This will save your document file and return you to the "Opening" menu.
2. When the "Opening" menu appears, press X.

WordStar will stop and you will see B (or something similar) somewhere on the screen. This means that the operating system is now running. Your operating system allows you to copy files, delete files, and check your work space. See the manual on your operating system to learn how to perform these functions.

To return to WordStar from your operating system, see "Starting WordStar" earlier in this lesson.

Stopping Your Computer

If you plan to be away from the machine for a while, you may want to turn the computer off completely. Here is how to do this:

1. When the B> prompt appears, release each of the diskettes. (Never leave diskettes running in the machine while you are away.)
2. Store the diskettes in a safe place until you are ready to return to your machine.
3. If appropriate, turn off the switch (or key) on your machine. (This may not be good for some machines, so check with your supervisor before doing this.)

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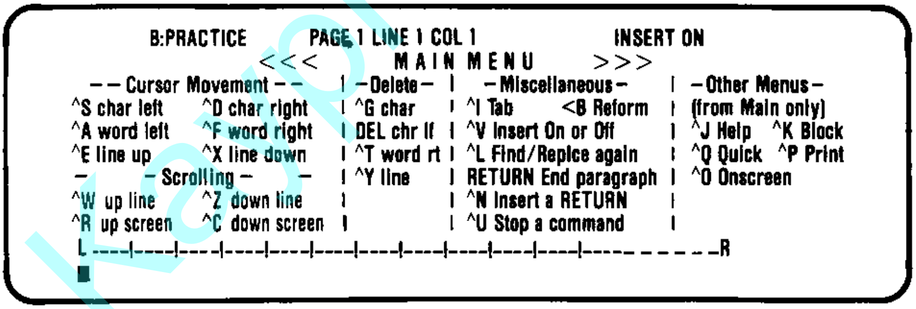
Help from WordStar

Whenever WordStar is running, you will never be lost for long. If you don't remember which key to push, WordStar will remind you. For example, as soon as you enter WordStar, the Opening display is there to tell you which keys you can push. (By the way, if you push the wrong one, the worst thing that can happen is that you will get something different from what you were expecting.)

Right now let's take a quick look at the other menus that WordStar displays for you. To see these menus, you will have to start WordStar and create a document file:

1. With the Opening menu on the screen, press D to create a document file.
2. When the prompt NAME OF FILE TO EDIT? appears, type <u>Practice</u> and press RETURN.
3. After several messages come and go on the screen (WAIT, NEW FILE), the lower half of the screen will be cleared and the new file will be ready. This is how the screen should look:



```
        B:PRACTICE        PAGE 1 LINE 1 COL 1                INSERT ON
                  <<<          M A I N  M E N U        >>>
  - - Cursor Movement - -  | -Delete- |  -Miscellaneous-    | -Other Menus-
^S char left    ^D char right | ^G char  | ^I Tab      <B Reform  | (from Main only)
^A word left    ^F word right | DEL chr lf | ^V Insert On or Off     | ^J Help   ^K Block
^E line up      ^X line down  | ^T word rt | ^L Find/Replce again   | ^Q Quick  ^P Print
-        - Scrolling -     -  | ^Y line  | RETURN End paragraph   | ^O Onscreen
^W  up line     ^Z  down line |          | ^N Insert a RETURN     |
^R  up screen   ^C  down screen |        | ^U Stop a command      |
L----!----!----!----!----!----!----!----!----!----!----!----!---- - - - - - -R
█
```

The Main Menu

a. The very top line is called the **status line** and tells you the name of your document (B:PRACTICE, file "Practice" on disk drive B:), your current page, line, and column number, and other information (INSERT ON is one example).

b. The next eight lines give the Main Menu itself. (All you need to do now is just glance over it.)

c. The tenth line of the display, with L on the left and R on the right, is called the **ruler line.** This tells you where your margins and tabs are currently set:
   (1) L marks the left margin.
   (2) R marks the right margin.
   (3) Each ! marks a regular tab setting.
   (4) Each # marks a decimal tab setting.

4. While holding down the CTRL key with one finger, type J to see the Help Menu. (Just remember, J stands for help. Note: This is a joke; there is no J in "help.")
   a. When the Help Menu appears, look it over, then press R to read about the ruler line.
   b. After taking a look, press the space bar to return to the Main Menu.

5. While holding down the CTRL key with one finger, type Q to see the Quick Menu. (Press the space bar when you are ready to return to the Main Menu.)

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6. Repeat Step 5 with the other letters to see the rest of the menus:
    a. K — Block Menu
    b. O — Onscreen Formatting Menu
    c. P — Print Menu
7. While holding the CTRL key with one finger, type KQ with another to release and discard the file.

Any time you push one of these keys to begin a WordStar function, if you wait a few moments, the menu will appear to help you.

Help Levels

You also have a choice in how much help you want WordStar to give you:

- All the help I can get (level 3).
- A lot of help (level 2).
- A little help (level 1).
- No help (level 0).

When you first start WordStar, you get help level 3 automatically. You will probably want to stay with level 3 through this entire course. However, at the end of the booklet, we'll talk about how you can switch to a lower help level when you're ready. Less help usually means more screen area to work with.

Selecting a WordStar Function

If you want to select a function on a typewriter (set a margin, clear a tab, and so on), there is usually one key designated for the function. With WordStar, you select some functions with a single keystroke, just the way you would select a typewriter function. (With WordStar, it will be a letter key like D, rather than a special function key like TAB.) Other functions you select by pressing a combination of keys.

There are also a number of functions related to printing that you select by a third method. This method will be described in the Extended Course (Lessons 13-18).

Recovering from Errors

Suppose you select a WordStar function and then find that you actually wanted another function. WordStar allows you to interrupt the undesired function in the following way:

1. While holding down the CTRL key with one finger, press U with another.
2. When you see the screen prompt "*** INTERRUPTED *** Press ESC Key," press the ESCAPE key (often labeled ESC).
3. Now you are free to select another function.

Suppose you open a file and discover that it isn't the file you wanted. Or suppose you open the right file, but make some mistakes that are so hard to correct that it would be easier to start from the beginning. In either case, WordStar allows you to abandon the file and make another selection:

1. While holding down the CTRL key with one finger, type KQ with your other fingers.
2. If you have done any typing or made any changes in the file, the following message will appear on the screen: ABANDON EDITED VERSION OF FILE [filename]? (Y/N)
    a. Type Y if you are sure you want to abandon the file and there is no reason to save it.
    b. Type N if you change your mind and decide to save the file after all.
3. The file you had open will be abandoned and you are now free to open another file (or the same one again).

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Lesson 3

Typing a letter

In this lesson you are going to type a business letter using WordStar and then print the letter on the printer that is connected to your computer. Assuming your computer is running, you have inserted the diskettes, and WordStar is running, you are ready to create a document file for the letter.

1. Open a new file named "Letter":
   a. When the Opening menu appears, press D to create a document file.
   b. In response to the prompt NAME OF FILE TO EDIT?, type Letter and press RETURN.
   c. There will be a pause while the messages WAIT and NEW FILE appear on the screen.
2. When the status line, main menu, and ruler line appear, you are ready to begin.

Preliminary Adjustments

Ordinarily, you do not have to make any adjustments — you just start typing in the blank space below the ruler line. But this time, to get some practice in using WordStar, you will make three minor adjustments:

1. Change the left margin to column 21:
   a. While holding down the CRTL key with one finger, type OL with another.
   b. When the question LEFT MARGIN COLUMN NUMBER? appears, type 21 and press RETURN.
2. Change the right margin to column 56:
   a. While holding down the CTRL key with one finger, type the letters OR.
   b. When the question RIGHT MARGIN COLUMN NUMBER? appears, type 56 and press RETURN.
3. Turn off justification (alignment of the right margin):
   a. While holding down the CTRL key with one finger, type O to look at the Onscreen Formatting Menu.
   b. You should see "J=Justification off (ON)" in the middle column. If so, hold down CTRL and type J; if not, press the space bar and continue.
   c. Now you should see "J=Justification on (OFF)."

Now the status line, main menu, and ruler line should be back on the screen. This is how the ruler line should look:

```
L----!----!----!----!----!----!----R
```

If it looks like this, go on to the next section; if it doesn't, repeat steps 1 and 2 very carefully until it does look like this.

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A Letter with Mistakes

Here is the letter. Type this letter exactly as it appears, including mistakes. (In a moment, you will get a chance to correct them, and thereby learn more about WordStar.) Press the RETURN key at the places shown, but nowhere else. Within a paragraph, WordStar will return automatically from one line to another. So you never have to think about where you are on the line or how long the last word is going to be. (When you start, the cursor will be resting in column 1, not in column 21, where you just set the left margin. But as soon as you type the first letter, the cursor will jump over to column 21. Then it will move across the screen as you type.)

july 22, 1981 **RETURN**
RETURN
Bill somers,President **RETURN**
Beauty, Inc. **RETURN**
485 Avenida de las Guapas **RETURN**
Los Angeles, California 90036 **RETURN**
RETURN
Dear mr. Somers. **RETURN**
RETURN
In reference to our conversation earlier today, I would like to meet with you as soon as possible. We should discuss all possibilities of merging Beauty, Inc. and Heavy Dealing. **RETURN**
RETURN
Please call to set an appointment with me secretary at your earliest convenience. **RETURN**
RETURN
Sincerely, **RETURN**
RETURN
Jim Winters, President **RETURN**
Heavy Dealing, Inc. **RETURN**
RETURN
JW/sl **RETURN**
▮

Correcting "july"

Now you can go back and correct the mistakes in the letter. To make these corrections, you will first have to move the cursor to the screen location of each mistake. (On your particular screen, the cursor may be in the form of a rectangle, a triangle, a hyphen, or an underline, and it may or may not be flashing.) For example, after you have completed the letter, the cursor will be on the line below JW/sl in column 1. The first thing you need to do is to move the cursor in the j in "july" in the first line of the letter:

1. While holding the CTRL key down with one finger, press QR. This will take the cursor straight to the beginning of the file (to the left of "july").

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2. While holding the CTRL key down, press F. This will move the cursor across the screen to the j in "july."

Now you can change the lowercase j to an uppercase J. First look at the upper right-hand corner of the screen, on the status line. If you see the words INSERT ON, this means that anything you type will be inserted in front of july. If you type a J now, you will change "july" to "Jjuly," which isn't what you want. So to make the change correctly, you first have to shut off automatic insertion.

1. While holding down the CTRL key with one finger, press V with another.
   a. Look at the upper right-hand corner of the screen and note that the words INSERT ON have disappeared.
   b. Just to see how this works, keep the CTRL key down and press V two more times while watching the upper right-hand corner. You will see INSERT ON appear and then vanish again.
2. With the cursor resting on the incorrect j and INSERT ON gone from the upper right-hand corner of the screen, hold down the SHIFT key with one finger and press J with another. The uppercase J will now replace the lowercase j (and change "july" to "July").

Correcting "somers"

Next, to change "somers" to "Somers" on the third line, proceed as follows:

1. While holding down the CTRL key, press X twice. This will move the cursor down two lines, but in column 1.
2. While holding down the CTRL key, press F twice. This will move the cursor across to the first s in "somers."
3. Since automatic insertion is still off, you can just type an uppercase S (or SHIFT S) over the lowercase s. Now you have changed "somers" to "Somers."

Inserting a Space before "President"

Next, you want to insert a space between the comma and "President" on the same line:

1. While holding down the CTRL key with one finger, press D six times with another. This moves the cursor across the line six characters to the P in "President."
2. Now turn automatic insertion back on by holding down CTRL and pressing V. (You should see INSERT ON reappear in the upper right-hand corner.)
3. Press the space bar. You will see the word "President" move to the right one space. Now you have inserted a space after the comma.

Correcting "mr."

Now you want to correct "mr." in the eighth line. Once again you start by positioning the cursor:

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1. While holding down CTRL, press X five times. This will move the cursor down five lines (to the left of "Dear"). (We could also say, "Press CTRL X five times." This is a shorter way of saying it.)
2. Press CTRL F twice to move the cursor across one word to the m in "mr."
3. Press CTRL V to turn off automatic insertion. (Make sure INSERT ON disappears from the upper right-hand corner.)
4. Type an uppercase M (or SHIFT M) over the lowercase m to change "mr." to "Mr."

Let's take a moment now to see how you've done so far. The first eight lines of the letter should look like this:

July 22, 1981

Bill Somers, President
Beauty, Inc.
485 Avenida de las Guapas
Los Angeles, California 90036

Dear Mr. Somers:

If your letter looks just like this, wonderful! Go on to the next section ("Correcting 'should'"). If it doesn't, you have nothing to be ashamed of. Just give it another try. Here's how:

1. If you were fairly close, try turning back to the section called "Correcting 'july'" and going back over the steps very carefully.
2. If you are not very close and would like to start all over again, hold down the CTRL key and type KQ. Now you can turn back to the beginning of this lesson and forget about your mistakes.

Correcting "should"

Your next task is to replace "should" in line 13 with "must":

1. Press CTRL X five times to move the cursor from "Mr. Somers" five lines down (to the left of "should").
2. Press CTRL F to move the cursor across to the s in "should."
3. Type must over the word "should". Now you have must $\boxed{l}$d", with the cursor over the l.
4. Press CTRL T to delete "ld." Notice how the rest of the line moves left two spaces when you press CTRL T.

Emphasizing "all"

Now you are going to do something that will place more emphasis on the word "all" in the same line:

1. Press CTRL F twice to move the cursor across one word to the a in "all."
2. Press CTRL V to turn automatic insertion back on. (Make sure you see INSERT ON in the upper right-hand corner of the screen.)
3. Press CTRL PB (that is, hold down the CTRL key with one finger, then type PB with another, without a pause between the P and the B).
   a. You will see the characters ^B inserted in front of the word all. (The characters ^B represent an even shorter way of saying CTRL B.)
   b. Note that in some instances, control characters (like CTRL B) are actually displayed on the screen along with the characters of the text.

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4. Press CTRL F (also written ^F) to move the cursor across to the p in "possibilities."
5. Now press CTRL S (or ^S) to move the cursor back to the space between "all" and "possibilities."
6. Press CTRL PB (^P^B) again, but this time with a pause between ^P and ^B.
   a. If you wait long enough (about three seconds), you will see the menu at the top of the screen change.
   b. Then if you look at this menu, you will see B in the middle column, followed by the explanation "Boldface begin/end."
   c. This tells you that by placing a ^B on each side of the word "all," you want WordStar to print "**all**" in boldface type, as you see here.
   d. Note that "**all**" will not appear in boldface on the video screen —only on paper after you have printed this letter.

Correcting a Sentence

Your next task is to change the wording of the sentence in the second paragraph to, "Please call my secretary to set an appointment at your earliest convenience." This involves three changes: deleting the word "with," changing "me" to "my," and moving "my secretary" from the second line to the first. Here are the steps to follow:

1. Delete "with:"
   a. Press CTRL X (^X) five times to move the cursor five lines down (to the left of "with").
   b. Press CTRL F (^F) to move the cursor across the screen to the w in "with."
   c. Press CTRL T (^T) to delete "with." Now the cursor is on the m in "me."
2. Change "me" to "my":
   a. Press CTRL D (^D) to move the cursor over one space to the e in "me."
   b. Press CTRL G (^G) to delete the e.
   c. Type y to insert the corrected letter.

Note

This is a second way of replacing one letter with another: deleting the old, then inserting the new. (If you recall, the first way was to shut off automatic insertion and type the new letter over the old letter.)

3. Move "my secretary" from line 18 to line 17:
   a. Set a beginning marker:
      (1) Press CTRL A (^A) to move the cursor back to the m in "my."
      (2) Press CTRL KB (^K^B) to mark the beginning of the text you are about to move. (You will see <B> appear in front of "my.")
   b. Set an ending marker:
      (1) Press CTRL F (^F) twice to move the cursor two words across to the a in "at."
      (2) Press CTRL KK (^K^K) to mark the end of the text you are about to move. (If your screen is so designed, you will see "my secretary" become highlighted on the screen.)

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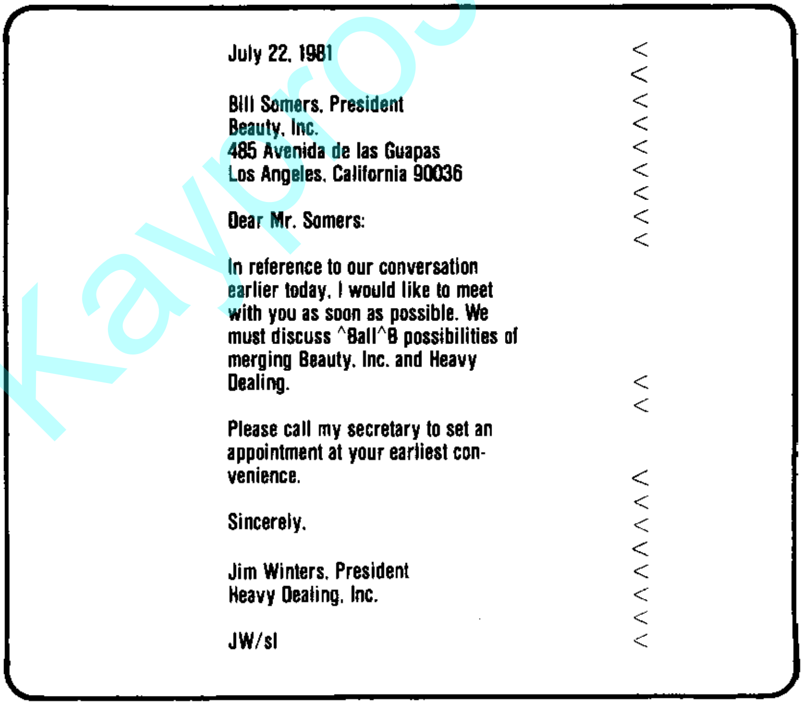
c. Move the text:
    (1) Press CTRL E (^E) to move the cursor up one line.
    (2) Press CTRL A (^A) to move the cursor back to the t in "to."
    (3) Press CTRL KV (^K^V) to move "my secretary" to the space between "call" and "to." Now you have re-worded the sentence.

4. Reform the paragraph:
    a. Press CTRL B (^B) to reform the paragraph.
    b. When the cursor stops on the n in "convenience," press CTRL S (^S) twice to back up two spaces to the v and press the hyphen key (-) to hyphenate the word after "con."

Checking the Results

Now your letter should look like this:



```
July 22, 1981                                <
                                             <
Bill Somers, President                       <
Beauty, Inc.                                 <
485 Avenida de las Guapas                    <
Los Angeles, California 90036                <
                                             <
Dear Mr. Somers:                             <
                                             <
In reference to our conversation
earlier today, I would like to meet
with you as soon as possible. We
must discuss ^Ball^B possibilities of
merging Beauty, Inc. and Heavy
Dealing.                                     <
                                             <
Please call my secretary to set an
appointment at your earliest con-
venience.                                    <
                                             <
Sincerely,                                   <
                                             <
Jim Winters, President                       <
Heavy Dealing, Inc.                          <
                                             <
JW/sl                                        <
```

If this is your first time on a computer and your letter looks just like this, you've done a very good job. You're on your way to becoming a WordStar superstar! Go on to the next section ("Printing the Letter").

If your letter needs a little more work, try pressing CTRL R (^R) followed by CTRL E (^E) to return to the salutation line and turning back to "Correcting 'should'" in this lesson. Go through the steps again very carefully. Or if your letter needs a lot more work, you may want to start all over by pressing CTRL KQ (^K^Q) and going back to the beginning of the lesson.

By the way, if you're curious about those "chicken scratches" along the right-hand side of the screen, the < symbols tell you where you pressed RETURN, while the blanks tell you where WordStar began a new line for you.

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Printing the Letter

Now you are ready to print this letter on your printer. To make it look more attractive, you can have WordStar justify the right margin for you:

1. Press CTRL OJ (^O^J) to turn on justification. After Steps 2 and 3, this will cause the text in the two main paragraphs to be lined up with even margins.
2. Reform the first paragraph:
   a. Press CTRL E (^E) ten times to move the cursor to the first line of the first paragraph ("In reference to . . .").
   b. Press CTRL B (^B) to reform the first paragraph.

Note

You don't have to worry about the "of" that appears to be past the right-hand margin. It will be lined up with the rest of the paragraph when the page is printed.

   c. When you see the cursor stop over the l in "Dealing," press CTRL B (^B) again to tell WordStar not to bother hyphenating this word.
3. Reform the second paragraph:
   a. Press CTRL X (^X) once to move the cursor down to the first line of the second paragraph ("Please call . . .").
   b. Press CTRL B (^B) to reform the second paragraph.
4. Press CTRL KD (^KD) to save a copy of your file. You will see two messages appear on the screen:
   a. WAIT (telling you not to press any keys)
   b. SAVING FILE B:LETTER — assuming "LETTER" is on drive B (telling you what WordStar is doing now).

Note

This is when your file gets transferred to your diskette for storage. Now your file will be much safer in the event that something goes wrong (the power fails, the plug comes loose, etc.).

5. When the Opening menu appears, press P to print your file.
   a. Make sure your printer is connected to your computer, loaded with ribbon, and ready to print. You can get help from someone if necessary.
   b. In response to the prompt NAME OF FILE TO PRINT?, type the name of your file Letter and press ESC (ESCAPE).

Now your letter should be printed. If nothing happens, check the most likely possibilities:

- Is the printer plugged in?
- Is the switch turned on?
- Is the cable from the computer connected?
- Is the lid on the printer closed tightly?

If the answer to all these questions is yes, then you should ask someone else for help. The printer may not be working properly.

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Lesson 4

Moving the cursor

In Lesson 3 you found that certain keys can be used to move the cursor from one place on the screen to another. In this lesson you are going to take a closer look at all the different ways of moving the cursor.

Moving the Cursor One Position

We begin by moving the cursor one position at a time. But first we have to have an open document file to work with. Follow these steps to re-open the file you named Letter:

1. When the Opening menu appears on your screen, press D.
2. In response to the prompt NAME OF FILE TO EDIT?, type Letter and press RETURN.
3. Now the status line, the main menu, and the ruler line will appear in the upper half of the screen, with the first fourteen lines of your letter in the lower half. If you turned off the computer after the last chapter, you'll have to reset the ruler line(margins) for the "Letter" file.
4. While holding down the CTRL key with one finger, type C with another (for short, "Press CTRL C"). This will move the cursor down to line 12 (to the left of "with").
5. Press CTRL F five times to move the cursor across to the a in the second "as."

Now that the cursor is located in the middle of a paragraph, you can try moving the cursor around one position at a time:

1. Press CTRL D to move one position to the right.
2. Press CTRL E to move up one position (one line).
3. Press CTRL S to move one position to the left.
4. Press CTRL X to move down one position (one line).
5. Press these keys several more times in any order.

Look at the arrangement of these four keys (D, E, S, and X) on your keyboard. Note that they form an approximate diamond shape. These four keys make up what we call the "cursor control diamond." Any time you hold down the CTRL key and press one of these keys, you move the cursor one position:

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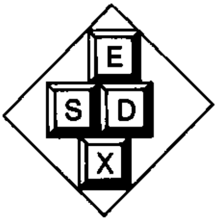

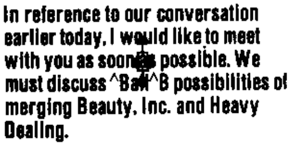
In reference to our conversation earlier today, I would like to meet with you as soon as possible. We must discuss ^Ball^B possibilities of merging Beauty, Inc. and Heavy Dealing.

Moving the Cursor One Word

Return the cursor to the a in "as" and press CTRL F several times. Continue pressing CTRL F until the cursor reaches the end of the paragraph. Now press CTRL A several times. Continue pressing CTRL A until the cursor is back at the beginning of the paragraph.

As you look at your keyboard and the following illustration, you can see that these two keys (A and F) are also part of the "cursor control diamond." These keys move the cursor one word at a time in one direction or the other. As you just noticed, they continue moving from one line of text to another.

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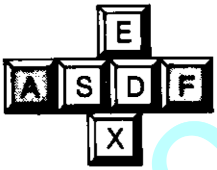
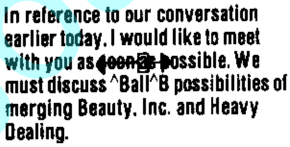
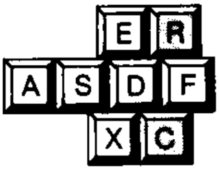


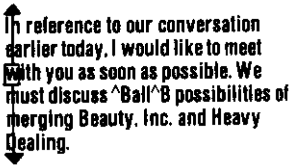

In reference to our conversation earlier today, I would like to meet with you as soon as possible. We must discuss ^Ball^B possibilities of merging Beauty, Inc. and Heavy Dealing.

Moving the Cursor One Screen

If the cursor is still on the I in "In," press CTRL X twice to move it down one line to the w in "with." Now at this location press CTRL R. The cursor should jump all the way up to the J in "July." Now press CTRL C to return. Press CTRL C again to move the cursor down to the J in "Jim Winters."

Looking at your keyboard and the following illustration, you can see that these two keys (R and C) are also part of the "cursor control diamond." These keys move the cursor up or down a distance of one screen. (Actually, it's about three-fourths of one screen—eleven lines of text when fourteen are displayed.)

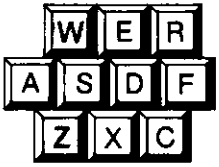


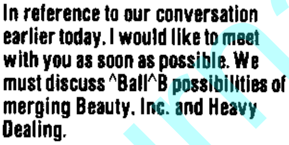

In reference to our conversation earlier today, I would like to meet with you as soon as possible. We must discuss ^Ball^B possibilities of merging Beauty, Inc. and Heavy Dealing.

Scrolling

At your location near the end of the letter, press CTRL W several times. The cursor will not move (unless it is on the very bottom line of the screen), but the entire display will move down one line for each CTRL W. Now press CTRL Z a few times, and watch the display move up. This is called scrolling.

Looking at your keyboard and the following illustration, you can see that these two keys (W and Z) are also part of the "cursor control diamond." The E, S, X, and D keys make up the "inner diamond," while the W, A, Z, C, F, and R keys make up the "outer diamond."



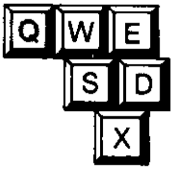

In reference to our conversation earlier today, I would like to meet with you as soon as possible. We must discuss ^Ball^B possibilities of merging Beauty, Inc. and Heavy Dealing.

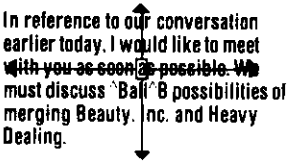
Moving to the Edges of the Text Area

Using the cursor motion keys you have learned, move the cursor back to the word "as" in "as possible." Now hold down the CTRL key and press QS. (A shorter way of saying it is, "Press CTRL QS.") CTRL Q is the "quick" key, which makes things happen faster. So when you press CTRL QS, the cursor moves quickly to the left side of the screen. Now press CTRL QD, and watch the cursor move to the right margin.

Next, press CTRL QE, and watch the cursor move to the top of the text area. Finally, press CTRL QX (or QX for short), and watch the cursor return.

As you have probably noticed already, the four keys you have been using with CTRL Q (E, S, X, and D) are the four keys of the cursor control diamond. Without CTRL Q, they move the cursor only one position in any of four directions; with CTRL Q, they move the cursor to the edge of the text area in any direction.




In reference to our conversation earlier today, I would like to meet with you as soon as possible. We must discuss ^Ball^B possibilities of merging Beauty, Inc. and Heavy Dealing.

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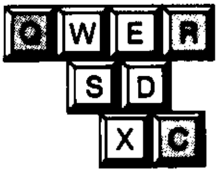
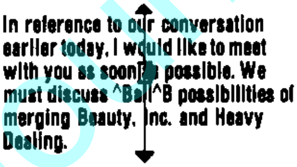
Moving to Either End of Your File

Using the keys you have learned, move the cursor back to the middle of the first paragraph of the letter (to the "as" in "as possible"). Now press CTRL QR (^Q^R), and watch the cursor move up to the first line. Next, press CTRL QC (^Q^ C) and watch the cursor move down to the end of the file.

Once again, these two keys (R and C) are part of the cursor control diamond. Without CTRL Q (^Q), they scroll up or down a distance of one screen (actually, three-quarters of a screen); with CTRL Q (^Q), they move the cursor either up to the beginning of the file or down to the end of the file.

Note that CTRL QR (^Q^R) will move the cursor to the beginning of the file, regardless how large the file. However, if you have a very large file and you want to return to the beginning of the file quickly, press CTRL KS (^K^S) instead. This will save a copy of your file and move the cursor to the beginning much faster than CTRL QR (^Q^R).



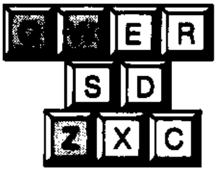


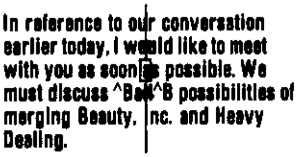
In reference to our conversation earlier today, I would like to meet with you as soon as possible. We must discuss ^Ball^B possibilities of merging Beauty, Inc. and Heavy Dealing.

Continuous Scrolling

From the current location of the cursor at the end of the file, press CTRL QW (^Q^W), and watch the screen begin scrolling down (while the cursor moves up to stay on the screen). You can stop the scrolling at any time by pressing CTRL Q again or by pressing the space bar. If you press CTRL QZ (^Q^Z), the text will begin scrolling up.

These two keys (W and Z) once again complete the cursor control diamond. Without CTRL Q, these keys scroll only one line either up or down; with CTRL Q, these keys scroll continuously.





In reference to our conversation earlier today, I would like to meet with you as soon as possible. We must discuss ^Ball^B possibilities of merging Beauty, Inc. and Heavy Dealing.

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Repeating a Function

CTRL Q Q key

WordStar allows you to repeat any function (or any keystroke) many times without having to keep pressing the keys. Since this is a lesson on cursor motion, let's use a cursor motion function as an example:

1. Press CTRL QR (^Q^R) to move the cursor to the beginning of the file.
2. Press CTRL QQF (^Q^Q^F) to start the cursor moving through the text a word at a time.
3. After watching the cursor move for a while, press the space bar to stop it.

You have seen CTRL Q (^Q) used with various other keys to give you various "quick" functions. When you press CTRL Q twice, followed by a third keystroke (CTRL F in the example above), this tells WordStar to keep repeating this keystroke until you press the space bar. Try Steps 2 and 3 again, only use CTRL QQA (^Q^Q^A) in Step 2 this time. This will start moving the cursor backwards a word at a time.

Saving Your File

Early in this guide, you learned that WordStar operates in your computer and that your files are stored on diskettes. About every half hour or so, you should save a copy of the file you are working on. Then WordStar will transfer your most recent changes to diskette, where they will be stored (and where they will be safer). In this lesson you have not really made any changes to your file (Letter), so this will be just for practice.

While holding down the CTRL key, type KD. (Another way of saying this is, "Press CTRL KD." A third way of saying it is, "Press ^K^D.") WordStar will save your file on diskette and return to the "editing no file" menu.

You pressed CTRL KD this time because you were finished with the file. But other times, when you plan to save your file and then make more changes to it, CTRL KS (^K^S) is a little faster.

Again, as a caution, computers rely on electrical power, and electrical power can fail or fluctuate. So protect you files by saving them. Save them often during a typing session, and always save them at the end of a session. Never leave an unsaved file unattended while you are away from the keyboard.

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Lesson 5

Inserting and deleting text

In Lesson 4 you learned how to move the cursor in any direction either a short distance or a longer distance. In this lesson you will learn how to add to and delete from text you have already typed. First we need a file to work with:

---

1. When the Opening menu appears on your screen, press D to open a document file.
2. Take a moment to look at the information on the screen.
3. In response to the prompt NAME OF FILE TO EDIT?, type Letter and press RETURN.

Inserting a New Paragraph

Now that the file is open, use the cursor motion keys you have learned to move the cursor to the blank line above "Sincerely" near the end of the letter. Now follow these steps:

1. Look at the upper right-hand corner of the screen and make sure you see "INSERT ON" on the status line. If you don't, press CTRL V (^V) to make it appear.
2. Press the RETURN key. Since automatic insertion is on, this will create an extra blank line above "Sincerely."
3. Now type the following additional paragraph exactly the way you see it:

One item 3we have to be sure to
cover when we get together is is
that plant we have over in Burbank.
that plant we have over in Burbank. RETURN

4. Press CTRL KS (^K^S) to save your file.
5. When the text reappears, press CTRL QP (^Q^P) to return to the place where you left off last time.

As you can see, WordStar inserts the text a character at a time while you type. The first RETURN creates a blank line for you to begin typing. With this one blank line as a starting-point, you can type as much text as you like. The RETURN at the end is to create a blank line between the new paragraph and "Sincerely." There are several mistakes in the text to be corrected later. But first you are going to insert more sentences.

Inserting New Sentences

Now press CTRL A to return to the end of the previous line, leave two spaces after the period, and add these sentences to the paragraph you have just typed: "I need to hear what you think about this. Maybe there's more to this than we realized. Keep

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in touch." The paragraph should now look like this:

> **One item 3we have to be sure to cover when we get together is is that plant we have over in Burbank. that plant we have over in Burbank. I need to hear what you think about this. Maybe there's more to this than we realized. Keep in touch.**

With WordStar, once you have found your place, there is no difference between adding a character, a word, a sentence, or even more. Just make sure the INSERT ON message is on the screen and start typing.

Deleting a Character

CTRL G

The first mistake we need to correct is the 3 in front of "we" in the first line of the new paragraph:

1. Use the cursor motion keys to position the cursor over the 3 in "3we."
2. Press CTRL G (^G) to delete the 3.

CTRL G (^G) deletes one character at a time. If you want to delete more than just a single character, you can use other keys.

Deleting a Word

CTRL T

The next mistake to correct is the extra "is" in the second line of the new paragraph:

1. Position the cursor over the i in the first "is."
2. Press CTRL T (^T) to delete the word.

CTRL T (^T) deletes one word at a time. This includes the space that follows the word; it also includes any punctuation that may follow the word.

Deleting a Line

CTRL Y

The third mistake to correct is the line that was typed twice:

1. Position the cursor anywhere in one of the extra lines.
2. Press CTRL Y (^Y) to delete the line.

CTRL Y (^Y) deletes one line of text from your file. There are also ways to delete part of a line.

Deleting to the Right

CTRL Q Y

The next correction to make is to delete the sentence, "Maybe there's more to this than we realized." We can't use CTRL Y here because the sentence isn't on a line by itself. So we'll begin with the part on the fifth line of the paragraph:

1. Move the cursor to the M in "Maybe."
2. Press CTRL QY (^Q^Y) to delete "Maybe there's more . . ."

CTRL QY (^Q^Y) deletes from where the cursor is located to the end of the same line (to the right). The character on which the cursor is resting is deleted. As you might have guessed, you can also delete to the left.

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Deleting to the Left

CTRL Q DEL

Next, we'll delete the rest of the unwanted sentence, which is on the sixth line of the paragraph:

1. Move the cursor to the K in "Keep."
2. Press CTRL Q DEL (^Q^DEL) to delete "than we realized." (On some keyboards, DEL (DELETE) is called RUBOUT.)

CTRL Q DEL (^Q^DEL) deletes from in front of the cursor to the beginning of the same line (to the left). The character on which the cursor is resting is not deleted. This is how your new paragraph should look now:

One item we have to be sure to
cover when we get together is
that plant we have over in Burbank.
I need to hear what you think about
this.
Keep in touch.

These deletions have left both margins a little ragged. In a moment, we'll take care of that. Right now we are going to consider ways of inserting and deleting blocks of text that you have already typed.

Copying a Paragraph

CTRL K C

Suppose that after looking at your letter, you discover that you have typed this new paragraph in the wrong location. It really belongs between the other two paragraphs. WordStar allows you to copy the entire paragraph to the new location:

1. Mark the beginning of the paragraph:
   a. Move the cursor to column 1 of the line above your new paragraph (the line above "One item . . .").
   b. Press CTRL KB (^K^B) to mark the beginning of the block of text you are going to copy. (You will see <B> appear in front of the cursor.)
2. Mark the end of the paragraph:
   a. Move the cursor to column 1 of the line below your new paragraph (the line below "Keep in touch.").
   b. Press CTRL KK (^K^K) to mark the end of the block of text you are going to copy. (Either the block will become highlighted or <K> will appear.)
3. Copy the paragraph to the new location:
   a. Move the cursor to column 1 of the line between the other two paragraphs (the line above "Please call . . .").
   b. Press CTRL KC (^K^C) to copy the marked paragraph to the new location.

Deleting a Paragraph

CTRL K Y

Now you are going to go back and delete the paragraph from the old location:

1. Mark the beginning of the paragraph:
   a. Move the cursor to column 1 of the line above the paragraph (the line above "One item").
   b. Press CTRL KB (^K^B) to mark the beginning of the block of text you are going to delete. (You will see <B> appear in front of the cursor.)

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2. Mark the end of the paragraph:
    a. Move the cursor to column 1 of the line below the paragraph (the line below "Keep in touch.").
    b. Press CTRL KK (^K^K) to mark the end of the block of text to be deleted. (Either the block will become highlighted or <K> will appear.)
3. Press CTRL KY (^K^Y) to delete the marked paragraph.

You don't have to copy a block of text from one location to another and then go back to the old location to delete. This has just been for the practice. WordStar has another feature that moves text from one location to another without leaving a copy behind at the old location.

Moving a Paragraph

CTRL K V

After looking at your letter for a while, you decide that the new paragraph you've inserted really belongs at the end as a postscript. You can move the paragraph to the end of the letter with one command after marking it:

1. Mark the beginning of the paragraph:
    a. Move the cursor to column 1 of the line above the paragraph (the line above "One item . . .").
    b. Press CTRL KB (^K^B) to mark the beginning of the block of text you are going to move. (You will see <B> appear in front of the cursor.)
2. Mark the end of the paragraph:
    a. Move the cursor to column 1 of the line below the paragraph (the line below "Keep in touch.").
    b. Press CTRL KK (^K^K) to mark the end of the block of text you are going to move. (Either the block will become highlighted or <K> will appear.)
3. Move the paragraph to the new location:
    a. Move the cursor to column 1 of the blank line above the initials (the line above "JW/sl").
    b. Press CTRL KV (^K^V) to move the marked paragraph. (No copy will be left at the previous location.)

Inserting "P.S."

Now for a final touch you can insert "P.S. " in front of the paragraph you just moved:

1. Press CTRL KH (^K^H) to turn off the highlighting (and hide the markers).
2. Move the cursor to the O of "One item . . .".
3. Look at the upper right-hand corner of the screen to check for "INSERT ON." If it isn't there, press CTRL V (^V) to make it appear.
4. Type "P.S. " (with a space after the second period) in front of "One item . . .".
5. Press CTRL B (^B) to reform the paragraph.
6. Press CTRL KD (^K^D) to save your file.
7. Look at the directory for LETTER.BAK your backup file.

Any time you mess up a paragraph with insertions or deletions, you can tidy it up again by pressing CTRL B (^B). You can press ^B either at the beginning of the paragraph or at any line further down, as long as the cursor precedes the untidy places.

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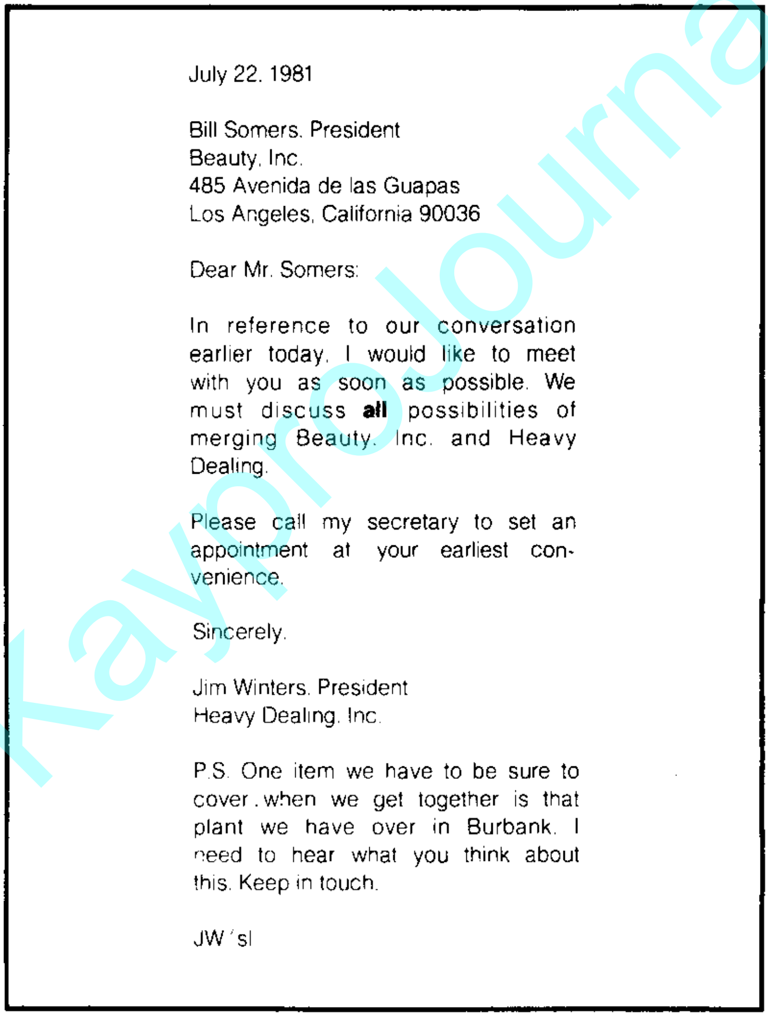
Printing Your File

Just for practice, you can now print your file on your printer:

1. When the Opening menu appears, press P. (Make sure the printer is ready and that the paper is lined up at the right position.)
2. When the prompt NAME OF FILE TO PRINT? appears, type Letter and press ESC (ESCAPE). Now your letter will be printed with the new paragraph.



July 22, 1981

Bill Somers, President
Beauty, Inc.
485 Avenida de las Guapas
Los Angeles, California 90036

Dear Mr. Somers:

In reference to our conversation earlier today, I would like to meet with you as soon as possible. We must discuss **all** possibilities of merging Beauty, Inc. and Heavy Dealing.

Please call my secretary to set an appointment at your earliest convenience.

Sincerely,

Jim Winters, President
Heavy Dealing, Inc.

P.S. One item we have to be sure to cover, when we get together is that plant we have over in Burbank. I need to hear what you think about this. Keep in touch.

JW/sl

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Summary

In this lesson you have learned how to insert a sentence, a paragraph, or any amount of text into your file, using INSERT ON. You have also learned how to delete a character, a word (or part of a word), an entire line, or part of a line:

CTRL G	One item ~~a~~we have to be sure to	
	cover when we get together ~~is~~ is	CTRL T
	that plant we have over in Burbank.	
CTRL Y	~~that plant we have over in Burbank~~.	
	I need to hear what you think about	
	this. ~~Maybe there's more to this~~	CTRL QY
CTRL DEL	~~than we realized~~. Keep in touch.	

In addition, you have learned how to set markers at each end of a block of text:

<B> (CTRL KB)
One item we have to be sure to
cover when we get together is
that plant we have over in Burbank.
I need to hear what you think about
this.
Keep in touch.
<K> (CTRL KK)

Finally, you have learned how to copy, delete, or move a paragraph (or any other block of text that has been marked):

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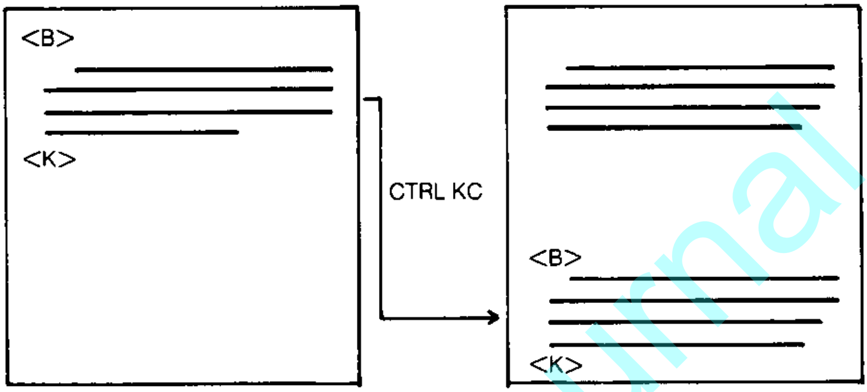

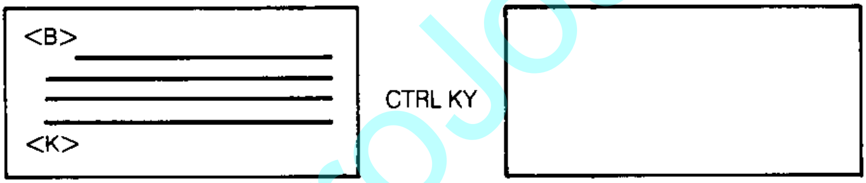

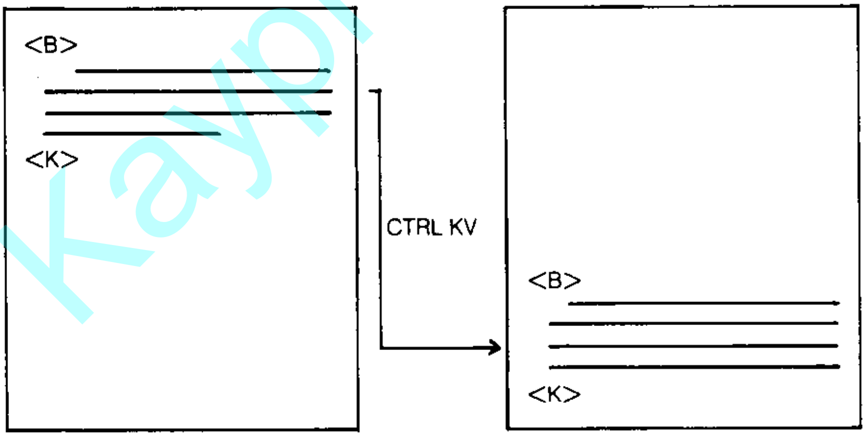

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Lesson 6
Forming paragraphs

In this section you will learn how to enter paragraphs correctly, how to split one paragraph into several, and how to merge several paragraphs into one. You will also learn how to select unjustified right margins and how to select double or triple spacing.

First, you will create a new document file and (if you haven't exited from WordStar since Lesson 5) reset the original margins.

1. Create a new file called "Control":
    a. When the Opening menu appears, press D.
    b. When the prompt NAME OF FILE TO CREATE OR EDIT? appears, type Control and press RETURN.
    c. First the WAIT and NEW FILE messages will appear on the screen, then the file will be ready.
2. Reset the left margin to column 1 (if necessary):
    a. Press CTRL OL (^O^L) to request a new left margin.
    b. When the question LEFT MARGIN COLUMN NUMBER? appears, type 1 and press RETURN.
3. Reset the right margin to column 65 (if necessary):
    a. Press CTRL OR (^O^R) to request a new right margin.
    b. When the question RIGHT MARGIN COLUMN NUMBER? appears, type 65 and press RETURN.

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Typing Separate Paragraphs

Enter the following text exactly as you see it here:

The CTRL key on your keyboard is very similar to the SHIFT key in many ways. First of all, you always press it while you are pressing another key; pressing it by itself doesn't do anything. Like the SHIFT key, the CTRL key changes what happens when you press some other key. And like the SHIFT key, the CTRL key is located near the left side of the key cluster. However, pressing the CTRL key while you are pressing another key does not usually produce a visible character on the screen and never produces a printed character. **RETURN**
RETURN
Instead of saying, "While holding down the CTRL key with one finger, press O with another," we can be briefer by just saying, "Press CTRL O." This is like saying, "Press SHIFT O." The difference is that pressing CTRL O will activate a WordStar function, while pressing SHIFT O will merely display a capital letter O on the screen. If we want to be even briefer still, we can say, "Press O" instead of, "Press CTRL O." **RETURN**

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Even though you have already typed this text as two separate paragraphs, WordStar makes it easy for you to change this.

Joining Paragraphs

Just for practice, you will first join the two paragraphs you have typed into one larger paragraph:

1. Move the cursor just past the last word of the first paragraph (to the first blank space past "character."), as follows:
   a. Place the cursor in the left-hand margin of the blank line between the two paragraphs.
   b. Press CTRL A (^A) to move the cursor back up to the end of the previous line.
2. Press the space bar twice to leave room between the two sentences.
3. Press CTRL G (^G) twice.
   a. With the first CTRL G, the blank line between the paragraphs will vanish.
   b. With the second, the first word of the second paragraph will move to the cursor.
4. Press CTRL B (^B) twice to reform the new paragraph.

Splitting a Paragraph

Now you are going to split into smaller paragraphs the larger paragraph you have just formed:

1. Using the cursor control keys you have learned, move the cursor to the H in "However, . . ." in the sixth line.
2. With INSERT ON showing in the upper right-hand corner of the screen, press RETURN twice.
   a. With the first RETURN, "However, . . ." moves to a separate line.
   b. With the second, a blank line appears between the new paragraphs.
3. Press CTRL B (^B) to reform the second paragraph.
4. Repeat Steps 1-3 to form a third paragraph beginning with "Instead of . . . ."

Even though you entered this text in block style, there's nothing to keep you from changing that now.

Changing to Indented Paragraphs

WordStar makes it easy for you to change to indented paragraphs after you have already typed them:

1. Move the cursor to the beginning of the first paragraph (the T in "The CTRL key . . .").
2. With INSERT ON showing in the upper right-hand corner of the screen, press CTRL I (^I) to indent the first line of the paragraph to the first tab stop.
3. Press CTRL B (^B) to reform the paragraph.

You will see the cursor stop in the middle of "anything." This is WordStar's way of asking you if you want to hyphenate this word. To hypenate, back the cursor up to the t and press the key (-). Now WordStar will continue reforming.

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Hyphenating Words During Reform

Repeat Steps 1-3 for the second two paragraphs. While you are reforming the second paragraph, WordStar will stop to hyphenate "another:"

1. If you don't want to hyphenate "another," just press CTRL B (^B) again. WordStar will move "another" to the next line and go on.
2. If you want to hyphenate "another," use CTRL S (^S) to back up the cursor to the o and press the hyphen key. WordStar will place a hyphen after "an" and then go on to the end of the paragraph.

Just for practice, reform the paragraph twice, once without hyphenation and once with hyphenation. (If you have already reformed with hyphenation, just leave the paragraph that way.) Note that the hyphen may appear highlighted on your screen. The highlighting tells you that this hyphen will be printed only if it falls at the end of a line (which it does right now). If your screen doesn't show highlighting, this is still true.

Rejoining Paragraphs

Now you are going to rejoin the first and second paragraphs:

1. Using the cursor control keys you have learned, move the cursor past the last word in the first paragraph, with two spaces between the period and the cursor. (CTRL F or CTRL A should do this automatically.)
2. Press CTRL G (^G) twice to bring the two paragraphs together.
3. Press CTRL G (^G) five more times to remove the indentation.
4. CTRL B (^B) to reform the new paragraph.
5. Press CTRL KD (^K^D) to save a copy of your file.

Now the text is about the way it was when you first entered it, except that each paragraph begins with an indented line.

Printing Your File

To print your completed file, follow these steps:

1. When you see the Opening menu, press P to request printing. (Make sure the printer is ready and the paper is positioned correctly.)
2. When the prompt NAME OF FILE TO BE PRINTED? appears, type Control and press ESCAPE. Your file will be printed on the printer.

Printing Double-Spaced, Unjustified

Just to illustrate some of the choices you have in printing, you will now print the same file with double-spacing and an unjustified right margin:

1. Open the file named "Control:"
   a. When the Opening menu appears, press D to open your file again.
   b. When the prompt NAME OF FILE TO CREATE OR EDIT? appears, type CONTROL and press RETURN.
2. Set double-spacing:
   a. Press CTRL OS (^O^S).
   b. When the prompt "ENTER space OR NEW LINE SPACING (1-9): " appears, type 2 (no RETURN required).

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    c. LINE SPACING 2 will appear in the upper right-hand corner of the screen (on the status line).

3. Turn off justification:
    a. Press CTRL O (^O).
    b. If the menu shows that justification is now ON, press CTRL J (^J) to turn it off.
    c. If the menu shows that justification is already OFF, press the space bar to leave it that way.
    d. The next time you type ^O^J, you will turn justification back on again.
4. Reform the first paragraph:
    a. Leave the cursor at column 1 of the first line of the first paragraph ("The CTRL key . . .").
    b. Press CTRL B (^B) to reform the paragraph.
5. Reform the second paragraph:
    a. Move the cursor down to column 1 of the first line of the second paragraph ("Instead of . . .").
    b. Press CTRL B (^B) to reform the paragraph.
6. Print your file again:
    a. When you see the "Opening" menu, press P to request printing.
    b. When the prompt NAME OF FILE TO BE PRINTED? appears, type Control and press ESCAPE.
    c. The printed result should look like this:

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The CTRL key on your keyboard is very similar to the SHIFT key in many ways. First of all, you always press it while you are pressing another key; pressing it by itself doesn't do anything. Like the SHIFT key, the CTRL key changes what happens when you press some other key. And like the SHIFT key, the CTRL key is located near the left side of the key cluster. However, pressing the CTRL key while you are pressing another key does not usually produce a visible character on the screen and never produces a printed character.

Instead of saying, "While holding down the CTRL key with one finger, press O with another," we can be briefer by just saying, "Press CTRL O." This is like saying, "Press SHIFT O." The difference is that pressing CTRL O will activate a WordStar function, while pressing SHIFT O will merely display a capital letter O on the screen. If we want to be even briefer still, we can say, "Press O" instead of, "Press CTRL O."

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Line Spacing and Justification

You can set any line spacing from 1 to 9 by pressing ^O^S. and typing a number. When you set a value other than 1 (single-spacing). e.g.. 2 (double-spacing). you will see a message in the upper right-hand corner of your screen (LINE SPACING 2). You probably won't have many occasions to use any setting other than 1. 2. or 3 for line spacing.

You can turn off justification of the right margin by pressing ^O^J once. The next time you press ^O^J. you will turn justification back on again. You can always tell whether you have turned justification on or off by looking at the text you are typing. Another way to tell is to press ^O and look at the menu after J (either ON or OFF will appear highlighted). If you don't want to change it. just press the space bar.

If you select double spacing and unjustified right margins before you begin typing. then you will see the text appear with these features on the screen. But if you have already typed the text and then select these features. nothing will happen to your text until you reform each paragraph one at a time. This means that WordStar allows you to change the settings as often as you like. which means. in turn. that you could type each paragraph of your file with different settings for printing.

Any WordStar features you select will remain in effect until you exit from WordStar. even if you switch to a different file.

End of the Short Course

This concludes the Short Course. At this point. you don't know all the features of WordStar. but you know enough to handle most ordinary typing jobs. Here is a quick summary of what you have covered:

Lesson 1. You learned how the keyboard. screen. diskettes. disk drives. and printer work together while you are typing.

Lesson 2. You learned how to start your computer and WordStar. how to stop WordStar and your computer. and how WordStar helps you while you are typing.

Lesson 3. You learned how to create a document file and type a letter. You also learned how to use many WordStar functions for making corrections and how to print the letter.

Lesson 4. You learned how to move the cursor one position. one word. or one screen in either direction. You also learned how to scroll the screen up or down. move the cursor to the edge of the text area. move the cursor to either end of the file. and repeat a keystroke or WordStar function.

Lesson 5. You learned how to insert text with INSERT ON and how to delete a character. a word. a line. or part of a line. You also learned how to copy. delete. or move a block of text.

Lesson 6. You learned how to join two paragraphs together and split one paragraph into two. You also learned how to change block paragraphs to indented paragraphs. how to reform a paragraph. and how to hyphenate words during a paragraph reform. Finally. you learned how to specify line spacing and right-justification.

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You have created these files:

PRACTICE (Lesson 2)
LETTER (Lesson 3)
CONTROL (Lesson 6)

If you plan to repeat the Short Course, you can delete these files now, using either WordStar's deletion command or your operating system's deletion command. Here is how to use WordStar's deletion command for the first file (PRACTICE):

1. When the "Opening" menu appears, press Y to delete a file.
2. When the prompt NAME OF FILE TO DELETE? appears, type Practice and press RETURN.

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Intermediate Course

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Lesson 7

Margins, tabs, and centering

In this lesson you will learn how to align the text you are typing with tabs, margins, and centering.

First you will need to create a new document file:

1. When the Opening menu appears, press D to create a document file.
2. When the prompt NAME OF FILE TO EDIT? appears, type Display and press RETURN.

Now you have a document file called "Display," and you are ready to begin entering text.

Centering Text

CTRL O C

The first word you are going to type is to be the title of this file. So you will want to center this word in the middle of the line:

1. Press RETURN three times to bring the title down from the top of the page.
2. Type "Display" next to the left-hand margin.
3. Press CTRL OC (^O^C) to center "Display." You will see the word shift to the middle of the screen.

Indenting Text

CTRL I

Now you are going to enter several paragraphs of text with indentations included for better appearance:

1. Press RETURN three times to leave two blank lines below the title.
2. Press CTRL I (^I) to move the cursor out to the first tab stop. (You can see the positions of the tabs that WordStar has set for you by looking at the ruler line below the menu. Each exclamation point (!) represents one tab stop.)

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3. Now type the following paragraph:

> WordStar displays a lot of information for the beginning user. Besides the display of text in the lower part of the screen, WordStar also displays **RETURN**
> **RETURN**

4. Press CTRL I (^I) to move the cursor out to the first tab stop and type "o" to represent a **bullet.**
5. Press CTRL I (^I) again to move the cursor to the second tab stop.
6. Press CTRL OG (^O^G) twice to move the left margin temporarily to the second tab stop, then type the following paragraph:

> Status Line. The status line tells you the name of your file (B:DISPLAY), the page, line, and column of the cursor's location in your file, and other information, such as INSERT ON. **RETURN**
> **RETURN**

7. Repeat Steps 4-6 and type the following paragraph:

> Main Menu. The main menu gives you information about the most common WordStar functions and refers you to five other menus for additional information. **RETURN**
> **RETURN**

8. Repeat Steps 4-6 and type the following paragraph:

> Ruler Line. The ruler line shows you the margins and tab stops currently in effect. WordStar initially sets the left margin to column 1, the right margin to 65, and tab stops at every fifth column up to 56 **RETURN**
> **RETURN**

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9. Press CTRL KD (^K^D) to save your file.

By pressing CTRL I (^I) one or more times, you can cause a line of text to be indented to one of the tab stops currently set. (But the rest of the lines of the paragraph will not be indented.) By pressing CTRL OG (^O^G) the same number of times, you can temporarily reset the left margin to the same tab stop, which means that the entire paragraph will be indented.

Printing Your File

Now you can print your file by following these steps:

1. When the "Opening" menu appears, press P.
2. Make sure the printer is ready and that the paper is in the correct position.
3. When the prompt NAME OF FILE TO PRINT? appears, type Display, then press ESC (ESCAPE).

When printed, your file should look like this:

Display

WordStar displays a lot of information for the beginning user. Besides the display of text in the lower part of the screen, WordStar also displays

- Status Line. The status line tells you the name of your file (B:DISPLAY), the page, line, and column of the cursor's location in your file, and other information, such as INSERT ON.
- Main Menu. The main menu gives you information about the most common WordStar functions and refers you to five other menus for additional information.
- Ruler Line. The ruler line shows you the margins and tab stops currently in effect. WordStar initially sets the left margin to column 1, the right margin to 65, and tab stops at every fifth column up to 56.

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Changing the Margins

To help you become more familiar with margin settings, you are now going to reprint your file with narrower margins:

1. Open file "Display" again:
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Display and press RETURN.
2. Change the left margin to 11:
   a. Press CTRL OL (^O^L) to change the left margin.
   b. When the prompt LEFT COLUMN NUMBER (ESCAPE for cursor column)? appears, type 11 and press RETURN.
3. Change the right margin to 56:
   a. Press CTRL OR (^O^R) to change the right margin.
   b. When the prompt RIGHT COLUMN NUMBER (ESCAPE for cursor column)? appears, type 56 and press RETURN.
4. Reform the first paragraph:
   a. Move the cursor to the first line of the first paragraph ("WordStar displays . . .").
   b. Press CTRL B (^B) to reform the paragraph.
5. Reform the second paragraph:
   a. After making sure INSERT ON is showing in the upper right-hand corner, move the cursor to the start of the second paragraph (to the bullet).
   b. Press CTRL I (^I) twice to push the bullet out to the first tab stop.
   c. Press CTRL F (^F) to move the cursor to the S in "Status Line."
   d. Press CTRL OG (^O^G) twice to reset the left margin temporarily to the second tab stop.
   e. Press CTRL B (^B) to reform the paragraph.
6. Repeat Step 5 for the third and fourth paragraphs, leaving all words unhyphenated.
7. Press CTRL KD (^K^D) to save a copy of your file.

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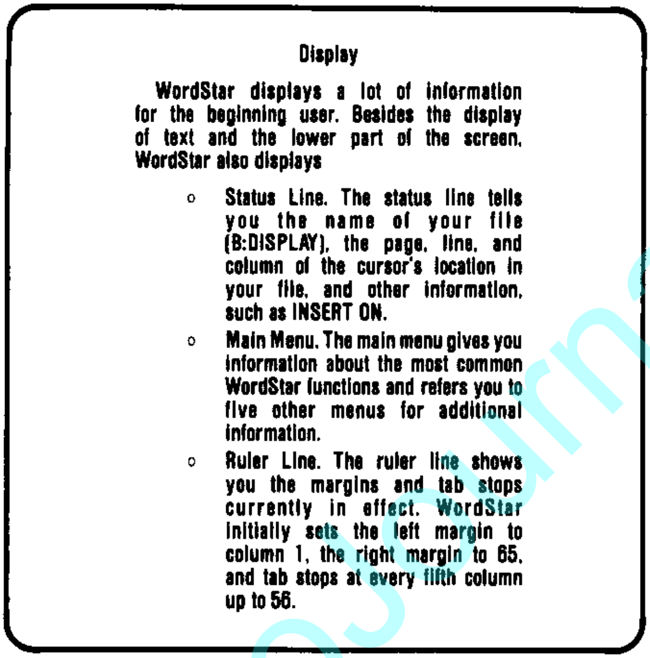
Now your file should look like this:



Display

WordStar displays a lot of information for the beginning user. Besides the display of text and the lower part of the screen, WordStar also displays

- o Status Line. The status line tells you the name of your file (B:DISPLAY), the page, line, and column of the cursor's location in your file, and other information, such as INSERT ON.
- o Main Menu. The main menu gives you information about the most common WordStar functions and refers you to five other menus for additional information.
- o Ruler Line. The ruler line shows you the margins and tab stops currently in effect. WordStar initially sets the left margin to column 1, the right margin to 65, and tab stops at every fifth column up to 56.

To print your file, follow these steps:

1. When the "Opening" menu appears, press P.
2. When the prompt NAME OF FILE TO PRINT? appears, type Display and press ESCAPE (ESC).

Restoring the Original Margins

To restore the original margins (column 1 and column 65), using a slightly different procedure, follow these steps:

1. Open file "Display" again:
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Display and press RETURN.
2. Restore the left margin:
   a. With the cursor resting in column 1, press CTRL OL (^O^L) to reset the left margin.
   b. When the prompt LEFT COLUMN NUMBER (ESCAPE for cursor column)? appears, press ESC (ESCAPE) to reset the left margin to column 1. (This is a second way to change a margin, and can be used any time.)
3. Restore the right margin:
   a. Press CTRL OR (^O^R) to reset the right margin.
   b. When the prompt RIGHT COLUMN NUMBER (ESCAPE for cursor column)? appears, enter 65 and press RETURN. (You will not be able to use the ESCAPE

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key this time because there is no way to move the cursor to column 65.)

4. Reform the first paragraph:
   a. Move the cursor to the first line of the first paragraph ("WordStar displays . . . ").
   b. Press CTRL B (^B) to reform the paragraph.
5. Reform the second paragraph:
   a. Move the cursor to column 1 of the first line of the second paragraph ("Status Line.").
   b. Press CTRL T (^T) to delete the spaces in front of the bullet. The bullet will jump to column 1.
   c. With INSERT ON showing, press CTRL I (^I) to push the bullet out to the first tab stop.
   d. Press CTRL F (^F) to move the cursor to the S in "Status Line."
   e. Press CTRL OG (^O^G) twice to move the left margin temporarily to the second tab stop.
   f. Press CTRL B (^B) to reform the paragraph.
6. Repeat Step 5 for the third and fourth paragraphs.
7. Press CTRL KS (^K^S) to save your file.

Now the text should look the way it looked when you first entered it. Remember, new margins do not change existing text until you reform your paragraphs. New text that you are just entering is placed within the margins you now see on the screen on the ruler line. With the procedure described above, the text in the bulleted paragraphs will be left-justified with the paragraph title. If you want your paragraphs left-justified with the bullets, press CTRL OG once instead of twice in substep e.

Changing the Tabs

You have just changed margins from one pair of settings to another and back again. Now you will learn how to change the tab settings, using the same file. Begin by clearing some of the current tab settings:

1. Clear the tab stop in column 6:
   a. Press CTRL ON (^O^N) to clear a tab.
   b. When the prompt CLEAR TAB AT COL (ESCAPE for cursor col; A for all)? appears, type 6 and press RETURN.
2. Clear the tab stop in column 11:
   a. Move the cursor to column 11.
   b. Press CTRL ON (^O^N) to clear another tab.
   c. When the prompt CLEAR TAB AT COL (ESCAPE for cursor col; A for all)? appears, press ESC ESCAPE).

Now that you have cleared two of the old tab settings, you are ready to set two new tab settings:

1. Set a tab stop in column 4:
   a. Press CTRL OI (^O^I) to set a tab.
   b. When the prompt SET TAB AT COLUMN (ESCAPE for cursor column)? appears, type 4 and press RETURN.
2. Set a tab stop in column 8:
   a. Move the cursor to column 8 (the status line can help you find the column).
   b. Press CTRL OI (^O^I) to set another tab.
   c. When the prompt SET TAB AT COLUMN (ESCAPE for cursor column)? appears, press ESC (ESCAPE).
3. Look at the ruler line to see the new tab settings.

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You have just used two methods for **clearing** tabs one at a time and the same two methods for **setting** tabs one at a time. One method is to enter a column number and press RETURN; the other is to position the cursor in the desired column ahead of time and then press ESC (ESCAPE). There is also a method for clearing all tabs at once:

1. Press CTRL ON (^O^N) to clear tabs.
2. When the prompt CLEAR TAB AT COL (ESCAPE for cursor col; A for all)? appears, type A to clear all tabs.
3. Look at the ruler line to see the result.

To restore the tabs again, you will have to restart WordStar:

1. Press CTRL KQ (^K^Q) to abandon the file.
2. When the `Opening` menu appears, press X to stop WordStar.
3. When the operating system's prompt (A> or something similar) appears, type ws (or something similar) and press RETURN to start WordStar again.
4. Look at the ruler line to see the tab settings.

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Lesson 8

Typing tables

After learning how to set margins and tabs in Lesson 7, now you are ready to type some tables.

Typing a Simple Table

You will start by typing a simple table. Then you will type a more difficult table.

1. Open a new file called "Tables":
    a. When the " Opening " menu appears, press D to create a document file.
    b. When the prompt NAME OF FILE TO EDIT? apears, type Tables and press RETURN.
2. Type the title of the table:
    a. When your new file is ready, type Table 8-1. Basic Cursor Movement Commands.
    b. Without moving the cursor, press CTRL OC (^O^C) to center the title.
3. Type the table headings:
    a. Press RETURN twice to leave a blank line, then type Command beginning at the left margin.
    b. Press CTRL I (^I) five times to move the cursor to the tab stop in column 31.
    c. Type Description and press RETURN.
4. Type the first table entry:
    a. Press RETURN again to leave a blank line, then type CTRL S beginning at the left margin.
    b. Press CTRL I (^I) once to move the cursor to the next tab stop (column 11).
    c. Press CTRL OG (^O^G) twice to move the left margin temporarily to the tab stop, and type the following description:

Move the cursor back to the previous character, returning to the end of the preceding line if the curser is at the beginning of a line. **RETURN** **RETURN**

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5. Follow procedures similar to those given in Step 4 to type the other three items in the table:

CTRL D	Move the cursor ahead of the next character, going to the beginning of the next line if the cursor is at the end of a line. **RETURN**
RETURN CTRL E	Move the cursor up to the preceding line, staying in the same column if possible. **RETURN**
RETURN CTRL X	Move the cursor down to the next line, staying in the same column if possible. **RETURN**
RETURN	

6. Press CTRL KD (^K^D) to save your file.

This completes the table. Now you can print it on your printer:

1. When the "Opening" menu appears, press P.
2. When the prompt NAME OF FILE TO PRINT? appears, type Tables and press ESC (ESCAPE).
3. This is how the table should look:

Table 8-1. Basic Cursor Movement Commands

Command	Description
CTRL S	Move the cursor back to the previous character, returning to the end of the preceding line if the cursor is at the beginning of a line.
CTRL D	Move the cursor ahead to the next character, going to the beginning of the next line if the cursor is at the end of a line.
CTRL E	Move the cursor up to the preceding line, staying in the same column if possible.
CTRL X	Move the cursor down to the next line, staying in the same column if possible.

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Typing a Table with Decimal Amounts

Now you are ready to type a table with more columns and some decimal amounts in place of words. First you will need a file to work with:

1. When the Opening menu appears, press D to create a document file.
2. When the prompt NAME OF FILE TO EDIT? appears, type Tables and press RETURN. (This is the same file you used for the other table.)
3. When the file appears on the screen, press CTRL QC (^Q^C) to move the cursor to the end of the file.
4. Press RETURN three times to leave a few blank spaces after the other table.

Resetting the Tab Settings

The next step is to reset the tabs for the new table:

1. Clear the old tabs:
   a. Press CTRL ON (^O^N) to clear tabs.
   b. When the prompt CLEAR TAB AT COL (ESCAPE for cursor col; A for all)? appears, type A and press RETURN.
   c. Look at the ruler line to see the result.

2. Set the new ordinary tabs:
   a. Press CTRL OI (^O^I) to set a new tab.
   b. When the prompt SET TAB AT COLUMN (ESCAPE for cursor column)? appears, type 8 and press RETURN.
   c. You have just set a new tab in column 8 (look at the ruler line).
   d. Follow procedures similar to those given in Steps 2a-c to set new tabs at columns 26, 36, 48, and 56.
3. Set the new decimal tabs:
   a. Press CTRL OI (^O^I) to set another new tab.
   b. When the prompt appears, type #39 and press RETURN.
   c. You have just set a decimal tab in column 39 (look at the # in the ruler line).
   d. Follow procedures similar to those given in Steps 3a-c to set decimal tabs in columns 51 and 60.

Typing the Table

Now you are ready to begin typing the table:

1. Type the title of the table:
   a. Type Table 8-2. Parts Orders next to the left margin.
   b. Without moving the cursor, press CTRL OC (^O^C) to center the title.
   c. Press RETURN twice to leave a blank line after the title.
2. Type the table headings:
   a. Beginning at the left margin, type Item.
   b. Press CTRL I (^I) to move to the next tab and type Description
   c. Repeat steps similar to a and b for the rest of the column headings ("Part," "Price," "Qty," and "Amount").
   d. Press RETURN twice to leave a blank line after the column headings

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At this point, your table should look this:

Table 8-2. Parts Orders

Item	Description	Part	Price	Qty	Amount

Now you can type the body of the table a line at a time:

1. Type 1501.
2. Press CTRL I (^I) to move the cursor to the next tab and type Chair, easy.
3. Press CTRL I (^I) to move to the next tab and type 721C.
4. Press CTRL I (^I) **twice** to move to the first decimal tab and type 249.00 (watch the screen to see what happens).
5. Press CTRL I (^I) twice to move to the next decimal tab and type 7.
6. Press CTRL I (^I) twice to move to the last decimal tab and type 1743.00.
7. Press RETURN twice to leave a blank line.
8. Repeat Steps 1-7 to type the rest of the table:

1502	Table, kitchen	682U	175.00	4	700.00
1503	Sofa, queen size	836L	535.00	19	10165.00
1504	Lamp, table	379H	85.00	24	2040.00
1505	Curio, odd	102Z	1.25	101	126.25

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9. Press CTRL KD (^K^D) to save a copy of your file.

Printing the Table

This completes the table. Now you can print it on your printer:

1. When the Opening menu appears, press P.
2. When the prompt NAME OF FILE TO PRINT? appears, type Tables and press ESC (ESCAPE).
3. The table should appear as shown here.
4. To restore the original tab settings, restart WordStar:
   a. When the Opening menu appears, press X to exit from WordStar.
   b. When the operating system's prompt (A> or something similar) appears, type ws (or something similar) and press RETURN.

Ordinary Tabs and Decimal Tabs

WordStar allows you to use two kinds of tab settings when you are typing a table: ordinary tabs and decimal tabs. Use ordinary tabs to align columns of text. (If a column of text takes more than one line, you can also use CTRL OG (^O^G) one or more times to move the left margin temporarily to the tab.) Use decimal tabs to align columns of numbers, whether the numbers actually have decimal points or not.

Table 8-2. Parts Orders

Item	Description	Part	Price	Qty	Amount
1501	Chair, easy	721C	249.00	7	1743.00
1502	Table, kitchen	682U	175.00	4	700.00
1503	Sofa, queen size	836L	535.00	19	10165.00
1504	Lamp, table	379H	85.00	24	2040.00
1505	Curio, odd	102Z	1.25	101	126.25

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Lesson 9

Creating special effects: Part 1

In this lesson, you will learn how to create a variety of special printing effects, such as boldface, double-striking, underlining, and strikeout. In Lesson 10, you will learn how to type subscripts, superscripts, strikeovers, and non-break spaces. With these features, you will be able to emphasize certain words, type titles of books, print new characters, type mathematical formulas, and so on. These two lessons are designed so that you may skip around. However, for your first time through, the complete text will be required for later lessons.

Before you can begin, you will need a file to work with:

1. When the Opening menu appears, press D.
2. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.
3. When the file is ready, press CTRL PB (^P^B) followed by RETURN to go to the next line.
4. On the next line, type Special Effects, press CTRL OC (^O^C) to center the title, and press RETURN.
5. On the next line, press CTRL PB (^P^B) then RETURN twice.

Typing Boldface Text

CTRL P B

The titles and headings of a book are often printed in **boldface** type. The heading for this section is in boldface; so is the word "boldface" in this paragraph. You just typed the title for your file ("Special Effects") in boldface. Here is an exercise in typing boldface characters:

1. Press CTRL I (^I) to move the cursor to the first tab.
2. Press CTRL PB (^P^B), type Boldface Printing, and press CTRL PB (^P^B) again.

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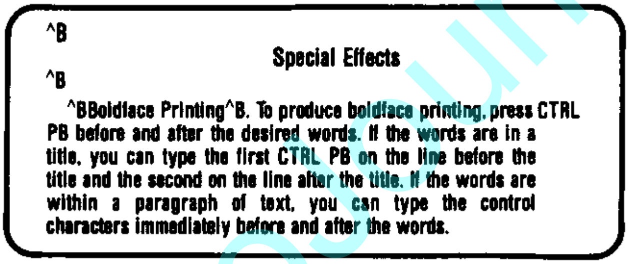
3. Type a period, leave two spaces, and type the following paragraph: "To produce boldface printing, press CTRL PB before and after the desired words. If the words are in a title, you can type the first CTRL PB on the line before the title and the second on the line after the title. If the words are within a paragraph of text, you can type the control characters immediately before and after the words."
4. Press RETURN twice after the last sentence to leave a blank line. What you have typed so far should look like this on the screen:



```
^B
                     Special Effects
^B
  ^BBoldface Printing^B. To produce boldface printing, press CTRL
PB before and after the desired words. If the words are in a
title, you can type the first CTRL PB on the line before the
title and the second on the line after the title. If the words are
within a paragraph of text, you can type the control
characters immediately before and after the words.
```

You can see the four ^Bs that WordStar has inserted into the text. (The word "CTRL" in the first line of text appears to be beyond the right margin because WordStar does not recognize the ^Bs as part of the text.) To see how this will look on paper, print this file on your printer:

1. Press CTRL KD (^K^D) to save your file on disk.
2. When the "Opening" menu appears, press P.
3. When the prompt NAME OF FILE TO PRINT? appears, type Special and press ESC.
4. This is how this paragraph should look:

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Special Effects

Boldface Printing. To produce boldface printing, type CTRL PB before and after the desired words. If the words are in a title, you can type the first CTRL PB on the line before the title and the second on the line after the title. If the words are within a paragraph of text, you can type the control characters immediately before and after the words.

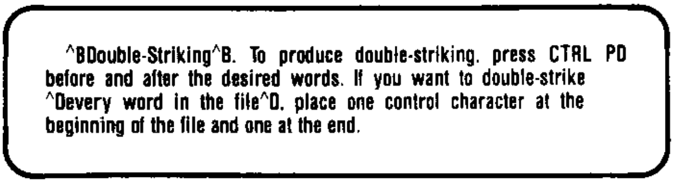
As you can see, the title of the file ("Special Effects") and the paragraph heading ("Boldface Printing") were both printed with thicker, darker letters. This is boldface printing. The special effects you are about to learn are all typed in just about the same way.

Double-Striking

CTRL P D

To produce printing in which each character is typed twice for double clarity, you can use double-striking. The characters will be sharper than ordinary characters, but not as thick as boldface characters. Here is an exercise in double-striking words in a paragraph:

1. Reopen the file "Special":
   a. When the Opening menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.
2. Position the cursor.
   a. When the file is ready, press CTRL QC (^Q^C) to move the cursor to the end of the file.
   b. Press CTRL I to move the cursor to the first tab.
3. Type the paragraph:
   a. Press CTRL PB (^P^B), type Double-Striking, press CTRL PB (^P^B) again, and type a period, followed by two spaces.
   b. Now type the following paragraph, using CTRL PD (^P^D) to double-strike the phrase "every word in the file": "To produce double-striking, press CTRL PD before and after the desired words. If you want to double-strike every word in the file, place one control character at the beginning of the file and one at the end."
4. Press RETURN twice to leave a blank line after the paragraph. This is how your paragraph should look on the screen:



```
   ^BDouble-Striking^B.  To produce double-striking, press CTRL  PD
before and after the desired words. If you want to double-strike
^Devery word in the file^D, place one control character at the
beginning of the file and one at the end.
```

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WordStar has inserted a ^D before and after the words "every word in the file." To see how this will look on paper, print this file on your printer:

1. Press CTRL KD (^K^D) to save your file on disk.
2. When the Opening menu appears, press P.
3. When the prompt NAME OF FILE TO PRINT? appears, type Special and press ESC.
4. This is how this paragraph should look:

> **Double-Striking.** To produce double-striking, press CTRL PD before and after the desired words. If you want to double-strike **every word in the file**, place one control character at the beginning of the file and one at the end.

Underlining

CTRL P S

In this training guide, underlining is used to indicate items for you to type. For example, "Start WordStar by typing ws after A>." Here is an exercise in typing underlined words.

1. Reopen the file "Special":
   a. When the Opening menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.
2. Position the cursor:
   a. When the file is ready, press CTRL QC (^Q^C) to move the cursor to the end of the file.
   b. Press CTRL I to move the cursor to the first tab
3. Type the paragraph:
   a. Press CTRL PB (^P^B), type Underlining, press CTRL PB (^P^B) again, and type a period, followed by two spaces.
   b. Now type the following paragraph using CTRL PS (^P^S) to underscore the phrase "continuous underlining": "To produce underlining, press CTRL PS before and after the desired words. If you want continous underlining, make sure you type underscore characters between words. Otherwise, only the words themselves will be underscored and the spaces between the words will be blank."
4. Press RETURN twice to leave a blank line after the paragraph. This is how your paragraph should look on the screen:

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```
  ^BUnderlining^B. To produce underlining, press CTRL PS before
and after the desired words. If you want ^Scontinuous underlining^S,
make sure you type underscore characters between words.
Otherwise, only the words themselves will be underscored and the
spaces between the words will be blank.
```

WordStar has inserted a ^S before and after the words "continuous underlining," but it is up to you to type the underscore character between the words if you want it printed.

To see how this will look on paper, print this file on your printer:

1. Press CTRL KD (^K^D) to save your file on disk.
2. When the Opening menu appears, press P.
3. When the prompt NAME OF FILE TO PRINT? appears, type Special and press ESC.
4. This is how this paragraph should look:

> **Underlining.** To produce underlining, press CTRL PS before and after the desired words. If you want continuous underlining, make sure you type underscore characters between words. Otherwise, only the words themselves will be underscored and the spaces between the words will be blank.

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Striking Out Words

CTRL P X

Sometimes you need to show some words or sentences that you are deleting from your text. This is especially common in printing legal documents or the by-laws of an organization. Here is an exercise in striking words from the text:

1. Reopen the file "Special":
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.
2. Position the cursor:
   a. When the file is ready, press CTRL QC (^Q^C) to move the cursor to the end of the file.
   b. Press CTRL I to move the cursor to the first tab.
3. Type the paragraph:
   a. Press CTRL PB (^P^B), type Strikeouts, press CTRL PB (^P^B) again, and type a period, followed by two spaces.
   b Now type the following paragraph, using CTRL PX (^P^X) to strikeout the sentence beginning with "Any obsolete words . . .": "To produce a strikeout, press CTRL PX before and after the desired words. ~~Any obsolete words will then be stricken from the text in the printed copy~~.
4. Press RETURN twice to leave a blank line after the paragraph. This is how your paragraph should look on the screen.

```
   ^BStrikeouts^B. To produce a strikeout, press CRTL PX before
and after the desired words. ^XAny obsolete words will then be
stricken from the text in the printed copy^X.
```

WordStar has inserted a ^X before and after the second sentence of the paragraph. To see how this will look on paper, print this file on your printer:

1. Press CTRL KD (^K^D) to save your file on disk.
2. When the "Opening" menu appears, press P.
3. When the prompt NAME OF FILE TO PRINT? appears, type Special and press ESC.

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4. This is how this paragraph should look:

Strikeouts. To produce a strikeout, press CTRL PX before and after the desired words. ~~Any obsolete words will then be stricken from the text in the printed copy~~.

Summary

You have now learned how to type boldface, double-strike, underlining, and strikeouts. This is how the file "Special" should look:

Special Effects

Boldface Printing. To produce boldface printing, press CTRL PB before and after the desired words. If the words are in a title, you can type the first CTRL PB on the line before the title and the second on the line after the title. If the words are within a paragraph of text, you can type the control characters immediately before and after the words.

Double-Striking. To produce double-striking, press CTRL PD before and after the desired words. If you want to double-strike **every word in the file**, place one control character at the beginning of the file and one at the end.

Underlining. To produce underlining, press CTRL PS before and after the desired words. If you want continuous underlining, make sure you type underscore characters between words. Otherwise, only the words themselves will be underscored and the spaces between the words will be blank.

Strikeouts. To produce a strikeout, press CTRL PX before and after the desired words. ~~Any obsolete words will then be stricken from the text in the printed copy~~.

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Lesson 10

Creating special effects: Part 2

In this lesson we continue with subscripts, superscripts, strikeovers, and non-break spaces.

Typing Subscripts

CTRL P V

Subscripts are used in chemical notation and certain mathematical applications. Here is an exercise in typing subscripts:

1. Reopen the file "Special":
   - a. When the Opening menu appears, press D.
   - b. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.
2. Position the cursor:
   - a. When the file is ready, press CTRL QC (^Q^C) to move the cursor to the end of the file.
   - b. Press CTRL I to move the cursor to the first tab.
3. Type the paragraph:
   - a. Press CTRL PB (^P^B), type Subscripts, press CTRL PB (^P^B) again, and type a period, followed by two spaces.
   - b. Now type, using CTRL PV (^P^V) before and after each number, "To type a subscript, press CTRL PV before and after the desired number. For example, H_2O is the chemical name for water. Here is a 'system of linear equations:'

$$a_1 x + b_1 y = c_1$$

$$a_2 x + b_2 y = c_2$$"

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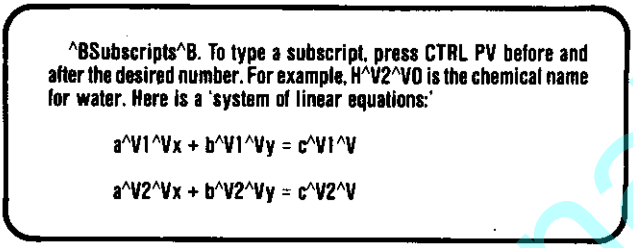
4. Press RETURN twice to leave a blank line after the paragraph. This is how your paragraph should look on the screen:



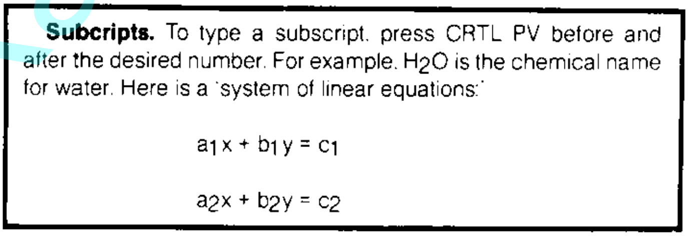
```
   ^BSubscripts^B. To type a subscript, press CTRL PV before and
after the desired number. For example, H^V2^VO is the chemical name
for water. Here is a 'system of linear equations:'

           a^V1^Vx + b^V1^Vy = c^V1^V

           a^V2^Vx + b^V2^Vy = c^V2^V
```

WordStar has inserted a ^V before and after each subscript. To see how this will look on paper, print this file on your printer:

1. Press CTRL KD (^K^D) to save your file on disk.
2. When the Opening menu appears, press P.
3. When the prompt NAME OF FILE TO PRINT? appears, type Special and press ESC.
4. This is how this paragraph should look:



Subcripts. To type a subscript, press CRTL PV before and after the desired number. For example, H_2O is the chemical name for water. Here is a 'system of linear equations:'

$$a_1 x + b_1 y = c_1$$

$$a_2 x + b_2 y = c_2$$

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Typing Superscripts

CTRL P T

Superscripts are used to flag footnotes in ordinary text and to represent exponents in mathematical equations. Here is an exercise in typing superscripts:

1. Reopen the file "Special":
   a. When the Opening menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.
2. Position the cursor:
   a. When the file is ready, press CTRL QC (^Q^C) to move the cursor to the end of the file.
   b. Press CTRL I to move the cursor to the first tab.
3. Type the paragraph:
   a. Press CTRL PB (^P^B), type Superscripts, press CTRL PB (^P^B) again, and type a period, followed by two spaces.
   b. Now type, using CTRL PT (^P^T) before and after each number, "To type a superscript, press CTRL PT before and after the desired number. For example, suppose we wanted to place a footnote at the end of this sentence.[3] Here is one mathematical equation for a circle:

$$(x - a)^2 + (y - b)^2 = r^2$$

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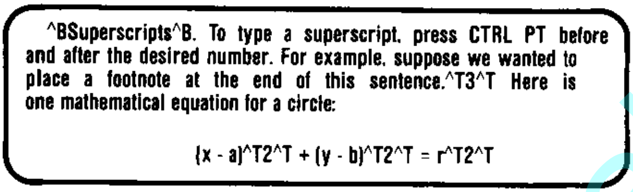
4. Press RETURN twice to leave a blank line after the paragraph. This is how your paragraph should look on the screen:

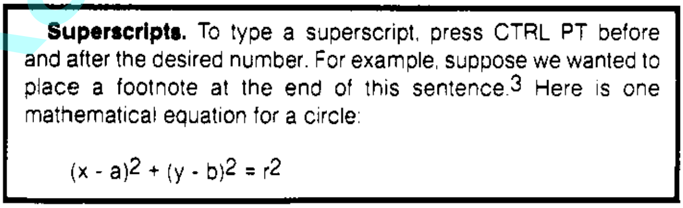


```
   ^BSuperscripts^B. To type a superscript, press CTRL PT before
and after the desired number. For example, suppose we wanted to
place a footnote at the end of this sentence.^T3^T Here is
one mathematical equation for a circle:

              (x - a)^T2^T + (y - b)^T2^T = r^T2^T
```

WordStar has inserted a ^T before and after each superscript. To see how this will look on paper, print this file on your printer:

1. Press CTRL KD (^K^D) to save your file on disk.
2. When the Opening menu appears, press P.
3. When the prompt NAME OF FILE TO PRINT? appears, type Special and press ESC.
4. This is how this paragraph should look:



Superscripts. To type a superscript, press CTRL PT before and after the desired number. For example, suppose we wanted to place a footnote at the end of this sentence.^{3} Here is one mathematical equation for a circle:

$$(x - a)^2 + (y - b)^2 = r^2$$

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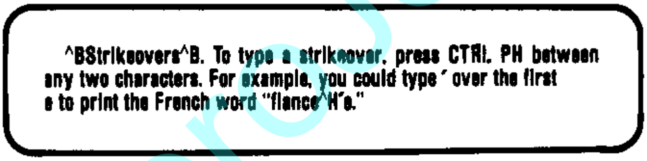
Typing Strikeovers

CTRL P H

WordStar allows you to print more than one character in the same position, so that you can form new characters by combining the ordinary ones. For example, you could combine c and | to form a cent sign or you could combine a special symbol with a letter to form an accented letter in a foreign language. Here is an exercise in typing strikeovers:

1. Reopen the file "Special":
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type <u>Special</u> and press RETURN.
2. Position the cursor:
   a. When the file is ready, press CTRL QC (^Q^C) to move the cursor to the end of the file.
   b. Press CTRL I to move the cursor to the first tab.
3. Type the paragraph:
   a. Press CTRL PB (^P^B), type <u>Strikeovers</u>, press CTRL PB (^P^B) again, and type a period, followed by two spaces.
   b. Now type, using CTRL PH (^P^H) and an apostrophe after the first e in fiancee, "To type a strikeover, press CTRL PH between any two characters. For example, you could type ´ over the first e to print the French word "fiancée.""
4. Press RETURN twice to leave a blank line after the paragraph. This is how your paragraph should look on the screen:



```
   ^BStrikeovers^B. To type a strikeover, press CTRL PH between
any two characters. For example, you could type ´ over the first
e to print the French word "fiance^H´e."
```

WordStar has inserted a ^H between the pair of characters to be combined. To see how this will look on paper, print this file on your printer:

1. Press CTRL KD (^K^D) to save your file on disk.
2. When the "Opening" menu appears, press P.
3. When the prompt NAME OF FILE TO PRINT? appears, type <u>Special</u> and press ESC.
4. This is how this paragraph should look:

> **Strikeovers.** To type a strikeover, press CTRL PH between any two characters. For example, you could type over the first e to print the French word "fiancée."

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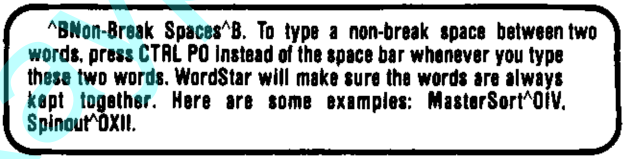
Typing Non-Break Spaces

CTRL P O

Suppose you are typing about a product called "Tempo III," and you want to be sure that WordStar never splits this name at the end of a line. WordStar allows you to type a special space between "Tempo" and "III" that will prevent the two from being split by a line break. Here is an exercise in typing non-break spaces:

1. Reopen the file "Special:"
   a. When the ``Opening'' menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.
2. Position the cursor:
   a. When the file is ready, press CTRL QC (^Q^C) to move the cursor to the end of the file.
   b. Press CTRL I to move the cursor to the first tab.
3. Type the paragraph:
   a. Press CTRL PB (^P^B), type Non-Break Spaces, press CTRL PB (^P^B) again, and type a period, followed by two spaces.
   b. Now type, using CTRL PO (^P^O) before "IV" and "XII," "To type a non-break space between two words, press CTRL PO instead of the space bar whenever you type these two words. WordStar will make sure the words are always kept together. Here are some examples: MasterSort IV, Spinout XII."
4. Press RETURN twice to leave a blank line after the paragraph. This is how your paragraph should look on the screen:



```
  ^BNon-Break Spaces^B. To type a non-break space between two
words, press CTRL PO instead of the space bar whenever you type
these two words. WordStar will make sure the words are always
kept together. Here are some examples: MasterSort^OIV,
Spinout^OXII.
```

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WordStar has inserted a ^O between "MasterSort" and "IV" and between "Spinout" and "XII." (Without the non-break space, "Spinout" would have stayed on the fourth line, with "XII" on the fifth line. To see how this will look on paper, print this file on your printer:

1. Press CTRL KD (^K^D) to save your file on disk.
2. When the "Opening" menu appears, press P.
3. When the prompt NAME OF FILE TO PRINT? appears, type Special and press ESC.
4. This is how this paragraph should look:

> **Non-Break Spaces.** To type a non-break space between two words, press CTRL PO instead of the space bar whenever you type these two words. WordStar will make sure the words are always kept together. Here are some examples: MasterSort IV, Spinout XII."

Combining Special Effects

In Lessons 9 and 10 you have learned to create a variety of special effects with WordStar: boldface characters, double-strike characters, underlined text, stricken text, subscripts, superscripts, strikeovers, and non-break spaces. So far you have tried these features only in separate examples. However, you are free to combine them in almost any way you can imagine. You can have a boldface subscript, an underlined superscript, a multiple strikeover, and so on. Here is an exercise in combining special effects:

1. Reopen the file "Special":
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.

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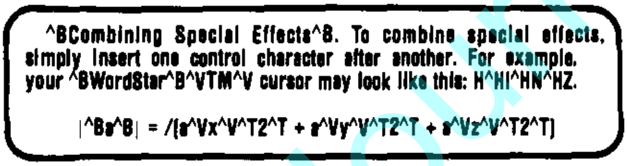
2. Position the cursor:
    a. When the file is ready, press CTRL QC (^Q^C) to move the cursor to the end of the file.
    b. Press CTRL I to move the cursor to the first tab.
3. Type the paragraph:
    a. Press CTRL PB (^P^B), type Combining Special Effects, press CTRL PB (^P^B) again, and type a period, followed by two spaces.
    b. In this paragraph, use boldface, subscript, strikeover, and superscript in the appropriate places to produce the special effects. Now type, "To combine special effects, simply insert one control character after another. For example, your **WordStar**TM cursor may look like this: ▮. [Use H, I, N, and Z.]

    $|\mathbf{a}| = /\,(a_x^2 + a_y^2 + a_z^2)$"
4. Press RETURN twice to leave a blank line after the paragraph. This is how your paragraph should look on the screen:



```
   ^BCombining Special Effects^B. To combine special effects,
simply insert one control character after another. For example,
your ^BWordStar^B^VTM^V cursor may look like this: H^HI^HN^HZ.

        |^Ba^B| = /(a^Vx^V^T2^T + a^Vy^V^T2^T + a^Vz^V^T2^T)
```

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WordStar has inserted many control characters. To see how this will look on paper, print this file on your printer:

1. Press CTRL KD (^K^D) to save your file on disk.
2. When the "Opening" menu appears, press P.
3. When the prompt NAME OF FILE TO PRINT? appears, type Special and press ESC.
4. This is how this paragraph should look:

Combining Special Effects. To combine special effects, simply insert one control character after another. For example, your **WordStar**TM cursor may look like this: ▮.

$$|\mathbf{a}| = /\,(a_x^2 + a\,_y^2 + a_z^2)$$

Lesson 11

Finding and replacing text

In this lesson you will learn how to set place markers in your file–markers to which you can later return. You will also learn how to search for a given word in your file, and if necessary to replace it with another word.

First you will need a file to work with:

1. When the “Opening” menu appears, press D.
2. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.

Setting Place Markers

CTRL K n

Now that you have an open file, you can set place markers in different locations:

1. Set place marker number 1:
   a. Move the cursor to the blank space in front of the heading "Double-Striking" (second paragraph).
   b. Press CTRL K1 (^K1). (You will see <1> appear highlighted where the cursor was. Don't be concerned when you see the text get pushed to the right.) You have just set place marker number 1 in front of this paragraph.
2. Set place marker number 2:
   a. Move the cursor to the blank space right after "Strikeouts" (fourth paragraph).
   b. Press CTRL K2 (^K2). (You will see <2> appear.) You have just set place marker number 2.
3. Set place marker number 3:
   a. Move the cursor to the blank space after "r^2" in the equation (sixth paragraph).
   b. Press CTRL K3 (^K3). (You will see <3> appear.) You have just set place marker number 3.

You can set as many as ten place markers in a single file by pressing CTRL K, followed by a single digit (0-9). (The markers do not have to be in numerical order.) You can then return the cursor to any of these locations very quickly.

NOTE

You must release the CTRL key before pressing any number key.

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Moving to Place Markers

CTRL Q n

Now that you have three place markers set in your file, you can move the cursor to any one of them at any time:

1. Press CTRL Q2 (^Q2) to move the cursor to place marker number 2.
2. Press CTRL Q3 (^Q3) to move the cursor to place marker number 3.
3. Press CTRL Q1 (^Q1) to move the cursor to place marker number 1.

You can move the cursor to any place marker that you have already set by pressing CTRL Q, followed by the number of the marker. It probably doesn't need to be said, but you can't move the cursor to a marker that you haven't set.

Finding a String

CTRL Q F

In computer language, a "string" isn't something you tie around your finger; it's a sequence of characters, which may or may not form a word or phrase. WordStar makes it easy for you to find any word, phrase, or string of up to 30 characters with a simple command.

1. With the file "Special" still open, press CTRL QR (^Q^R) to return the cursor to the beginning of the file.
2. Press CTRL QF (^Q^F) to request a search.
3. When the prompt FIND? appears, type words and press ESC (ESCAPE).
4. The cursor will come to rest at the W in "words" in the second line of the first paragraph.
    a. If this is what you are looking for, you can note the location, make corrections, and so on.
    b. If this is not what you are looking for, you can ask WordStar to go on to the next one (Step 5).
5. Press CTRL L (^L) to move the cursor to the next occurrence of "words."
6. Keep pressing ^L until the NOT FOUND message appears (*** NOT FOUND *** words *** Press ESC Key ***). This message tells you that WordStar could not find another occurrence of "words." You have two options:
    a. To return to the last occurrence of "words," press ESC (ESCAPE), then CTRL QV (^Q^V).
    b. To return to the beginning of the file, press ESC (ESCAPE), then CTRL QR (^Q^R).

You have just completed a simple, unconditional search. Now repeat Steps 1-6, substituting "under" for "words." Note that WordStar found "underlining," "underlining," "underscore," and "underscored" in the third paragraph. This shows that you can look for a prefix (or suffix) of a word without having to know the rest of the word. (Soon you will learn how to specify only the word "under" by itself.)

Disregarding Case

Option U

If you look closely at the third paragraph, you will see that WordStar missed one occurrence of "under"—the "under" in the paragraph heading "Underlining." WordStar skipped this not because it was boldface, but because the U was capitalized. Here is how you can correct that:

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1. Press CTRL QR (^Q^R) to move the cursor to the beginning of the file.
2. Press CTRL QF (^Q^F) to request a search.
3. When the prompt FIND? appears, type under and press RETURN (instead of ESCAPE).
4. This time another prompt will appear (OPTIONS?). Now type U and press RETURN. (The U tells WordStar to disregard the difference between upper case and lower case letters.)
5. Now WordStar will stop at the paragraph heading "Underlining."

Searching for Whole Words

Option W

In the simple search for "under," recall that WordStar found words that contained "under," but not the word itself, since there was none to be found. Now you will learn how to ask WordStar to search only for the word itself:

1. With the file "Special" still open, press CTRL QC (^Q^C) to move the cursor to the end of the file.
2. Type this sentence: "Under the last paragraph on special effects you will find this sentence all by itself."
3. Press CTRL QR (^Q^R) to return the cursor to the beginning of the file.
4. Press CTRL QF (^Q^F) to request a search.
   a. When the prompt FIND? appears, type Under and press RETURN.
   b. When the OPTIONS? prompt appears, type W and press RETURN. (The W tells WordStar to look only for a whole word.)
5. WordStar will stop at the word "Under" at the beginning of the sentence you just typed; it will not stop at "Underlining" or "underscore."

You have tried two find options so far, U (disregard the difference between upper and lower case letters) and W (search only for whole words). You can also combine options in any order. Repeat Steps 1-6, this time typing "under" after FIND and either UW or WU after OPTIONS? in Step 6.

Replacing One String with Another

CTRL Q A

WordStar also allows you to search for a string, then replace it with another string. This can help you when you need to change one word to another in your file:

1. With the file "Special" open, press CTRL QR (^Q^R) to return the cursor to the beginning of the file.
2. Press CTRL QA (^Q^A) to request a replace.
   a. When the prompt FIND? appears, type words and press RETURN.
   b. When the prompt REPLACE WITH? appears, type numbers and press ESC (ESCAPE).
3. The cursor will come to rest at the W in "words" in the second line of the first paragraph, with this prompt displayed above: REPLACE (Y/N):
   a. Type Y to allow the replacement.
   b. Press CTRL L (^L) to continue.
4. When the REPLACE (Y/N) prompt appears, type Y. (Continue in this way until you have replaced all occurrences of "words" with "numbers.")

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5. When the NOT FOUND message appears, press ESC (ESCAPE), then CTRL QR (^Q^R).

You have just completed a manual replacement. A manual replacement allows you to look at each occurrence of the string and make a decision about whether you want to replace it. If you are absolutely certain that you want every occurrence replaced, you can ask WordStar to perform an automatic replacement, which is much faster.

Automatic Replacement

Option N

All the options for finding a string may also be used for replacing a string. There is also an additional option you can request to have WordStar skip the REPLACE (Y/N) prompt and make all replacements automatically:

1. With the cursor at the beginning of file "Special," press CTRL QA (^Q^A) to request replacement.
   a. When the prompt FIND? appears, type numbers and press RETURN.
   b. When the prompt REPLACE WITH? appears, type words and press RETURN.
   c. When the prompt OPTIONS? appears, type GN and press RETURN. (The GN tells WordStar to make all replacements without asking.)
2. This time WordStar will move quickly through your file and replace each occurrence of "numbers" with "words."
3. Press CTRL KQ (^K^Q) to "abandon" this file.
   a. In response to the prompt ABANDON EDITED VERSION OF FILE A:DISPLAY ? (Y/N) ■, type Y (no RETURN necessary).
   b. The file will be abandoned.

You can abandon a file any time you don't want to keep the results of your most recent session.

Summary

In this lesson you have learned how to set place markers anywhere in your file and then move the cursor to one of these markers. You press CTRL K (^K) and a number to set a place marker; you press CTRL Q (^Q) and a number to move the cursor to one of these place markers.

You have also learned how to search for words, phrases, or other strings in your file. You press CTRL QF (^Q^F) to begin a search to find a string; you press CTRL QA (^Q^A) to begin a search to replace a string. Two of the options available for either find or replace are to disregard the difference between upper and lower case (option U) and to search only for whole words (option W). Another option available only for replace is to make an automatic replacement without asking (option N).

Additional options are also available during a search. These are described in other WordStar publications.

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Lesson 12

Handling blocks and files

In this lesson you will learn the different ways you can save your file after a typing session; you will learn how to mark a block of text to be moved, copied, or deleted; and you will learn how to move, copy, delete, or rename an entire file.

In Lesson 1 you learned that it is important to save the file you are working on fairly often to avoid losing text. In this lesson you will practice the four ways of saving (or not saving) your file after a session of typing.

Saving Your File and Continuing

CTRL K S

If you are going to spend a lot of time on a typing job, you should interrupt the job from time to time to save your file, then resume work. (Remember, no text is saved until you request to have it saved, and until it is saved, it can be lost.) Here is an example of the procedure:

1. When the Opening menu appears, press D.
2. When the prompt NAME OF FILE TO EDIT? appears, type Control and press RETURN.
3. Now you have an open file. In a real typing situation, you would be spending some time with this file. For now, assume you have been working with the file for a while, and move the cursor to the middle of the file.
4. Press CTRL KS (^K^S) to save the file.
5. After a short time (and some noises from your disk drive), you will see your file return to the screen.
6. Press CTRL QP (^Q^P) to return the cursor to where it was before you saved the file.

Pressing CTRL KS (^K^S) allows you to save a copy of your file on disk, then continue typing where you left off. Now leave your file just the way it is for the next exercise.

Saving Your File and Going to Another WordStar Operation

CTRL K D

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If you have completed work on one file and you plan to do something else with WordStar (like opening another file or printing the same file), you can save the file and return to the "Opening" menu:

1. With file "Control" still open from the previous exercise, press CTRL KD (^K^D) to save the file.
2. Again, the file is saved, but this time WordStar displays the "Opening" menu instead of the file after the save.

Pressing CTRL KD (^K^D) allows you to save your file and go to another file or begin another WordStar operation.

Saving Your File and Stopping WordStar

CTRL K X

If you have completed work on your file and you are also completing a session with WordStar, you can save your file and exit from WordStar at the same time:

1. When the "Opening" menu appears, press D.
2. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.
3. Now you have an open file from which to exit.
4. Press CTRL KX (^K^X) to save your file and exit from WordStar.
5. After saving your file, you will find that WordStar is no longer running. Type a:ws (or just ws and press RETURN to restart WordStar.

Pressing CTRL KX (^K^X) allows you to save your file and exit from WordStar. Once you are out of WordStar, you may want to run utility programs under your computer's operating system. For example, your operating system probably has programs to check the amount of space left on your disk or to copy or delete files.

Abandoning a File

CTRL K Q

If you work on a file for a while and discover that you have made some big mistakes that you want to get rid of, you can abandon the file instead of saving it. By doing this, you retain your previous version of this file, which is still on disk (and which doesn't have the mistakes). You may also want to abandon a file that you have just opened by mistake.

1. When WordStar is running again and the "Opening" menu appears, press D.
2. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.
3. Now you have an open file again. Suppose you have messed it up and want to get rid of it.
4. Press CTRL KQ (^K^Q) to abandon the file.

Pressing CTRL KQ (^K^Q) allows you to abandon a file that you don't want to keep. The next time you open the file with this name, you will get the previous version of it.

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Marking a Block

WordStar allows you to move, copy, or delete a block of text. The first step is to mark the beginning and end of the block that you want to deal with. Here is a sample procedure:

1. Open the file "Special":
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type <u>Special</u> and press RETURN.
2. Set the beginning marker:
   a. Move the cursor to the blank line above the first paragraph ("**Boldface Printing**").
   b. Press CTRL KB (^K^B) to mark the beginning of a block. (<**B**> will appear on the screen.)
3. Set the ending marker:
   a. Move the cursor straight down to the blank line between the fourth and fifth paragraphs (left-hand margin, just above "**Subcripts**").
   b. Press CTRL KK (^K^K) to mark the end of this block.
   c. If your screen has the capability, you will see the four paragraphs become highlighted.
   d. If your screen is not capable of highlighting, <**K**> will appear on the screen.

In Lesson 11, you learned how to move the cursor to any one of ten numbered markers. For your convenience, WordStar also allows you to move the cursor quickly to the block markers <**B**> and <**K**>:

1. Press CTRL QB (^Q^B) to move the cursor to the beginning marker <**B**>.
2. Press CTRL QK (^Q^K) to move the cursor to the ending marker <**K**>.

Now you are ready to deal with this block of text. (An easy way to remember these letters is to think of the word BlocK, which begins with **B** and ends with **K**.) One of the things you can do with the block is to move it to somewhere else in the file.

Moving a Block

CTRL K V

If you received an addendum with this manual, read it to make sure that your system has sufficient memory to perform this operation.

After typing your text, you may decide that a certain sentence, paragraph, or group of paragraphs belongs in a different location. WordStar allows you to move it as a block of text. For practice you will move the four paragraphs you just marked in the previous section:

1. Press CTRL QC (^Q^C) to move the cursor to the end of the file.
2. Press CTRL KV (^K^V) to move the four paragraphs to this location.
3. Now press CTRL QR (^Q^R) to return the cursor to the beginning of the file, then move it straight down to the blank line above the first paragraph ("**Subscripts**").
4. Press CTRL KV (^K^V) to return the four paragraphs to their original location. (The block markers are still in effect, even though you have already moved the block once.)

Pressing CTRL KV (^K^V) allows you to move a block of text from one location to another. After the move, the block will no longer be in the previous location. Another thing you can do with a marked block of

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text is to make a copy of it somewhere else in the file (or the same place). The next section explains how to do this.

Copying a Block

CTRL K C

You may want to repeat a certain block of text in more than one place in your file. For practice, you will make a copy of the four paragraphs you marked in a previous section:

1. Press CTRL QC (^Q^C) to move the cursor to the end of the file.
2. Press CTRL KC (^K^C) to copy the four paragraphs to this location.
3. Press CTRL KC (^K^C) to make another copy. (The block markers remain in effect, even after you have copied the block. The markers remain until you save your file or mark another block of text.)
4. Press CTRL KH (^K^H) to hide the block markers. (This can sometimes be a helpful precaution.)

Pressing CTRL KC (^K^C) — after block markers have been set — allows you to make a copy of a block of text at the place where the cursor is currently located. The original block is not changed. Another thing you can do with a marked block is to delete it. The next section explains how to do this.

Deleting a Block

CTRL K Y

In the previous section, you made an extra copy of the four paragraphs that were marked. For practice you will delete one of them:

1. Press CTRL KH (^K^H) to make the block markers reappear on the screen.
2. Press CTRL KY (^K^Y) to delete the marked block. (It doesn't matter where the cursor is located.)
3. Press CTRL KQ (^K^Q) to abandon the file. (Now the block markers are gone.)

Pressing CTRL KY (^K^Y) allows you to delete a block of text that has been marked. The block is gone and so are the markers. (The block-hiding feature (CTRL KH) can be used to protect you from an accidental deletion.)

Writing a Block to Another File

CTRL K W

So far you have been handling blocks of text only within the same file. Now you will learn how to transfer a block out of the current file into another file. Here are the steps:

1. Reopen the file "Special":
   a. When the Opening menu appears, press D.
   b. When the prompt NAME OF FILE EDIT? appears, type Special and press RETURN.
2. Set the beginning marker:
   a. When the file appears, move the cursor to the blank line above the first paragraph **("Boldface Printing").**
   b. Press CTRL KB (^K^B) to mark the beginning of a block.
3. Set the ending marker:
   a. Move the cursor down to the blank line between the fourth and fifth paragraphs (just above

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“**Subscripts**”). (CTRL C (^C) twice should do it.)

   b. Press CTRL KK (^K^K) to mark the end of this block.

4. Write the block to a temporary file named “x:”
   a. Press CTRL KW (^K^W) to request a block write.
   b. When the prompt NAME OF FILE TO WRITE MARKED TEXT ON? appears, type x and press RETURN.
5. Press CTRL KQ (^K^Q) to abandon “Special.”

WordStar will write this block to a new file named “x.” Now you will learn how to read the block from this new file into another file. (It’s usually a good idea to give temporary files like x short, one-letter names to make them easy to use and easy to identify.)

Reading One File into Another

CTRL K R

In the previous section, you marked a block of text and then wrote it into a new file. Now you will read this new file into still another file:

1. Reopen the file “Control”:
   a. When the “Opening” menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Control and press RETURN.
2. Read “x” into “Control”:
   a. When the file appears, move the cursor down to the blank line between the two paragraphs.
   b. Press CTRL KR (^K^R) to request a file read.
   c. When the prompt NAME OF FILE TO READ? appears, type x and press RETURN.

WordStar will read the entire contents of file “x” into file “Control.” Scroll the screen up and down to check this. The four paragraphs of file “x,” which originally came from file “Special,” have been inserted into file “Control.” This is how you copy text from one file to another. (You can press CTRL KQ (^K^Q) to abandon file “Control.”)

Summary: Moving Text from One File to Another

The exercise you have just completed in the previous two sections illustrates how you copy text from one file to another. It’s a two-step procedure in WordStar:

- First mark the block of text to be moved and write it to a temporary file.
- Then open the target file, position the cursor and read the text from the temporary file.

Now a copy of the text has been transferred from the original file to the target file via a temporary file, as shown in the following illustration:

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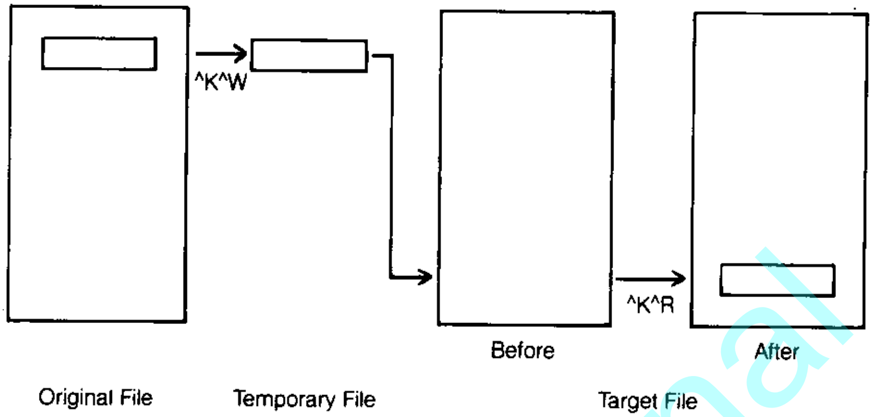

Moving Text from One File to Another

Copying a File

CTRL K O

Now you will learn how to make a copy of a file:

1. When the " Opening " menu appears, press O.
2. When the prompt NAME OF FILE TO COPY FROM? appears, type x and press RETURN.
3. When the prompt NAME OF FILE TO COPY TO? appears, type y and press RETURN.

WordStar will make a copy of file "x," called file "y." To verify this, look at your disk directory, which usually appears under the " Opening " menu. You can also open file "y" to see that it is the same.

Note that you don't have to use the " Opening " menu to copy a file. You can also use CTRL KO (^K^O) if you're in the middle of a file (it doesn't have to be the file you're copying).

Renaming a File

CTRL K E

WordStar allows you to change the name of a file:

1. When the " Opening " menu appears, press E.
2. When the prompt NAME OF FILE TO RENAME? appears, type x and press RETURN.
3. When the prompt NEW NAME? appears, type z and press RETURN.

WordStar will change the name of file "x" to file "z." File "x" no longer exists. You can verify this by looking at your disk directory, which usually appears below the " Opening " menu. You can also look at the actual file:

1. When the " Opening " menu appears, press D.
2. When the prompt NAME OF FILE TO EDIT? appears, type z and press RETURN.

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3. After glancing over the file, press CTRL KD (^K^D) to save a copy of it on disk.

Note that you don't have to use the "Opening" menu to rename a file. You can also use CTRL KE (^K^E) if you're in the middle of a file (it doesn't have to be the file you're renaming).

Deleting a File

CTRL K J

Finally, Wordstar allows you to delete any file you have entered:

1. When the "Opening" menu appears, press Y.
2. When the prompt NAME OF FILE TO DELETE? appears, type z and press RETURN.

WordStar will delete file "z." You can verify this by looking at your disk directory, which usually appears below the "Opening" menu.

Note that you don't have to use the "Opening" menu to delete a file. You can also use CTRL KJ (^K^J) — not CTRL KY — if you're in the middle of a file (it doesn't have to be the file you're deleting). (Since Y is the "no-file" key for deleting a file, you may think that CTRL KY is the key sequence to use when you're in another file. But CTRL KY is for deleting a marked block.)

Restoring a Lost File from the Backup File

Any time you lose a file, you can restore it from the backup file that WordStar created the last time you saved a copy of it. For example, suppose you realized after deleting "z" that you really wanted to keep the file. You could restore "z" from "z.bak" as follows:

1. When the "Opening" menu appears, press O.
2. When the prompt NAME OF FILE TO COPY FROM? appears, type z.bak and press RETURN.
3. When the prompt NAME OF FILE TO COPY TO? appears, type z and press RETURN.

WordStar will make a copy of "z.bak," called "z." You can verify this by looking at your disk directory. This new "z" will contain all the changes you made before the last time you saved it. You can make a copy of a backup file, but you can never edit the backup file itself.

End of the Intermediate Course

This concludes the Intermediate Course. By now you have learned most of WordStar's major features. Here is a brief summary of what you have learned:

Lesson 7. You learned to center text on a line and indent text using the tab stops. You also learned how to change the margins and tabs that WordStar provides automatically.

Lesson 8. You learned how to type tables using both ordinary tabs and decimal tabs.

Lesson 9. You learned how to type boldface, double-strike, underlined, and stricken text.

Lesson 10. You learned how to type subscripts, superscripts, strikeovers, and non-break spaces. In addition, you learned how to combine special effects and how to type two more special characters.

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Lesson 11. You learned how to set place markers in a file and then move the cursor to them. You also learned how to search for a string and how to replace a string, along with several options (disregard case, search for whole words, automatic replace).

Lesson 12. You learned how to save your file (or not save it) in four different ways. You also learned how to mark a block to be moved, copied, deleted, or transferred to another file. Finally, you learned how to copy, rename, or delete an entire file, including how to restore a lost file from the backup copy.

So far you have created the following files:

PRACTICE (Lesson 2)
LETTER (Lesson 3)
CONTROL (Lesson 6)
DISPLAY (Lesson 7)
TABLES (Lesson 8)
SPECIAL (Lessons 9)
X (Lesson 12)
Y (Lesson 12)
Z (Lesson 12)

If you plan to repeat any of these lessons or you have no further use for these files, you may want to delete them now. If you plan to go on to the Extended Course, do not delete these files now — some of them will be used again.

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Extended Course

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Lesson 13

Printing and pagination

In this lesson you will learn how to print a document longer than one page. This will involve telling WordStar where to make page breaks and how to format each printed page. You will also learn how to select the various printing options provided by WordStar, along with how to suspend, stop, or resume a printing job.

Setting a Conditional Page Break .cp

When you print a document longer than one page, you have to have a way to tell WordStar where to make page breaks. Otherwise, WordStar's automatic methods may break pages in undesirable places. One way you can do this is by setting a conditional page break:

1. When the "Opening" menu appears, press D.
2. When the prompt NAME OF FILE TO EDIT? appears, type Special and press RETURN.
3. When the file appears, press CTRL QC (^Q^C) to move the cursor to the end of the file, then back up a few lines to view the last paragraph.

You will see that the paragraph is split in half by a dashed line, with a P in the right-hand margin. This is WordStar's way of telling you that this is where WordStar is planning to break the first page. Suppose you decide that this isn't the best place to make a page break. This is how to tell WordStar to move the page break:

1. Move the cursor up to the blank line above the paragraph (the line above "**Combining Special Effects.**").
2. Make sure you see INSERT ON in the upper right-hand corner of the screen; if you don't, press CTRL V (^V) to make it appear.
3. Press RETURN to create a new blank line.
4. Type .cp5, and press RETURN. (You will see the page break marker jump up two lines.)
5. Press CTRL KD (^K^D) to save a copy of your file.

You have just moved the page break from the middle of the paragraph to the top of the paragraph. The .cp command is the conditional page command, which allows you to give WordStar a certain number of printed lines (in this case, 5). This command says to WordStar, "Keep the next five lines together. If they won't fit on this page, then move them all to the next page." The line containing the .cp command is not counted by WordStar as a line of text.

If you would like to see this document on paper, you can print it on your printer:

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1. When the "Opening" menu appears, press P.
2. When the prompt NAME OF FILE TO PRINT? appears, type Special and press ESC (ESCAPE).

Typing an Article

Sometimes you need to have a page broken in a certain place, no matter what. For example, at the start of a new chapter, the title must be at the top of a new page, regardless of how much or how little text is printed on the previous page. To see how to set an unconditional page break, you will first have to type several new paragraphs of text:

1. When the "Opening" menu appears, type D.
2. When the prompt NAME OF FILE TO EDIT? appears, type DataStar and press RETURN.
3. When the empty file appears, leave three blank lines and type the following text just as you see it here:

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DataStar

If you'd like one, easy, uniform way to enter, retrieve, and update all your records, you'll love DataStar. Why use sixteen different programs to handle sixteen different kinds of records . . . when you can turn to DataStar? **RETURN**

You pay for only one program, but you get the ability to enter, verify, update, and print all your records, whether they're address lists, inventories, invoice and order records, accounting and employee information, shipping and receiving data or anything else. **RETURN**

What's more, DataStar handles all that information just the way you want, because you set up the system so it makes sense for you and the way you do business. **RETURN**

You don't have to be a computer whiz to know and love DataStar. In fact, you don't have to know anything about computers . . . or even how to type. First of all, DataStar itself takes you on a short demonstration tour that shows you how easy it is to operate. Even better, you're told exactly what to do while you're doing it — with prompts right on the screen, whether you're making or filling out a "form." **RETURN**

You use simple commands on a keyboard that looks like an ordinary typewriter. And you use the DataStar manual that looks as though it's written in ordinary language — and is. Even if you don't know anything about computers, you can run DataStar right. You can't inadvertently affect, change, or wipe out any part of DataStar by making mistakes. **RETURN**

You can even install DataStar yourself. It's compatible with a wide range of microcomputers that run under CP/M or a CP/M-derived operating system . . . virtually any Z80 or 8080/8085 system. **RETURN**

The only computer forms you use are in plain and simple English. Because you design them. You don't have to translate all your current forms into exotic computer language that nobody understands. You don't have to translate them at all. If you wish, you can enter those forms into DataStar just the way they now look on paper. **RETURN**

Other systems may restrict the number and length of lines — or "fields," the overall size of the form, or your ability to change it or to create new forms. With DataStar, you can design virtually anything you want — even a form that's three times as long or three times as wide as the screen. And then change it whenever you have a better idea. **RETURN**

RETURN

Making Copies of the Article

With the text now typed, your next step is to make several copies of it for printing:

If you received an addendum with this manual, read it to be sure that your system has sufficient memory to perform this operation.

1. Mark the beginning of the block:
   a. Press CTRL QR (^Q^R) to return the cursor to the beginning of the file.
   b. Press CTRL KB (^K^B) to set a beginning marker.
2. Mark the end of the block:
   a. Press CTRL QC (^Q^C) to move the cursor to the end of the file.
   b. Press CTRL KK (^K^K) to set an end marker.
3. Without moving the cursor, press CTRL KC (^K^C) to copy the block of text (to make a duplicate copy). You now have two copies of the same text.
4. Repeat Step 3 two more times to make two more copies.
5. Press CTRL KH (^K^H) to hide the block markers and turn off the highlighting.

Setting an Unconditional Page Break .pa

Now you should have four copies of the text. However, if you move the cursor through the file, you will discover that the page breaks are not where you would like them to be. You would like each copy to appear on a separate page. Here is how you can make this happen:

1. Move the cursor to the first blank line below the first copy of the article (just below " . . . have a better idea.").
   a. Look at the status line to find the location.
   b. You will find this blank line on PAGE 1 at LINE 46.
2. Type .pa. (You will see the page divider jump to the line below .pa.)
3. Repeat Steps 1 and 2 for each of the remaining three copies of the article.
4. Press CTRL KD (^K^D) to save a copy of the file.

You have just set unconditional page breaks between each pair of articles. The .pa command is the unconditional page command. This command tells WordStar to cause a page break on the very next line. The line containing .pa is not counted by WordStar as a line of text.

If you would like to see this document on paper, you can print it on your printer:

1. When the "Opening" menu appears, press P.
2. When the prompt NAME OF FILE TO PRINT? appears, type DataStar and press ESC (ESCAPE).

When you look at the results, you will see that the pages have been numbered 1-4, with each number centered at the bottom of a page. (In this learning exercise, the four pages are the same; but in actual practice, you will be printing pages that are different.) If you would like to number the pages a different way (such as alternating from side to side), you will learn how to do this in Lesson 14.

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Lesson 14

Printing with headings and footings

In Lesson 13, you typed some text from a brochure, made copies of it, then printed the four copies as a four–page document. In this lesson you will print the same four pages with headings and footings. You will also learn how to print selected pages of a document, pause for paper changes, and suspend a print job in the middle.

Adding Page Headings .he

When you print a book, you often print the same heading at the top of each page. For example, you might print the title of the book or the title of a chapter. Just for practice, you can now add a heading to the document you typed in Lesson 13:

1. When the "Opening" menu appears, press D.
2. When the prompt NAME OF FILE TO EDIT? appears, type DataStar and press RETURN.
3. Make sure you see INSERT ON in the upper right-hand corner of the screen. If you don't, press CTRL V (^V) to make it appear.
4. Press CTRL N to create an extra blank line.
5. Now type, .he ^SMicroPro Brochure^S and press RETURN (use CTRL PS (^P^S) to insert the ^S underline characters).

The .he command is the heading command. It allows you to type in any one-line heading, using any special effects that you learned earlier in this guide. In a moment you will print your four pages again, but first you will get a chance to add a footing also.

Adding Page Footings .fo

WordStar also allows you to print from one character to a full line of text at the bottom of each page. For practice, you will print the page numbers on alternating sides of the page:

1. On the next blank line, type .fo ^K (use CTRL PK (^P^K) to enter the CTRL K (^K)).
2. Move the cursor out to column 69 (watch the column number on the status line at the top of the screen). (You can use CTRL I (^I) to tab most of the way.)

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3. Type # for the page number.
4. Press CTRL KD (^K^D) to save a copy of your file.

You have just entered a simple footing. The .fo command is the footing command. It allows you to enter up to one line of text to be printed at the bottom of every page. The CTRL K that follows the space after .fo tells WordStar to remove the spaces between .fo and # on even-numbered pages (this is how the page numbers are from side to side).

If you would like to see this document on paper, you can print it on your printer:

1. When the "Opening" menu appears, press P.
2. When the prompt NAME OF FILE TO PRINT? appears, type DataStar and press ESC (ESCAPE).

You can see how the heading and footing you requested were printed at the top and bottom of each of the four pages, even though you typed them only once.

Printing Selected Pages

WordStar allows you to print only part of your file. For example, to print only pages 2 and 3 of "DataStar," you could follow these steps:

1. When the "Opening" menu appears, press P.
2. When the prompt NAME OF FILE TO PRINT appears, type DataStar and press RETURN (not ESCAPE).
3. When the prompt DISK FILE OUPUT (Y/N): appears, press RETURN to skip this question.
4. When the prompt START AT PAGE NUMBER (RETURN for beginning)? appears, type 2 and press RETURN.
5. When the prompt STOP AFTER PAGE NUMBER (RETURN for end)? appears, type 3 and press RETURN.
6. Press RETURN four more times to skip the remaining questions and start printing.

You can see from the page numbers that only pages 2 and 3 have been printed. Note that a RETURN after the START question means to start printing at the beginning of the file (page 1 in this case) and a RETURN after the STOP question means to print all the way to the end of the file (page 4 in this case).

Pausing for Paper Changes

If your printer has a single-sheet feeder, you can try this feature with separate, hand-fed sheets. If not, you can just use continuous form and pretend the sheets are separated. Here are the steps:

1. When the "Opening" menu appears, press P.
2. When the prompt NAME OF FILE TO PRINT? appears, type DataStar and press RETURN four times.
3. When the question PAUSE FOR PAPER CHANGE BETWEEN PAGES (Y/N): appears, type Y and press RETURN four more times to start printing.

After printing one page, the printer will stop to give you time to insert the next page. As soon as the next page is ready, press P to continue printing. (If you forget, you can look at the "Opening" menu, where you will see P=CONTINUE.)

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Suspending a Print Job

CTRL K P

You can suspend a print job before it has completed if necessary. Here is an exercise in how to suspend printing in progress:

1. When the "Opening" menu appears, press P.
2. When the prompt NAME OF FILE TO PRINT? appears, type DataStar and press ESC (ESCAPE).
3. After a few paragraphs have been printed, press P again. (You have just suspended printing.)
4. When the prompt TYPE "Y" TO ABANDON PRINT, "N" TO RESUME, U TO HOLD: appears, type N to resume printing (no RETURN required here).
5. After a few more paragraphs have been printed, press P again.
6. When the prompt appears, type Y to abandon printing.
7. Move the paper to the correct position if necessary.

You have just practiced two of the options available to you (resuming the print job and abandoning the print job). In this example, you started printing from the "Opening" menu. You also could have started printing while you were in the middle of a file, as you will do in the next exercise:

1. Open the file "DataStar:"
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type DataStar and press RETURN.
2. Start printing:
   a. When the file appears on the screen, press CTRL KP (^K^P) to request printing.
   b. When the prompt NAME OF FILE TO PRINT? appears, type DataStar and press ESC (ESCAPE).
   c. As soon as the file starts to print, you will see the following message appear on-screen below the menu:

   WARNING:

   You are printing the same file as you are editing. The last saved version will be printed, not reflecting unsaved changes. Furthermore, WordStar will not allow you to save the edited version while the print is in progress.

If your computer doesn't have enough memory to print and edit at the same, you will see a message telling you to finish one operation before starting the other

You will learn more about this later; right now, just go on to the next step.

3. Suspend, then resume, printing:
   a. After a few paragraphs have been printed, press CTRL KP (^K^P) to suspend printing.
   b. When the prompt TYPE "Y" TO ABANDON PRINT, "N" TO RESUME, ^U TO HOLD: appears, press CTRL U (^U) to hold printing.
   c. When the prompt "*** INTERRUPTED *** Press ESCAPE Key" appears, press ESC (ESCAPE).

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   d. While the print job is holding, you can move the cursor around, delete text, add text, change margins, and reform paragraphs. (No changes will be included in the current print job, however.)
   e. Press CTRL KP (^K^P) to resume printing.

4. Abandon printing:
   a. After a few more paragraphs have been printed, press CTRL KP (^K^P) to suspend printing again.
   b. When the prompt appears (see Step 3b), press Y to abandon printing.
   c. Return the paper to the top-of-form position.
5. Press CTRL KQ (^K^Q) to abandon the file.

To summarize: After you suspend a print job, you may then do one of three things:

- Abandon the print job entirely
- Resume printing after making some checks
- Hold the print job while you perform some other WordStar tasks

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Lesson 15

Typing form letters

(MailMerge option only)

In this lesson you will learn how to transform an ordinary letter into a form letter, into which thousands of names and addresses can be inserted. Once you complete this lesson, you will be able to generate a large number of letters from one letter and mailing list. (Your WordStar system must include the MailMerge option.)

Preparing the Matrix Letter

The first step in printing thousands of form letters is to prepare a "matrix letter," which contains generic names in place of actual names:

1. When the "Opening" menu appears, press O to copy a file.
2. When the prompt NAME OF FILE TO COPY FROM? appears, type Letter and press RETURN. (This is the letter you typed in Lesson 3.)
3. When the prompt NAME OF FILE TO COPY TO? appears, type Mailing3 and press RETURN. (You have just made a copy of file "Letter" called "Mailing3.")

Eventually, you will print many letters that look just like "Letter." Now that you have a copy of it, you can modify this copy to produce the matrix letter. To do this, you begin by typing some preliminary instructions for WordStar:

1. Open a file called "Mailing3":
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Mailing3 and press RETURN.
2. Make sure you see INSERT ON in the upper right-hand corner; if you don't, press CTRL V (^V).
3. Press CTRL N to create a blank line.
4. Type ..File: MAILING3 and press RETURN. (This tells you the name of your file.)
5. On the next blank line type .op and press RETURN. (This is to turn off page-numbering.)
6. On the third blank line type .df LIST3.DAT and press RETURN.(This is to tell WordStar the name of your data file, which you will be typing later.)

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7. On the fourth blank line type .rv N,TITLE,COMPANY, ADDRESS1, ADDRESS2, NAME, LOCAL and press RETURN. (This tells WordStar what to read from your data file.)

With the instructions to WordStar completed, you can turn off insertion by pressing CTRL V (^V) and begin modifying the actual letter:

1. Replace the title line with &TITLE&:
   a. Move the cursor to the B in "Bill Somers, President."
   b. Type &TITLE& over the name and press CTRL QY (^Q^Y) to delete whatever is left on the line after "&TITLE&."
2. Replace the company line with &COMPANY&:
   a. Move the cursor down one line to the B in "Beauty, Inc.".
   b. Type &COMPANY& over the name and press CTRL QY (^Q^Y) to delete whatever is left over.
3. Replace the first address line with &ADDRESS1&:
   a. Move the cursor down one line to the 4 in "485 Avenida de las Guapas."
   b. Type &ADDRESS1& over the address and press CTRL QY (^Q^Y) to delete whatever is left over.
4. Replace the second address line with &ADDRESS2&:
   a. Move the cursor down one line to the L in "Los Angeles, California 90036."
   b. Type &ADDRESS2& over the address and press CTRL QY (^Q^Y) to delete whatever is left over.
5. Replace the name in the salutation with &NAME&:
   a. Move the cursor to the M in "Dear Mr. Somers."
   b. Type &NAME& over "Mr. Somers" and delete the last four letters of "Somers" (but leave the colon).
6. Replace the company name with &COMPANY& again:
   a. Move the cursor to the B in "Beauty, Inc." near the end of the first paragraph.
   b. Type &COMPANY& over "Beauty, Inc." and press CTRL T to delete the last three letters of "Inc." (but leave the space before "and").
   c. It won't be necessary to reform the paragraph.
7. Replace the name of the local city with &LOCAL&:
   a. Move the cursor to the B in "Burbank" in the postscript.
   b. Type &LOCAL& over "Burbank" (leave the period).
8. Press CTRL QC (^Q^C) to move the cursor to the end of the file.
9. On a blank line type .pa to tell WordStar to start each letter on a new page.
10. Press CTRL KD (^K^D) to save your file.

You have added five lines of instructions to WordStar (four at the beginning, one at the end) and replaced each specific name or address with a generic name. This changes the sample letter into a matrix letter, ready to receive information from a date file. WordStar will fill information into the places where the generic names are located in the matrix letter. This is how the matrix letter should look on the screen:

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```
. . File: MAILING3
.op
.df LIST3.DAT
.rv N, TITLE, COMPANY, ADDRESS1, ADDRESS2, NAME, LOCAL.
                              July 22, 1981

                              &TITLE&
                              &COMPANY&
                              &ADDRESS1&
                              &ADDRESS2&

                              Dear &NAME&:

                              In reference to our conversation
                              earlier today, I would like to meet
                              with you as soon as possible. We
                              must discuss ^Ball^B possibilities of
                              merging &COMPANY& and Heavy
                              Dealing.

                              Please call my secretary to set an
                              appointment at your earliest con-
                              venience.

                              Sincerely,

                              Jim Winters, President
                              Heavy Dealing, Inc.

                              P.S One item we have to be sure to
                              cover when we get together is that
                              plant we have over in &LOCAL&. I
                              need to hear what you think about
                              this. Keep in touch.

                              JW/sl
.pa
```

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Typing the Data File

Your next task is to type the data file, which contains the specific names and addresses that will be inserted into the matrix letter:

1. Open a file called "LIST3.DAT".
   a. When the "editing no file" menu appears, press N (not D) to create a non-document file.
   b. When the prompt NAME OF FILE TO EDIT? appears, type <u>LIST3.DAT</u> and press RETURN.
   c. You will see the messages "WAIT" and "NEW FILE" appear on the screen.
2. When the messages leave and the file is ready, type the following five lines of information (each line is continued as one line until you press RETURN):

```
1 "Bill Somers, President", "Beauty,Inc.", 485 Avenida de las Guapas, "Los Angeles, California 90036", Mr. Somers, Burbank RETURN
2 "Running Bear, Chief", Papoose-a-Plenty, North River Fork, "Little Big Horn, Montana 59107", Chief, Billings RETURN
3 "Henry Howe, Chairman", Mixed Reactions, 12736B North Central Avenue, "New York, New York 10024", Mr. Howe, Queens RETURN
4 "Jane Southern, President", Interiors Unlimited, 7 Rue d'Elegance, "New Orleans, Louisiana 70149", Mrs. Southern, Baton Rouge RETURN
5 "James Beauregard, Executive", Sumptuous Dining, 901 Gastronomic Parkway, "Denver, Colorado 80201", Mr. Beauregard, Colorado Springs RETURN
```

4. Press CTRL KD (^K^D) to save your data file.

Each entry line, or record, in your data file contains seven items, or fields, separated by commas. (When a field contains a comma of its own, as "Beauty, Inc." does, it must be typed within quotation marks.) The seven fields in each line correspond to the seven generic names, or variables, you used in the matrix letter. For example, in the third record,

N = 3
TITLE = Henry Howe, Chairman
COMPANY = Mixed Reactions
ADDRESS1 = 12736B North Central Avenue
ADDRESS2 = New York, New York 10024
NAME = Mr. Howe
LOCAL = Queens

Because there are five records in your data file, five letters will be printed.

Printing the Form Letters

With your matrix letter and your data file completed, you are ready to begin printing:

1. When the "Opening" menu appears, type M to request a mailmerge.
2. Make sure your printer is ready to go, with the first page aligned correctly.
3. When the prompt NAME OF FILE TO MAILMERGE? appears, type Mailing3 and
   a. If you are printing on continous form paper, press ESC (ESCAPE) to begin printing.
   b. If you are printing each letter on a separate sheet of stationery, press RETURN seven times, press Y for PAUSE FOR PAPER CHANGE BETWEEN PAGES (Y/N): ■, then press RETURN two more times to begin printing.

Now WordStar will print five letters on the printer, using the five lines of your data file to insert information into your matrix letter. You can see that WordStar made allowance for words of different lengths that had to be inserted, and reformed paragraphs when necessary. Note also that the first letter is identical to the letter you typed in Lesson 3.

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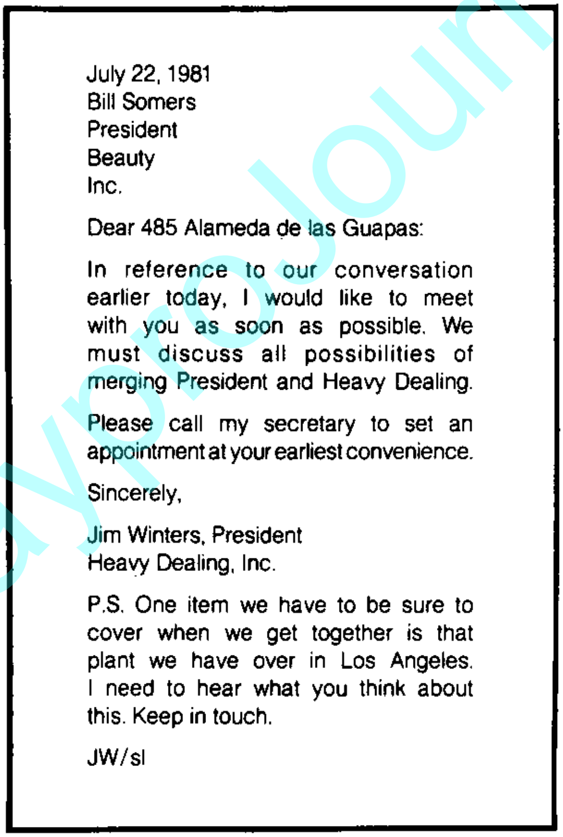
Rules for Typing a Data File

Follow these rules whenever you type a data file:

- Use a non-document file
- Begin each record with a record number
- Separate fields with commas
- Use quotation marks around fields that contain commas of their own (type the closing quotation mark before the next comma)
- Never leave out a field; if you don't know what to enter, just type a blank space followed by a comma
- End each record by pressing RETURN
- Whenever possible, use **DataStar** to enter data files

If you should forget these rules and type the data file incorrectly, you could end up with letters that look like this:



July 22, 1981
Bill Somers
President
Beauty
Inc.

Dear 485 Alameda de las Guapas:

In reference to our conversation earlier today, I would like to meet with you as soon as possible. We must discuss all possibilities of merging President and Heavy Dealing.

Please call my secretary to set an appointment at your earliest convenience.

Sincerely,

Jim Winters, President
Heavy Dealing, Inc.

P.S. One item we have to be sure to cover when we get together is that plant we have over in Los Angeles. I need to hear what you think about this. Keep in touch.

JW/sl

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NOTES

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Lesson 16

Envelopes and mailing labels

(MailMerge option only)

In Lesson 15 you printed five form letters. In this lesson you will address envelopes to mail the letters in and prepare mailing labels for some accompanying mail.

Addressing Envelopes

To address envelopes for mailing your five letters, you can use the same data file with a different matrix. Here is how to type the new matrix:

1. Open a new file called "Envelop3":
   a. When the Opening menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Envelop3 and press RETURN.
2. When the file appears, type the information on the next page.
3. Read the comments to see what each command is used for. (The comments are not required, but are provided here to help you learn the commands.)
4. Press CTRL KD (^K^D) to save your file.

You now have a document file called "Envelop3" that you can use as a matrix to address your mailing envelopes one at a time. This matrix calls for an envelope height of 25 lines, a top margin of 15 lines, a left margin of 30 characters, and single-spacing. (To print with double-spacing, change the top margin to 10 and leave blank lines between the lines of addressing.) You are ready to print the envelopes:

1. When the Opening menu appears, type M to request a mailmerge.
2. Make sure your printer is ready to go, with the first envelope in position.
3. When the prompt NAME OF FILE TO MAILMERGE? appears, type Envelop3 and press ESC (ESCAPE) to begin printing.
4. Press P each time you are ready to address a new envelope. (If you forget, look at the Opening menu, where you will see P = CONTINUE PRINT.)

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```
.. File: ENVELOP3 (print envelopes from LIST3.DAT)
.. File: EN
..
.op      Turn off page numbering
.pl 25   Page length = 25 lines (ordinary envelope)
.mt 15   Allow a top margin of 15 lines
.mb 0    Allow no bottom margin (0 lines)
..
.df LIST3.DAT (the data file is LIST3.DAT)
..
..       Read these seven fields (variables),
..       one record at a time:
.rv N, TITLE, COMPANY, ADDRESS1, ADDRESS2, NAME, LOCAL
..       Press CTRL PC (^P^C) to insert ^C
..       (wait for the next envelope)
^C
                              &TITLE&
                              &COMPANY&
                              &ADDRESS1&
                              &ADDRESS2&
.pa      Roll envelope out of the printer    RETURN
```

When you have finished positioning the last envelope, WordStar will print and then return you to the Opening menu. You now have five mailing envelopes to match your five letters.

Printing Mailing Labels

To print single-column mailing labels for the people on your mailing list, you can use the same data file again with still another matrix. (To print multi-column labels, see Section 10 of the WordStar Reference Manual.) Here is how to type the matrix:

1. Open a new file called "Label3":
   a. When the Opening menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Label3 and press RETURN.
2. When the file appears, type the following information (the comments can help):

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```
..       File: LABEL3 (print mailing labels from LIST3.DAT)
.op      Turn off page numbering
.pl 18   Page length = 18 lines (this may vary)
.mt 8    Allow a top margin of 8 lines
.mb 6    Allow a bottom margin of 6 lines
.df LIST3.DAT (the data file is LIST3.DAT)
.rv N, TITLE, COMPANY, ADDRESS1, ADDRESS2, NAME, LOCAL
         &TITLE&
         &COMPANY&
         &ADDRESS1&
         &ADDRESS2&
.. End of file    RETURN
```

3. Press CTRL KD (^K^D) to save a copy of your file.

You now have a document file called "Label3" that you can use as a matrix to print your mailing labels on a continuous roll. This matrix calls for a label height of 18 lines, a top margin of 8 lines, a bottom margin of 6 lines, a left margin of 10 characters, and single-spacing. (To print with double-spacing, change the top margin to 5, the bottom margin to 5, and leave blank lines between the the lines of addressing.) You are ready to print the labels:

1. When the `Opening` menu appears, type M to request a mailmerge.
2. Make sure your printer is ready to go, with the roll of labels in position.
3. When the prompt NAME OF FILE TO MAILMERGE? appears, type Label3 and press ESC (ESCAPE) to begin printing.

Now WordStar will print five mailing labels to match your five letters and envelopes.

Combining Three Tasks into One

In Lesson 15 and this lesson you have printed a series of letters, followed by corresponding envelopes and mailing labels. Now you will learn how to combine all three of these tasks into one task. So far you have typed files with these names:

MAILING3	(matrix for the letters)
ENVELOP3	(matrix for the envelopes)
LABEL3	(matrix for the mailing labels)

All three of these matrices drew from the same data file of names and addresses (LIST3.DAT). In this lesson you will type an additional matrix file to print your data file in a readable format. Then you will type a simple command file to have all four printed in succession.

As you have probably noticed, your data file of names and addresses is difficult to read. If you had to make any changes to it, you would not have an easy time finding anything. So why not print it in a more readable format and make your job easier? Here are the steps:

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1. Open a new file called "Format3":
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Format3 and press RETURN.
2. When the file appears, type the following:

```
.. File:  FORMAT3 (print a formatted mailing list)
.op       Turn off page-numbering
.pl 8     Set the page length to 8 lines
.mt 2     Set the top margin to 2 lines
.mb 2     Set the bottom margin to 2 lines
.cp 6     Set a conditional page break (6 lines)
.df LIST3.DAT
.rv N, TITLE, COMPANY, ADDRESS1, ADDRESS2, NAME, LOCAL
&n&            &title&
               &company&
               &address1&
               &address2&
.cs
.dm NOW PRINTING RECORD FOR &title&
.. End of file    RETURN
```

3. Press CTRL KD (^K^D) to save your file.

Typing a Command File

Whenever you want to combine several tasks into one, MailMerge allows you to type one special file, called a command file, to have these tasks performed for you. This command file will call the other files for you and print them in succession while you go on to some other work. Here are the steps for this particular command file:

1. Open a new file called "Combine3":
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Combine3 and press RETURN.
2. When the file appears, type the following:

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```
.dm     This program will perform four tasks in succession:
.dm     (1) print a series of letters, (2) print the envelopes
.dm     (3) print mailing labels, (4) print the data file
.dm     Task 1: Print the letters
.fi  MAILING3
.dm     Task 2: Print the envelopes
.dm                 Get the envelopes ready
.fi  ENVELOP3
.dm     Task 3: Print the mailing labels
.dm                 Put the labels into the feeder
..      Press CTRL PC (^P^C) to insert ^C
^C
.fi  LABEL3
.dm     Task 4: Print the mailing list
.dm                 Put the paper back into the feeder
..      Press CTRI PC (^P^C) to insert ^C
^C
.fi  FORMAT3
```

3. Press CTRL KD (^K^D) to save your file.

Running the Command File

Now that you have a command file, along with four files that are called by the command file, you are ready to start:

1. When the "Opening" menu appears, type M to request a mailmerge.
2. Make sure your printer is ready to go, with the paper in position.
3. When the prompt NAME OF FILE TO MAILMERGE? appears, type Combine3 and press ESC (ESCAPE) to begin printing:
    a. The letters will be printed first, with no action required by you.
    b. After the last letter has been printed, you will have to begin inserting the envelopes one at a time, as indicated by screen messages.
    c. After the last envelope has been addressed, you will have to insert the roll of mailing labels during the next printing pause.
    d. After the last label has been addressed, change back to paper again during the printing pause.

After the mailing list has been printed, WordStar will return you to the "editing no file" menu. You now have five letters, five envelopes, five mailing labels, and a mailing list with five names on it.

Summary

The documents you have been typing to produce special printing all contain a number of three-character commands that begin with periods (dots). These are called dot commands. Here is a summary of the **dot commands** you have seen so far, and what they mean to WordStar:

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..	"Ignore this line. This line is for comments (or to leave some open space in the file)."
.op	"Turn off page-numbering when you print this document."
.pa	"Go to a new page right here."
.cp	"Here is a number. If this number of lines won't fit on this page, move all of them to the next page."
.pl	"The length of each page of printing is as follows."
.mt	"Allow the following top margin on each page before printing anything."
.mb	"Allow the following bottom margin after printing one page."
.df	"The name of the data file for this matrix file is as follows." (MailMerge only)
.rv	"For each item to be printed, read the following fields (variables) from a record in the data file. You don't have to use all of them during printing." (MailMerge only)
.fi	"Insert the following file right here. In other words, print everything in that file here, then come back to this file to continue printing." (MailMerge only)
.cs	"Clear the open area of the screen." (MailMerge only)
.dm	"Display the following information on the screen." (MailMerge only)

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Lesson 17

Typing reply letters

(MailMerge option only)

In Lesson 15 you typed a form letter that could be addressed to many different people. Each addressee got the same letter. Now you will learn how to type another kind of form letter, a reply letter. This time, you will not be mailing a large number of identical letters. Instead, you will be mailing only one letter at a time, but the wording may vary from letter to letter.

Preparing the Matrix Letter

Instead of converting a sample letter into a matrix letter by making substitutions, as you did in Lesson 15, you will type the matrix letter directly this time:

1. Open a new file called "Reply":
   a. When the " Opening " menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Reply and press RETURN.
2. Press CTRL OJ (^O^J) to turn off justification.
3. When the new file appears on the screen, type the following letter:
4. Press CTRL KD (^K^D) to save your file.

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```
. . File: REPLY (prints a reply letter using RADIO, TV, or
. .       STEREO for description)
.cs
.av   "Enter the file name (RADIO/TV/STEREO): ", FILENAME
.av   "Please enter today's date: ", DATE
. .
.fi   HEADING           (standard letter heading and salutation)
      Thank you for your recent inquiry. The following features
are available for you to select from:
.fi   &FILENAME&
      We were happy to hear from you. We hope that our &PRODUCT&
will contribute to your &FUNCTION&. Let me know if I can be of
any further assistance.
                        Sincerely,

                        Henry L. ("Ham") Burger
                        Director of Marketing     RETURN
```

The Heading File

As you can see from looking at this letter, you are going to need several other files (HEADING, RADIO, TV, and STEREO) before you will be able to use it. We can begin by typing the heading file:

1. When the Opening menu appears, press D.
2. When the prompt NAME OF FILE TO EDIT? appears, type Heading and press RETURN.
3. When the new file appears on the screen, type the following:

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```
.. File:  HEADING (provides the standard heading and salutation)
.av   "Addressee's name and title: ", TITLE
.av   "Addressee's company: ", COMPANY
.av   "Street address: ", ADDRESS1
.av "City, state, and zip: ", ADDRESS2
.av "Dear ", NAME
.cs
&TITLE&                          &DATE&
&COMPANY&
&ADDRESS1&
&ADDRESS2&

Dear &NAME&:
.. End of file    RETURN
```

4. Press CTRL KD (^K^D) to save your file.

The First Product File

Next we go on to the three product files. One of these will be inserted as the middle paragraph of the reply. Here is the first one:

1. Open a new file called "Radio":
   a. When the `Opening` menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Radio and press RETURN.
2. When the new file appears on the screen, type the following:

```
..  File: RADIO (describes the AM/FM clock radio)
.sv   PRODUCT, AM/FM clock radio
.sv   FUNCTION, listening enjoyment
..
          o automatic tuning selection
          o AC/DC selection
          o choice of one of three wake-up methods
            * soft music
            * Chinese gong
            * "Stars and Stripes Forever"
.. End of file    RETURN
```

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3. Press CTRL KD (^K^D) to save your file.

The Second Product File

Next we prepare the second product file:

1. Open a new file called "TV":
   a. When the `Opening` menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type TV and press RETURN.
2. When the new file appears on the screen, type the following:

```
..   File: TV (describes the portable color TV)
.sv  PRODUCT, portable color television
.sv  FUNCTION, viewing enjoyment
..
            o full channel selection
            o Big Rainbow color
            o choice of three sizes
               * portable
               * briefcase size
               * pocket size
.. End of file     RETURN
```

3. Press CTRL KD (^K^D) to save your file.

The Third Product File

Finally we prepare the third product file:

1. Open a new file called "Stereo":
   a. When the `Opening` menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Stereo and press RETURN.
2. When the new file appears on the screen, type the following:

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```
..   File: Stereo (describes the stereo system)
.sv   PRODUCT, stereophonic system
.sv   FUNCTION, listening enjoyment
..
            o acoustic suspension speakers
            o Full stereophonic sound
            o Elliptical, 1.5-gram cartridge
            o choice of three colors
              * Brick Road yellow
              * Emerald green
              * Black and white
..End of file      RETURN
```

3. Press CTRL KD (^K^D) to save your file.

Having the Reply Letter Printed

Now you have a matrix letter to answer inquiries about products, along with four accompanying files. Here is how to have a reply letter typed:

1. When the "Opening" menu appears, type M to request a mailmerge.
2. Make sure your printer is ready to go, with the paper in position.
3. When the prompt NAME OF FILE TO MAILMERGE? appears, type Reply and press ESC (ESCAPE) to begin printing.
4. In reply to the prompt "Enter one file name (RADIO/TV/STEREO): ", type Radio and press RETURN.
5. Answer the remaining questions as indicated, pressing RETURN after each response:

```
Please enter today's date: June 15, 1981
Addressee's name and title: Mr. James V. Thompson
Addressee's company: Rampant Electronics, Inc.
Street address: 1307 Helsing Boulevard
City, state, and zip: Cupertino, CA 95014
Dear Mr. Thompson
```

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6. WordStar will now print the letter, which should look like this:

```
Mr. James V. Thompson                      June 15, 1981
Rampant Electronics, Inc.
1307 Helsing Boulevard
Cupertino, CA 95014

Dear Mr. Thompson:
     Thank you for your recent inquiry. The following features
are available for you to select from:

     o automatic tuning selection
     o AC/DC selection
     o choice of one of three wake-up methods
        * soft music
        * Chinese gong
        * "Stars and Stripes Forever"

     We were happy to hear from you. We hope that our AM/FM
clock radio will contribute to your listening enjoyment. Let me
know if I can be of any further assistance.
                                   Sincerely,

                                   Henry L. ("Ham") Burger
                                   Director of Marketing
```

7. Press the space bar to return to the "Opening" menu.
8. Repeat Steps 1-7, using either "TV" or "Stereo" in Step 4 and making up your own entries for Step 5.

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Summary

First of all, you learned two more dot commands in this lesson, both used to tell WordStar what value to use for a field (variable):

.av	"Ask the operator to type in this field (variable) at the keyboard."
.sv	"Set this field (variable) to the following value."

You have three different ways of telling WordStar what value to use for a given field (variable): read a variable (.rv), ask for a variable (.av), or set a variable (.sv).

Here is a brief description of how WordStar prints this reply letter (look at the contents of the files earlier in this lesson while you are reading this):

1. After you request a mailmerge, REPLY asks you for a file name and today's date.
2. Then REPLY switches control over to HEADING. (It's as though everything in HEADING were typed in the middle of REPLY. This is called **nesting**.)
3. HEADING asks for the addressee's name and address and types them, along with the salutation, using the date that REPLY asked you for, then returns control to REPLY.
4. Next REPLY prints a short paragraph and turns control over to the file you named in Step 1 (RADIO, TV, or STEREO).
5. Since you named RADIO the first time, RADIO begins by setting PRODUCT to "AM/FM clock radio" and FUNCTION to "listening enjoyment," prints the features of the radio, and returns control to REPLY.
6. REPLY now prints the closing paragraph, using the values of PRODUCT and FUNCTION set by RADIO, then prints the signature line to conclude the letter.

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NOTES

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Lesson 18

Chain-printing

(MailMerge option only)

In this lesson you will type three text files, representing three chapters of a book. Then you will type a command file that will print the three text files in succession. This is known as **chain-printing**, another way WordStar's MailMerge option can save you time and effort.

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Typing the Text Files

You will begin by typing several pages from each of the first three lessons of this guide. Besides helping you learn chain-printing, this will give you a good review of the different things you have learned in this guide. Here's how to do this:

1. Open a new file called "Guide1":
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type <u>Guide1</u> and press RETURN.
2. Type the first two sections of Lesson 1 of this guide ("The Keyboard" and "The Screen"), typing everything just as you see it.
   a. Here are some guidelines on spacing:
      (1) Leave three blank lines between the beginning of the file and "Lesson 1."
      (2) Leave two blank lines between the title and the first line of text.
      (3) Leave 13 blank lines between the end of the first paragraph ("... a little different.") and the figure caption ("Typical Keyboard").
   b. After the last sentence (which should be at the bottom of page 1), press RETURN three or four times to force a page break to page 2.
3. Press CTRL KD (^K^D) to save the file.
4. Open a new file called "Guide2":
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type <u>Guide2</u> and press RETURN.
5. Type the first four sections of Lesson 2 of this guide ("Starting Your Computer," "Starting WordStar," "Stopping WordStar," and "Stopping Your Computer").
   a. Follow the format of Lesson 2, but type the procedures that apply to your own machine, rather than the procedures you find in Lesson 2 (if they are different).

   b. This should fill about two and a half pages.
   c. On a blank line after the last line of text, type .pa and press RETURN. To force a fourth page type .pa and press RETURN again.
6. Press CTRL KD (^K^D) to save the file.
7. Open a new file called "Guide3":
   a. When the Opening menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Guide3 and press RETURN.
8. Type the opening paragraph and the first section of Lesson 3 ("Preliminary Adjustments"). This should fill a little more than one page.
9. Press CTRL KD (^K^D) to save the file.

Now you have three files (Guide1, Guide2, and Guide3), one for each of the three opening lessons of this guide. For this exercise, these represent only about five pages of typing. In actual practice, you may have dozens of files and hundreds of pages of typing.

Printing with Continuous Pagination

First you will type a command file that will cause the pages to be numbered continuously from lesson to lesson:

1. Open a new file called "Print01:"
   a. When the Opening menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Print01 and press RETURN.
2. When the file appears, type the following:

```
..  File: PRINT01
..
.fi  Guide1
.pa
.fi  Guide2
.pa
.fi  Guide3
..
..  End of file     RETURN
```

3. Press CTRL KD (^K^D) to save the file.

Each time you type an unconditional page command (.pa), WordStar will insert a page break in the command file, which you can ignore. For clarity, the page breaks are not shown here.

Note

The .pa command you typed at the end of Guide2 was to leave a blank page at the end of Lesson 2. (If you wanted to reproduce this printing on two-sided paper and you left a chapter with an odd number of pages, the next chapter would begin on the back of a sheet, instead of the front.)

Now you are ready to start printing:

1. When the Opening menu appears, type M to request a mailmerge.
2. Make sure your printer is ready and the paper is in position.
3. When the prompt NAME OF FILE TO MAILMERGE? appears, type Print01 and press RETURN (not ESCAPE) four times.

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4. When the prompt NUMBER OF COPIES (RETURN for 1)? appears, type 2 and press RETURN four more times.

You should have two eight-page copies, numbered from 1 to 8, with each number centered at the bottom of the page.

Printing with Pagination by Chapters

Now you will print the same three files with another method of pagination. This time, the chapters will be paginated separately, with the first page of chapter 1 called 1-1, the second page called 1-2, and so on. In addition, the page numbers will be alternated from side to side.

1. Add a footing to each of the pages of "Guide1":
   a. When the "Opening" menu appears, press D.
   b. When the prompt NAME OF FILE TO EDIT? appears, type Guide1 and press RETURN.
   c. When the file appears, press CTRL N to create a blank line at the beginning of the file.
   d. Type .fo^K at the left-hand margin, then type 1-# in columns 67-69. (Press CTRL PK to type ^K.)
   e. Press CTRL KD (^K^D) to save the file.
2. Repeat Step 1 for "Guide2" and "Guide3," using 2-# and 3-# in Step 1d in place of 1-#, as shown below.

```
      .fo ^K                              2-#

                      Lesson 2
                     Some Basics

   In this lesson, you will learn how to start and stop your
computer, and how to start and stop WordStar. You will also
learn how WordStar helps you when you need information.
```

Top of Page 1 of Lesson 2

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3. Open a new file called "Print02:"
    a. When the `Opening` menu appears, press D.
    b. When the prompt NAME OF FILE TO EDIT? appears, type Print02 and press RETURN.
4. When the file appears, type the following:

```
..  File: PRINT02
..
.fi  Guide1
.pa
.pn  1
.fi  Guide2
.pa
.pn  1
.fi  Guide3
..
..  End of file     RETURN
```

5. Press CTRL KD (^K^D) to save the file.

This file is the same as PRINT01, except for the page number commands (.pn 1), which tell WordStar to reset the page count to 1 before starting a new chapter. Once again, the page breaks are not shown here. Now you are ready to start printing:

1. When the `Opening` menu appears, type M to request a mailmerge.
2. Make sure your printer is ready and the paper is in position.
3. When the prompt NAME OF FILE TO MAILMERGE? appears, type Print02 and press ESC (ESCAPE).

You should have eight pages, numbered as follows: 1-1, 1-2, 2-1, 2-2, 2-3, 2-4, 3-1, 3-2. Also, the numbers should be alternated from side to side, with 1-1 on the right, 1-2 on the left, and so on.

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Lesson 19

Check spelling

(SpellStar option only)

In this lesson, you will learn how to "proofread" everything you write with WordStar. You will practice checking for misspellings and typos automatically, correcting the errors, and setting aside words to add to your on–disk dictionary or dictionaries. (Your WordStar program must have the SpellStar option to perform these operations.)

This lesson and Lesson 20 (about maintaining SpellStar's dictionaries) assume you are using disks of about 240 kilobytes. If you are using smaller capacity disks, you will need two disks and will have to take that into account when following these instructions.

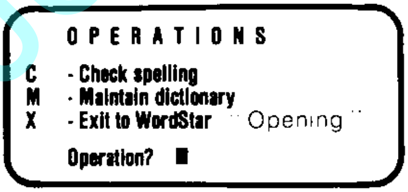
Starting SpellStar

SpellStar needs WordStar to run, so first you must get WordStar started:

1. Start your computer. (If you don't know how to do this, refer to Lesson 2 of this Training Guide.)
2. Start WordStar, logged on the A: drive. (You can refer to Lesson 2 for instructions on this also.)
3. Put a blank disk into drive B:.
4. When the "Opening" menu appears on your screen, press S to "Run SpellStar."
5. When the prompt NAME OF FILE TO CHECK / ADD TO DICTIONARY? appears, type A:SAMPLE.TXT and press RETURN. ("SAMPLE.TXT" is a file that comes with SpellStar; you'll use it to do a spelling check.)

The Operations Menu

Next you will see SpellStar's Operations Menu, from which you can choose to run a spelling check or do dictionary maintenance. (You can also return to WordStar's "Opening" menu at this point.)



```
     O P E R A T I O N S

C    - Check spelling
M    - Maintain dictionary
X    - Exit to WordStar "Opening"

     Operation? ■
```

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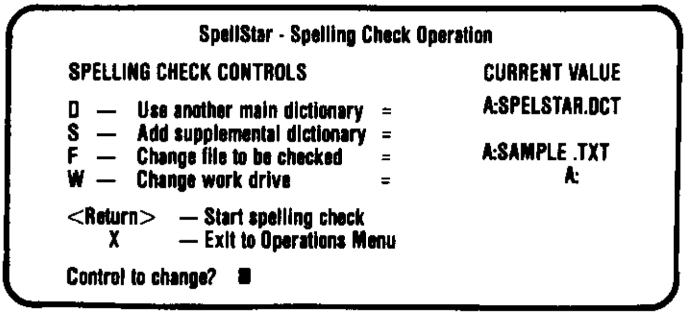


```
                SpellStar - Spelling Check Operation
SPELLING CHECK CONTROLS                              CURRENT VALUE

D  —  Use another main dictionary    =               A:SPELSTAR.DCT
S  —  Add supplemental dictionary    =
F  —  Change file to be checked      =               A:SAMPLE .TXT
W  —  Change work drive              =                      A:

<Return>    — Start spelling check
   X        — Exit to Operations Menu

Control to change?   ■
```

In this lesson, you'll run a sample spelling check, so

1. Press C, for "Check Spelling."
2. Now a menu titled "Spelling Check Controls" will appear. You will use the controls on this menu to define the check.

Setting Up Spelling Check Controls

The controls needed for each spelling check are the names of a dictionary and a file to be checked, and the letter of a work drive. You may name a supplemental dictionary if you wish, but it's not required.

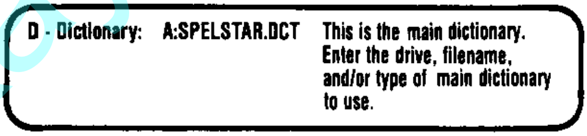
When the Spelling Check Controls menu first appears, it tells you the names ("current values") of the dictionaries, file, and work drive SpellStar will use unless you change them.

If you liked the way the controls were set up, you could just press RETURN and SpellStar would begin checking the file named.

Changing the Main Dictionary

This time, let's see how you use the controls to design a spelling check the way you want it. You'll use these same methods later to change other controls in SpellStar.

1. In response to the prompt "Control to change?", press D.
2. The following message appears on the screen below the Controls menu:



```
D - Dictionary:   A:SPELSTAR.DCT   This is the main dictionary.
                                   Enter the drive, filename,
                                   and/or type of  main dictionary
                                   to use.
```

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SPELSTAR.DCT is the 20,000-word dictionary that is "standard equipment" with SpellStar. It is based on the American Heritage dictionaries, published by Houghton Mifflin Co. Most of the time you'll find it quite sufficient.

When the Spelling Check Controls menu first appears on the screen, the current value of the main dictionary will always be SPELSTAR.DCT on the logged disk drive. (Note that the main dictionary can be on either drive, as long as you identify its location for SpellStar.) Let's pretend SPELSTAR.DCT is on the B: drive.

1. The cursor is on the first character—the drive letter— of the dictionary name. Type B: and press RETURN. (You must always press RETURN after typing in your change.)
2. Notice that on the Controls menu the current value of the main dictionary is now B:SPELSTAR.DCT.

You've just told SpellStar that the main dictionary to use, SPELSTAR.DCT, is on the B: drive.

With the "D" control, you can replace SPELSTAR.DCT with another main dictionary entirely. SpellStar will use any dictionary you name that has been organized properly. (We'll discuss in Chapter 20 how you and SpellStar do that.)

Let's suppose you have a dictionary file called "HERITAGE.DCT" that you want to use.

1. Press D. The message you saw before appears below the Controls menu. The cursor is on the first character.
2. Type HERITAGE, and press RETURN. (You can type HERITAGE in upper or lower case; it doesn't matter. If you make a mistake, backspace with the "backspace" key or CTRL H (êH) and correct it.)

Notice that the new current value for main dictionary reads B:HERITAGE.DCT.

Even though you typed in "HERITAGE" beginning at the first character of the previous dictionary's drive letter and name, SpellStar put "HERITAGE" in the proper place. SpellStar recognizes which part of the value you're entering and inserts it correctly.

Try this now with the dictionary name's extension, changing it to ".EXT."

1. Press D.
2. Type .DCN, and press RETURN.

The current value for main dictionary is now B:HERITAGE .EXT.

As you've just seen, you can change the drive, filename, or extension of the main dictionary as individual elements.

You can also change the entire value all at once, simply by entering the drive letter (with colon following), the filename, and the extension (with period preceding).

You can erase any element of the current value—the drive, filename, or extension—by using the "#" key. Let's try that.

1. Press D.
2. Type #, and press RETURN.

The current value of the main dictionary should now read

B: .EXT.

You can erase the entire value for any control (except the work drive) with the space bar, if you prefer, before entering a new value.

To begin a spelling check, you must have values for the main dictionary, file to be checked, and work drive. So if you erase either the main dictionary or the file value and leave a blank, you'll have to enter a value before SpellStar will let your command to begin the spelling check take effect.

The methods with which you've just experimented in naming a main dictionary will apply to many other controls in SpellStar.

Since you want to proceed now with setting the other controls for your sample spelling check, let's change the main dictionary value back to A:SPELSTAR.DCT.

1. Press D.
2. Type A:SPELSTAR.DCT, and press RETURN.

Adding a Supplemental Dictionary

With SpellStar, you can use more than one dictionary during a spelling check. Using a main dictionary plus a supplemental dictionary to check a document may catch many more errors.

Suppose you've just finished typing a contract with many legal terms. SpellStar can use a supplemental dictionary of legal terms, in addition to the main dictionary, to check your contract. (You can buy specialized dictionaries or create your own with SpellStar.)

Another useful supplemental dictionary might contain names and addresses of your company's clients. The dictionary wouldn't help you connect the right name with the right address, but it could tell you if the name, street, city, and state were spelled correctly.

You enter or change the supplemental dictionary's name the same way you did the main dictionary's. The only difference is that if you erase the entire supplemental name by pressing the space bar, SpellStar will let you begin a spelling check without a supplemental dictionary. Entering a supplemental value is always an option.

Even though we won't use a supplemental dictionary to check spelling in SAMPLE.TXT, let's look at the control to "add supplemental dictionary."

1. Press S.
2. Read the prompt, then press RETURN.

Notice that pressing RETURN left the value unchanged. In this case, the value was blank, but in this and other SpellStar controls, RETURN will always leave the value unchanged, whether that value is a blank or a name you entered earlier.

Changing the File to be Checked

On the Controls menu, you see that the current value of the file to be checked is SAMPLE.TXT. This is the name you entered at the "Opening" menu, when SpellStar asked you NAME OF FILE TO CHECK / ADD TO DICTIONARY?

If you wanted to change the file value, you'd press "F" and enter the new filename just as you entered new information for the value of the main dictionary.

You'll find this control especially handy in cases where you run spelling checks on several files at once before correcting the errors SpellStar has flagged in any of them.

This time, you'll leave SAMPLE.TXT as the file to be checked, so you needn't do anything.

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Changing the Work Drive

In WordStar, we use the term "work drive" generally to mean the drive to which your work is directed for storage.

But in SpellStar, "work drive" has a different meaning. During spelling checks, SpellStar creates its own temporary sorting files containing words from your document.

The "change work drive" control lets you tell SpellStar where to put its temporary files. The critical factor in your decision is the space available on either disk.

The sorting files take up about the same amount of space as your document file. You should always find out how large your document is and check to see if the sorting files will fit on the same disk. This is especially important when you're checking a large file.

Unless you have a lot of files on your boot disk, you should have enough space to put the sorting files there. (SAMPLE.TXT's size is only 4K.) However, you have a blank disk in the B: drive, so to play it safe, use B: for the work drive.

Note

To see your document's size - and how much space is left on your disk, you run a status check from the "opening" menu. If you needed to do it now, you would have to enter "X" to go back to the SpellStar Operations Menu, and exit using "X" from there to WordStar. (This won't hurt anything, but you'll lose a little time.)

To get back to this point in your check, you would press S at the "opening" menu, and enter the name of the file you're checking and press RETURN. Then press C at the Operations Menu.

Changing the work drive is very simple.

1. Press W.
2. Type B. (This time you don't have to press RETURN.)

Now the controls for your sample spelling check should look like this:

```
            SPELLING CHECK CONTROLS             CURRENT VALUE

    D    - Use another main dictionary =        A:SPELSTAR.DCT
    S    - Add supplemental dictionary =
    F    - Change file to be checked =          A:SAMPLE .TXT
    W    - Change work drive =                             B:

  <Return>   — Start spelling check
     X       — Exit to Operations Menu
```

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If your screen looks different, use what you've learned to change the controls so that they match these.

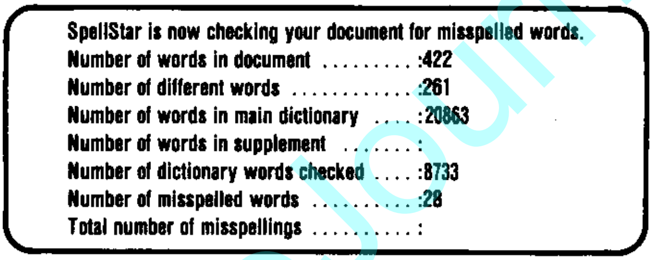
Running a Sample Spelling Check

Now, if you want, you're ready to run the spelling check on SAMPLE.TXT.

On the other hand, you could change your mind. If you decided you would rather do dictionary maintenance or go back to WordStar, you'd simply press "X" and find yourself back at SpellStar's Operations Menu. If you decide to abandon the spelling check here, on SAMPLE.TXT or any other file, you won't hurt anything. When you return to this point, it will look just as you left it, as long as you haven't exited to WordStar before returning.

We do want to perform a spelling check, though, so let's go.

1. Press RETURN.
2. Watch the screen display change to reflect what SpellStar's finding in SAMPLE.TXT.



```
SpellStar is now checking your document for misspelled words.
Number of words in document ......... :422
Number of different words ............ :261
Number of words in main dictionary .... :20863
Number of words in supplement ....... :
Number of dictionary words checked .... :8733
Number of misspelled words .......... :28
Total number of misspellings .......... :
```

The first thing SpellStar does is count the total number of words in your document; the total appears on the first line of the screen display.

Then it tells you how many of those words are "different"; after you throw out the duplicates, how many unique words are left? That total appears on the second line.

This calculation is useful if, for instance, you are writing something technical for non-technical people. A proportionately high number of different words indicates too much jargon.

In the third and fourth lines of the on-screen summary, SpellStar tells you how many words are in the main and supplemental dictionaries you specified for this check.

The changing number on the fifth line, "Number of dictionary words checked," lets you know how far SpellStar has gotten with your spelling check.

After SpellStar counts the words in your document, it sorts them by length and alphabetically and compares them to the words in the dictionary, which is organized the same way. As it compares, it tells you how many dictionary words it has gone through, by thousands.

By seeing how long SpellStar takes to get through a thousand words, you'll know approximately how long it will take to check your entire document. The more words in your document, the longer it takes to check. You can go do something else while the machine checks a long document, and come back when it's finished.

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Next, SpellStar tells you how many different words are misspelled. A "misspelled" word is any word that doesn't match up with a word in the dictionary or dictionaries you've specified. So SpellStar flags misspellings, typos, and all other words not in the dictionary or dictionaries.

SpellStar won't fill in the last line, "Total number of misspellings," until later.

When SpellStar has finished its check of SAMPLE.TXT, it pauses to let you decide what to do next.

At this point, SpellStar has not yet actually flagged the errors within the text of SAMPLE.TXT. Before you tell SpellStar to do that, you can elect to see listed on the screen all the misspellings, typos, and words unmatched in the dictionary; or you can leave the spelling check at this point without affecting your file.

SpellStar shows you the choices below the on-screen summary:

```
SpellStar has completed proofreading your document.
        Enter "L" to list the misspelled words.
        Enter <Return> to flag errors in your text.
        Enter "R" to abandon the check and restart.
```

Let's list the misspelled words.

1. Press L.
2. Your screen should look like this:

```
AA CH WS SAN ATTN DISCO TOM'S TYPOS WIT'S WRKNG BILOXI CALVIN DISCOS
RAFAEL SURVAY KEYTOPS MAUREEN HOTSTUFF JUMPSUIT ONSCREEN PROGRAMM
HICCUPING WHISKEY'S WORDSTAR'S FREEWHEELING CORESPONDENCE INTERNATOINAL
INSUBODRINATION


Enter <Return> to flag errors, "R" to restart.
```

You can see the kinds of words that aren't in SpellStar's dictionary: abbreviations (AA, ATTN); slang (DISCO); proper names (RAFAEL, MAUREEN); variations on root words ("hiccup" is in the dictionary, but HICCUPING isn't). And, most important — misspelled and mis-typed words (WRKNG, INTERNATOINAL).

You don't see state names or most plurals from SAMPLE.TXT on the list because SpellStar's dictionary includes names of all the states in the U.S. and the plurals of most common nouns.

(Remember that at this point SpellStar has not yet flagged these words in your document; once you're using SpellStar in your day-to-day work, if you saw words on this list you thought were in your dictionary [either main or supplemental], you could go back and check whether you'd used the right dictionary. To do this, you'd press "R" to go back to the Operations Menu, then "C" to look at your controls. You could change the dictionary or dictionaries in use, if necessary, and re-do the spelling check. As usual, you wouldn't hurt your document file if you left it now.)

Now that you've seen the errors listed, tell SpellStar to go ahead and flag those errors in the text of SAMPLE.TXT.

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1. Press RETURN.
2. Now see that SpellStar removes the word list, fills in a number on the last line in the checking summary, "Total number of misspellings," and shows you a new prompt at the bottom of the screen.

```
SpellStar has flagged the misspellings in the text.

Enter < Return > to correct errors in text. "R" to restart.
```

In SAMPLE.TXT 28 different words are misspelled, and when SpellStar adds up all the occurrences of these words, it finds 35 total misspellings.

You have two choices now: to proceed with correcting the errors in SAMPLE.TXT, or to exit with "R" from the spelling check and go back to SpellStar's Operations Menu.

Correcting Errors in the Text File

You want to go ahead with correcting errors in SAMPLE.TXT, so

1. Press RETURN.
2. Watch SAMPLE.TXT appear on the screen, with SpellStar's menu of correction commands above it.

The cursor is flashing at the first flagged error, the name "Calvin" in the return address, indicating that it's either misspelled or not in SpellStar's dictionary.

Notice that other words in the text are flagged with "@." When the cursor lands on a flagged word, the flag disappears and the word may be either highlighted or dimmed, depending on the kind of terminal you have.

If you worked for Freewheeling Enterprises, you might have a supplementary dictionary with the names and addresses of company employees. If you used that dictionary to check the letter, then SpellStar wouldn't flag Calvin P. Hotstuff and his address. Let's create such a supplemental dictionary, and add Calvin's name and address to it.

Setting Aside Words to Add to a Dictionary

1. Press S for "Add to supplemental dictionary." When the prompt Add to Supplement: CALVIN (Y/N)? appears, press Y.
2. Now the cursor moves onto the next "misspelled" word— "Hotstuff." Press S to add it to the supplement. Press Y in response to the prompt.
3. Press S at the next two words "Freewheeling" and "Biloxi," also. Press Y in response to the prompts.

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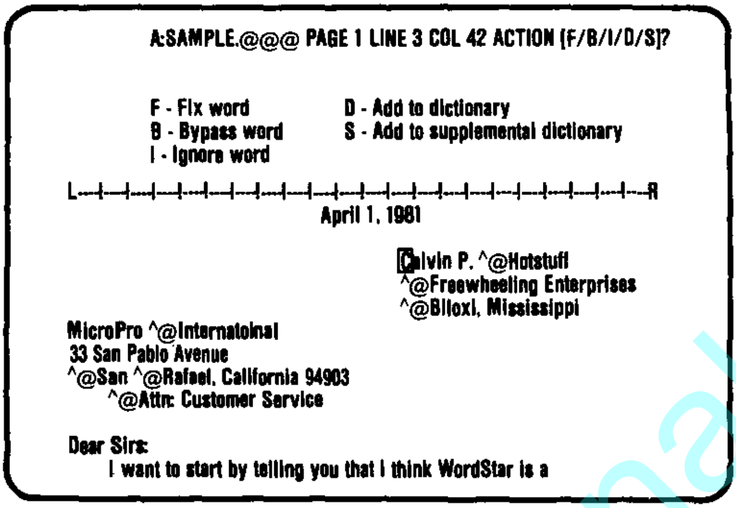

```
A:SAMPLE.@@@ PAGE 1 LINE 3 COL 42 ACTION (F/B/I/D/S)?

F - Fix word          D - Add to dictionary
B - Bypass word       S - Add to supplemental dictionary
I - Ignore word
L---!---!---!---!---!---!---!---!---!---!---!---!---!---!---!---!---!---!---!---!---!---!---R
                      April 1, 1981

                                        Calvin P. ^@Hotstuff
                                        ^@Freewheeling Enterprises
                                        ^@Biloxi, Mississippi
MicroPro ^@Internatoinal
33 San Pablo Avenue
^@San ^@Rafael, California 94903
   ^@Attn: Customer Service

Dear Sirs:
   I want to start by telling you that I think WordStar is a
```

Now you come to the first truly misspelled word, "Internatoinal". To correct the spelling . . .

1. Press F for "Fix word."
2. Now you are in WordStar's edit mode. All the WordStar commands are available to you to correct the misspelled word and to change anything else in the document you want. WordStar's main help menu appears at the top of the screen.

   Change "Internatoinal" to "International."

Now, if you didn't know the correct spelling of "International", you would have to look it up in your dictionary. SpellStar can't tell you the correct spelling of a word.

Let's continue:

1. In order to get out of WordStar's edit mode and move the cursor to the next flagged word, "San", press CTRL L (^L).

   Whenever you do a "Fix word", follow it with CTRL L (^L).
2. "San" is next. We don't want to put this word in our main dictionary or our supplement, so we'll tell SpellStar just to ignore this word and go on to the next one. Press I for "Ignore word."
3. The cursor goes to "Rafael." Press I, for "Ignore word."
4. "Attn" is next. This may be a word you want to put in the dictionary, if you use it a lot. Right now, let's tell SpellStar to bypass this word, and we can come back to it later to make a decision. Press B for "Bypass word."
5. "Programm": Press F for "Fix word" and correct spelling to "program." Press CTRL B (^B) to rejustify the paragraph. Then press CTRL L (^L) to go on to the next flagged word.
6. Notice that SpellStar stops in the middle of the word "hard-wrkng." SpellStar takes compound words like this and treats them like two separate words. Press F for "Fix Word" and change "wrkng" to "working." Press CTRL L (^L).

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7. "Programm": Press F for "Fix Word" and correct. You corrected this word when it appeared in the letter the first time, but SpellStar doesn't remember the correct spelling for you, so you must do it again. Press CTRL B (^B) to reformat the paragraph. Press CTRL L (^L).

Notice that the next word the cursor jumps to is "disco." Look at the paragraph above. The word "survay" in the last line is flagged, but SpellStar skipped it, because reformatting the paragraph took the cursor past this word. CTRL L always takes you to the next flagged word forward from the cursor.

Don't worry about correcting "survay." We'll get back to it later. Let's go on.

1. "Disco": Press D for "Add to dictionary." Press Y when Y/N prompt appears.
2. Press D at the next two words, "jumpsuit" and "discos." Press Y when Y/N prompt appears.
3. Press I at the next two words, "Maureen" and "Whiskey's," and watch the screen carefully as you do.

Observe that the cursor stops briefly at the word "Disco" in "Whiskey's Disco City," removes the flag, then moves on to the next flagged word. That's because you already told SpellStar to add "disco" to the dictionary the first time it appeared. SpellStar can remember "ignore" or "add" instructions for approximately 15 words at a time.

SpellStar did, however, stop at "discos," even though you'd already told it to add "disco" to the main dictionary. It treats plurals and other variations of words as separate words.

The cursor should now be at the word "typos." Let's add this word to our main dictionary.

1. Press D. Press Y in response to the prompt.
2. The next word, "corespondence," is hyphenated with a WordStar soft hyphen. SpellStar ignores soft hyphens, joining the two parts of the word into one. Press F for "Fix word" and correct the spelling to "correspondence." Press CTRL B (^B) to reformat the paragraph. Press CTRL B (^B) two more times in response to the hyphenation prompt. Press CTRL L (^L).
3. Press I for "Ignore word" at the next six flagged words: "keytops," "hiccuping," "Tom's," "wit's," "WordStar's," and "onscreen." Two of these words ("wit's," "WordStar's") are possessive forms of words already in the dictionary. SpellStar treats them as different words.
4. "Insubodrination": Press F for "Fix word" and correct spelling to "insubordination." You don't need to reformat, since you haven't changed the number of characters in the line. Press CTRL L (^L).
5. Press I for "Ignore word" until you are at the end of the letter.
6. When the message "Spelling Check Completed *** Press ESCAPE key" appears, press ESCAPE.

You see on the screen the end of SAMPLE.TXT. SpellStar is waiting for you to "save" the edited file with CTRL KD (^KD).

But first—remember the word you bypassed and the word SpellStar skipped over when you reformatted a paragraph? You'll go back and take care of them now. It's always a good idea to go back over your document a second time to make sure you've caught everything, so

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1. Press CTRL QL (^Q^L).
2. When the prompt RETURN = search forward. B = search backward. appears. press B.
3. The cursor will land at "survay." Press F for "Fix word" and correct the spelling to "survey." Press CTRL L (êL) to find any other flagged words.
4. The cursor now goes to "ATTN", the word we told SpellStar to bypass. Press D to add it to your dictionary, and press Y when the Y/N prompt appears.

You are now back at WordStar's opening menu.

5. When the prompt "Spelling Check Completed *** Press ESCAPE key" appears, press ESCAPE.
6. Now press CTRL KD (^K^D) to save the file SAMPLE.TXT.

SAMPLE.TXT now contains the corrected version of Calvin Hotstuff's letter. The back-up file, SAMPLE.BAK, contains the letter as it was before you corrected it.

Print a copy of SAMPLE.TXT, so you can see for yourself that all the errors have been fixed.

1. Check to see that your printer is on, and ready to begin printing.
2. Press P, to print a file.
3. In response to the prompt NAME OF FILE TO PRINT? type SAMPLE.TXT.
4. Press ESCAPE to begin printing.

If you want to use the SAMPLE.TXT letter to practice this lesson again, do the following:

1. Press Y, to delete a file.
2. Respond to the prompt NAME OF FILE TO DELETE? by typing SAMPLE.TXT. Press RETURN.
3. Press E, to rename a file.
4. Respond to the prompt NAME OF FILE TO RENAME? by typing SAMPLE.BAK, and press RETURN.
5. Respond to the prompt NEW NAME? by typing SAMPLE.TXT.
6. Press Y, to delete a file.
7. Respond to the prompt NAME OF FILE TO DELETE? by typing SAMPLE.ADD, and press RETURN.

SAMPLE.ADD is the file created by SpellStar for the words you decided to add to a dictionary or ignore. If you didn't delete it, you would have trouble practicing this lesson again.

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NOTES

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Lesson 20

Dictionary maintenance

(SpellStar option only)

Now you will learn to update dictionaries and to create new dictionaries with SpellStar. You will use a file that SpellStar created containing the words from SAMPLE.TXT that you decided to add to the dictionary, during Lesson 19.

What Is Dictionary Maintenance?

In Lesson 19, when you made corrections to SAMPLE.TXT, you asked SpellStar to add several words to the main dictionary or to a supplemental dictionary. SpellStar put all those words into a file it made up and called SAMPLE.ADD. (After your spelling check on SAMPLE.TXT, you probably saw SAMPLE.ADD on your file directory.)

Dictionary maintenance in SpellStar is actually a two-step process. First a word file is created, by you or SpellStar.

The word file may contain words for updating, adding to, or deleting from) a dictionary; or it may contain words to create an entirely new dictionary. Most of the time the word file will be the ".ADD" file that SpellStar creates during a spelling check.

You can also create a brand new word file in the edit mode of WordStar, simply by making a list of words. Or, you could decide you want all the words in a certain document to be in the dictionary, and make that document the word file.

You can also buy a disk containing a main dictionary or a specialized dictionary and use that as your word file.

However the word file is created, it must go through the second step of the dictionary maintenance process to actually be integrated with existing dictionaries or to be organized in the proper format for SpellStar to use.

Now you'll practice several kinds of dictionary maintenance. We'll start with adding words to the main dictionary.

Dictionary Maintenance Controls

1. Put a blank disk in drive B:.
2. Go to WordStar's "Opening" menu and press S to get SpellStar.
3. When the prompt NAME OF FILE TO CHECK / ADD TO DICTIONARY? appears, type A:SAMPLE.ADD.

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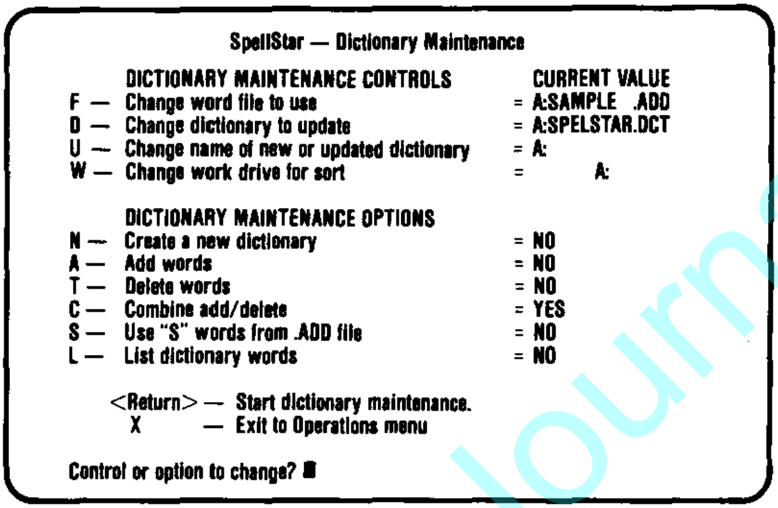
4. When the SpellStar Operations Menu appears, press M for "Maintain dictionary."
5. Take a look at the Dictionary Maintenance Controls Menu.



```
                    SpellStar — Dictionary Maintenance

          DICTIONARY MAINTENANCE CONTROLS              CURRENT VALUE
     F — Change word file to use                     = A:SAMPLE  .ADD
     D — Change dictionary to update                 = A:SPELSTAR.DCT
     U — Change name of new or updated dictionary    = A:
     W — Change work drive for sort                  =         A:

          DICTIONARY MAINTENANCE OPTIONS
     N — Create a new dictionary                     = NO
     A — Add words                                   = NO
     T — Delete words                                = NO
     C — Combine add/delete                          = YES
     S — Use "S" words from .ADD file                = NO
     L — List dictionary words                       = NO

          <Return> — Start dictionary maintenance.
           X       — Exit to Operations menu

     Control or option to change? ■
```

As in the spelling check step of SpellStar, if you like the way the current values are set up, you can go right to the Maintenance Options.

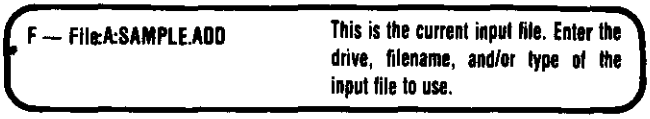
In this practice session, however, we'll make some adjustments to the controls. These tell SpellStar exactly which file contains the words to use, which dictionary to apply those words to, whether you want the resulting dictionary to be renamed, and where SpellStar should put its temporary sorting files.

The techniques you'll use to change the dictionary controls are the same ones you used for the spelling check controls.

You can change the drive, filename, or extension separately or in combination just by typing in new information over what's already there. Use the '#' key to blank out any portion of the control. Use the space bar to cancel the entire control; and press RETURN alone to leave the control unchanged.

First, take a look at "word file to use."

1. Press F.
2. Read the prompt at the bottom of the screen.



```
F — File:A:SAMPLE.ADD          This is the current input file. Enter the
                               drive, filename, and/or type of the
                               input file to use.
```

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Since the current value is already SAMPLE.ADD, press RETURN to leave it unchanged. Go on to the next control.

The "dictionary to update" can be either a main or supplemental dictionary that you want to add words to or delete words from. (If you were creating an entirely new dictionary, you'd leave this value blank.)

1. Press D.
2. Read the prompt at the bottom of the screen.

```
D — Dictionary A:SPELSTAR.DCT          Dictionary to update (add/delete words).
                                       Enter the drive, filename, and/or type of
                                       different dictionary.
```

When SpellStar first shows you the controls, it will show SPELSTAR.DCT on the logged disk drive as the default value for this control. It happens to be the dictionary we want with the correct drive location, so we'll leave it alone. Press RETURN to leave the value unchanged.

The "new or updated dictionary" is the one SpellStar creates during this maintenance run. It will be either a completely new dictionary or an old one with words added or deleted. If you wanted to update an existing dictionary, without changing its name or location, then you'd leave this control blank. (If you were sure that the disk with the "dictionary to update" had enough extra space to accept the temporary dictionary file that SpellStar creates during updating. More about this in the next page's Note.) The result would be one updated dictionary on the logged disk drive.

If you wanted to update a dictionary and put its updated version on a different drive, then you'd enter the new drive letter, including the colon following. SpellStar would save the old dictionary where it was and put the updated one where you told it to. The result would be two dictionaries on different drives, each with the same name.

You could also give an updated dictionary a new name, with SpellStar, saving the old one, simply by entering the new name with the "new or updated dictionary" control.

Note

Whenever you do an updating maintenance run, make sure you have extra disk space equivalent to the size of your original dictionary. SpellStar needs this space for either a temporary dictionary file or for the dictionary you've specified with U, for "new or updated dictionary". You can find out how much space you have by running a status check from WordStar's opening menu. If you'd reached this point in dictionary maintenance without checking your disk space, you could hit "X" to go to SpellStar's Operations Menu, then hit a second "X" there to go to the "opening" menu. As usual, you wouldn't hurt your file or your dictionaries if you chose to exit at this point.

For this practice run, you do not need to check disk space, since you will be putting your updated dictionary on the blank disk in your B: drive, as a guarantee you'll have enough disk space.

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Now you'll tell SpellStar to rename the updated dictionary and put it on the B: drive.

1. Press U, for "Change name of new or updated dictionary."
2. Read the prompt at the bottom of the screen.

U — New dict. A:	**This is the new or updated dictionary. Enter the drive, filename, and/or type of different dictionary.**

3. Type B:SPELSTAR.NEW, and press RETURN. (If you make a mistake here, or in typing any other value, backspace over it with the "backspace" key or CTRL H (^H) and type over it.)

Now for "Change work drive for sort." Just as in the spelling check step, SpellStar uses temporary files to sort the words in your word file. With the "change work drive for sort" control, you can decide where you want those files to go. They will disappear when the maintenance run is over, but you must have space for them while SpellStar is using them. Combined, they are roughly equivalent to the size of your word file.

Note

Once again, in order to know which of your disks has enough space to accept the temporary sorting files, you would have to run a status check from WordStar's "opening" menu.

You will not need to check disk space for this practice run, since you will be using the blank disk in B: for a work disk.

For this practice run, the work drive should be B:

1. Press W.
2. Check the prompt at the bottom of the screen.

W — Work drive A:	**This is drive to receive temporary sort files created by SpellStar. Enter the letter code for the drive to be used.**

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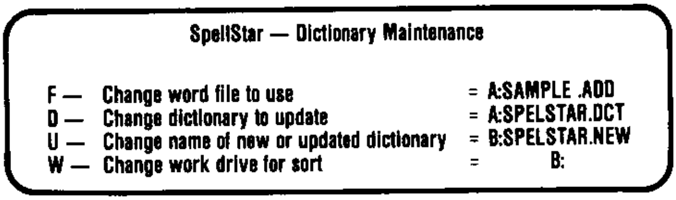
3. Type B to change the work drive. You do not need to press RETURN.

The current values for the controls on this dictionary maintenance run should look like this:

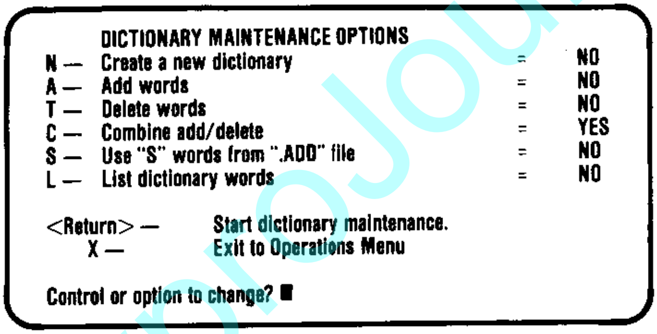


```
                SpellStar — Dictionary Maintenance

F —  Change word file to use                    = A:SAMPLE .ADD
D —  Change dictionary to update                = A:SPELSTAR.DCT
U —  Change name of new or updated dictionary   = B:SPELSTAR.NEW
W —  Change work drive for sort                 =        B:
```

Dictionary Maintenance Options

Now you'll go on to check that SpellStar is ready to perform the maintenance operation you want. The next section of this menu lists all the actions to choose from.



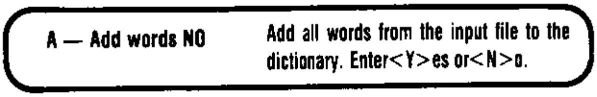
```
      DICTIONARY MAINTENANCE OPTIONS
N —   Create a new dictionary                =     NO
A —   Add words                              =     NO
T —   Delete words                           =     NO
C —   Combine add/delete                     =     YES
S —   Use "S" words from ".ADD" file         =     NO
L —   List dictionary words                  =     NO

<Return> —       Start dictionary maintenance.
      X —        Exit to Operations Menu

Control or option to change? ■
```

In this run we are going to add words to the main dictionary, so leave the value for "create a new dictionary" as NO, and go on to Option A.

1. Press A for "Add words."
2. Read the prompt at the bottom of the screen.



```
A — Add words NO        Add all words from the input file to the
                        dictionary. Enter<Y>es or<N>o.
```

3. Press Y for "yes."

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Notice on the Options menu that when you do this, the "YES" next to "Combine add/delete" becomes "NO". SpellStar starts out with a default value of "YES" for the "Combine add/delete" operation, but when you choose to do something else it automatically switches to "No."

Bypass T for "Delete words," thus leaving its value as "NO".

And bypass C for "Combine add/delete," leaving its value as "NO."

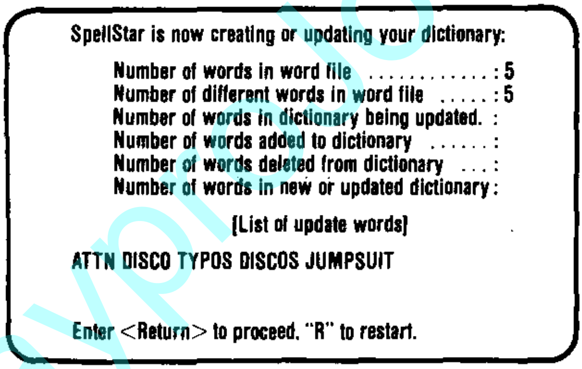
Bypass S for "Use "S" words from ".ADD" file," too; for this step, we want SpellStar only to add the "D" words from SAMPLE.ADD to the main dictionary.

SpellStar selects only the right ones—those "marked" with a "D" during corrections to SAMPLE.TXT - even though the SAMPLE.ADD file now contains words that you specified for both a main and a supplemental dictionary.

Your last action is to tell SpellStar to list the words it found in SAMPLE.ADD to add to the main dictionary, while it's updating your dictionary. It will also list the words in the updated dictionary. Let's see how that works.

1. Press L for "List dictionary words." Read the message at the bottom of the screen.
2. Press Y, in response to the Y/N prompt.
3. Everything is ready to go. So press RETURN.

Here's what you should see on the screen:



```
SpellStar is now creating or updating your dictionary:

      Number of words in word file .............: 5
      Number of different words in word file .....: 5
      Number of words in dictionary being updated. :
      Number of words added to dictionary ......:
      Number of words deleted from dictionary ...:
      Number of words in new or updated dictionary:

                      [List of update words]

ATTN DISCO TYPOS DISCOS JUMPSUIT


Enter <Return> to proceed. "R" to restart.
```

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First, SpellStar counts the "D" words in your file; then on the second line it tells you how many of those are different words. (Often those two numbers will be the same, but when you use a document for a word file, or add the same words more than once, there will be duplicate words, and the numbers will be different.)

SpellStar will fill in the other numbers later.

Below the summary, SpellStar lists the words it will add to the dictionary.

(Once you're using SpellStar regularly, you'll find this listing of words to be a handy double-check. When SpellStar shows you the list, you can make sure these are really the words you want added to the dictionary. If they are not, you can press R for "restart", which will take you back to the SpellStar Operations Menu. From there, you can go to the Maintenance Controls menu and choose another word file.)

You do want to add these words, so

1. Press RETURN, to proceed with dictionary maintenance.
2. Watch the numbers appear in the remaining lines of the on-screen summary.

Now SpellStar will begin to list, by screenful, the words that will be in your dictionary after it's updated by this run. SpellStar stops updating for as long as you want to look at this list. When you're ready, you can go on to the next screenful of words, or you can make the list scroll continuously. You can also stop listing words entirely and SpellStar will go on updating.

The message line under the listing shows you the commands to see the next screenful, to make it scroll continuously, or to stop it.

1. Press SPACE BAR, and look at the next list of words.
2. Press C to make the list scroll continuously.
3. Press CTRL L (^L) to stop the list.

Now SpellStar goes ahead with the update. Notice that the updating goes faster when the listing is stopped. If at any point you want to begin listing words again, just press CTRL L (^L) again and it will pick up wherever SpellStar is in the dictionary.

(Notice that the words in the dictionary are arranged alphabetically by length of word. So if you are looking for a word in your dictionary, count the letters and look for it among words of that length.)

The numbers flashing by in the third and sixth lines of your on-screen summary tell you how many dictionary words SpellStar has gone through in its updating process, and how many words it has added or deleted.

When SpellStar has finished adding words to the dictionary, it will show you this message below the summary:

```
SpellStar has completed the dictionary maintenance.
Enter RETURN to return to WordStar, "R" to restart.
```

You can exit to WordStar's "opening" menu by pressing RETURN, or go to the Operations Menu with "R" if you want to do another spelling check or maintenance procedure.

In this case, you press "R" to go back to SpellStar's Operations Menu, since you're going to practice another maintenance run.

Remember that SAMPLE.ADD still contains words that you decided, during the spelling check of SAMPLE.TXT, you wanted to add to a supplemental dictionary containing names of employees of Calvin Hotstuff's company.

Of course, you knew at that time that such a dictionary didn't exist. Now you'll create a new supplemental dictionary called EMPLOYEE.SUP, using the words you "marked" with an "S" in SAMPLE.TXT.

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Creating and Updating a Supplemental Dictionary

First, we'll go back to the Dictionary Maintenance Controls and Options setup.

1. Press M, for "Maintain dictionary," on the Operations Menu.
2. Study the current values on the Dictionary Maintenance Controls menu. The word file to use is still SAMPLE.ADD, since you used that last time. That's what you want, so go right past it, without doing anything to the F control.

You don't need a dictionary to update for this operation, so

1. Press D, for "Change dictionary to update."
2. Press SPACE BAR and RETURN to erase name of dictionary to update.

Caution: Any dictionary named here will be erased during this maintenance run.

Now put in the name of the new dictionary.

1. Press U, for "Change name of new or updated dictionary." You'll see B:SPELSTAR.NEW as the current value.
2. Type A:EMPLOYEE.SUP. Press RETURN. (Remember - you can use your backspace key to erase if you make a mistake while entering a new control value.)

For W, "Change work drive for sort," you can leave the current value as is.

Now you want to set up the Dictionary Maintenance Options.

1. Press N for "Create a new dictionary."
2. Press Y in response to the Y/N prompt.

The current value for A, "Add words," is already YES, from your last operation. If it had been NO, your selection of N, for "Create a new dictionary," would have changed it automatically to YES.

Make sure the current values for the T and C options are NO.

Tell SpellStar to use words you marked in SAMPLE.TXT as ones to be added to a supplemental dictionary.

1. Press S, for "Use 'S' words from .ADD file."
2. Press Y, in response to Y/N prompt at bottom of screen.

You won't list dictionary words this time, so

1. Press L, for "List dictionary words."
2. Press N in response to the Y/N prompt.

Your Controls and Options should look like this:

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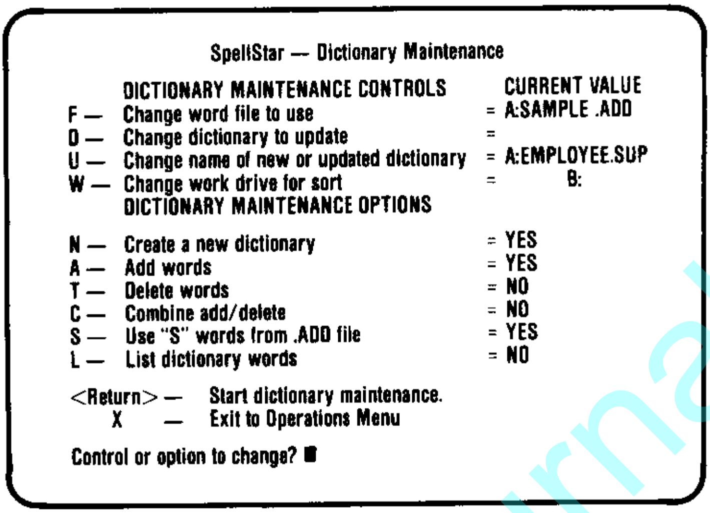

```
                 SpellStar — Dictionary Maintenance

         DICTIONARY MAINTENANCE CONTROLS          CURRENT VALUE
  F — Change word file to use                  = A:SAMPLE .ADD
  D — Change dictionary to update              =
  U — Change name of new or updated dictionary = A:EMPLOYEE.SUP
  W — Change work drive for sort               =        B:
         DICTIONARY MAINTENANCE OPTIONS

  N — Create a new dictionary                  = YES
  A — Add words                                = YES
  T — Delete words                             = NO
  C — Combine add/delete                       = NO
  S — Use "S" words from .ADD file             = YES
  L — List dictionary words                    = NO

  <Return> — Start dictionary maintenance.
      X    — Exit to Operations Menu

  Control or option to change? ▮
```

Press RETURN to begin the operation.

Now SpellStar is creating a supplemental dictionary for you. Read on while it does that.

If you already had a supplemental dictionary for employee's names and you were adding to it from your .ADD file, you would have named EMPLOYEE.SUP as the dictionary to update, leaving the "new or updated dictionary" control blank. You would have selected A for "Add words" and S for "Use 'S' words from '.ADD' file" as the maintenance options.

Deleting Words from a Dictionary

You're not going to practice deleting words in this lesson: this section will simply describe how you delete words from any dictionary when you want to.

First open a file with WordStar's D command ("Open a document file") and put into it all the words you wish to delete, in any order. You can use .DEL as this file's extension if you like. SpellStar doesn't require delete files to be named any special way, but it may help you recognize that file more quickly.

When you've saved that word file with ^KD, you'll be at WordStar's "opening" menu again. Select "S"; when the NAME OF FILE prompt appears, enter the name of the word file you just created. Select M at SpellStar's Operations menu; on the Dictionary Maintenance menu, select T, "Delete words", as the maintenance option. (Naturally, you'd name the dictionary from which the words would be deleted as the "dictionary to update".)

Combined Add/Delete Maintenance

You'll practice one more dictionary maintenance operation before ending this lesson: the "Combine add/delete" step. This can be a real timesaver, letting you do two maintenance operations in one step.

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In your last exercise, you created a new supplemental dictionary. Now that SpellStar has finished that, you should see the following message at the bottom of your screen:

```
SpellStar has completed the dictionary maintenance.
Enter Return to return to WordStar. "R" to restart.
```

In other practice steps, you've pressed R to go to Spellstar's Operations menu, but you won't do that this time. Even though you're going to do another maintenance operation, you will need a file to work with, and you'll create that with WordStar.

1. Press RETURN to go to WordStar's "Opening" menu.
2. On the "Opening" menu, press D to "open a document file."
3. When the prompt NAME OF FILE TO EDIT? appears, type Words, and press RETURN.
4. When the main help menu appears, type these words in a list (don't worry about format or spacing):

   fattest
   peachy
   bunnies
   cub
   hobo
   annul
5. When you've entered all the words press CTRL KD (^K^D) to save the file.
6. When the "Opening" menu appears, press S, for "Run SpellStar."
7. When the prompt NAME OF FILE TO CHECK / ADD TO DICTIONARY? appears, type Words, and press RETURN.
8. When SpellStar's Operations Menu appears, press M, for "Maintain dictionary," then press RETURN.
9. When the Dictionary Maintenance menu appears, the current values of the controls and options should look like this:

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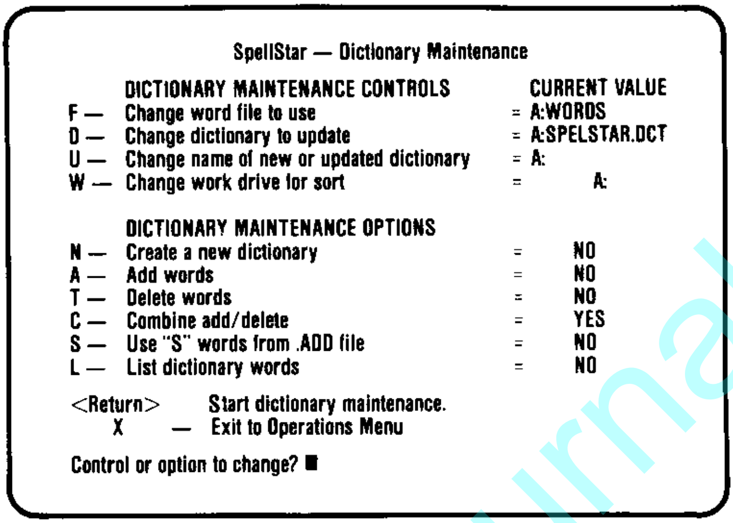

```
                 SpellStar — Dictionary Maintenance
      DICTIONARY MAINTENANCE CONTROLS                     CURRENT VALUE
F —   Change word file to use                           = A:WORDS
D —   Change dictionary to update                       = A:SPELSTAR.DCT
U —   Change name of new or updated dictionary          = A:
W —   Change work drive for sort                        =      A:

      DICTIONARY MAINTENANCE OPTIONS
N —   Create a new dictionary                           =    NO
A —   Add words                                         =    NO
T —   Delete words                                      =    NO
C —   Combine add/delete                                =    YES
S —   Use "S" words from .ADD file                      =    NO
L —   List dictionary words                             =    NO

<Return>        Start dictionary maintenance.
   X       —    Exit to Operations Menu

Control or option to change? ■
```

Note

What appears above is SpellStar's default condition for dictionary maintenance. That is, each time you come into SpellStar from WordStar, you will see these default controls: the word file you named at the "opening" menu, SPELSTAR.DCT on the logged disk drive as ". . . dictionary to update" and the logged disk drive as ". . . new or updated dictionary" and ". . . work drive." Similarly, in the options, the only YES value will be for C, "Combine add/delete." These defaults will not recur during successive SpellStar operations without exits to WordStar; in those cases, current values will show information entered for the preceding operation.

You're going to use B:SPELSTAR.NEW, the dictionary you created when you added words earlier in this lesson, so

1. Press D, for "Change dictionary to update."
2. Type B:SPELSTAR.NEW, and press RETURN.

Now change the disk drive for the updated dictionary to B:.

1. Press U for "Change name of new or updated dictionary."
2. Type B: and press RETURN.

Before you leave the controls, change the work drive value.

1. Press W for "Change work drive for sort."
2. Type B in response to the prompt.

You don't need to make any changes to the Options, since the value for C, "Combine add/delete," is already YES, and all others are NO. This is just what you want.

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Now press RETURN to begin the combined add/delete maintenance run on your WORDS file.

What SpellStar is doing is comparing all words in the WORDS file to SPELSTAR.NEW. In one step, it's adding words from WORDS that aren't already in the dictionary, and deleting from the dictionary any words already listed there.

While SpellStar is doing this, you'll see on the screen the familiar six-line summary. Above that, at the top of the screen, you will see a prompt for several words, one at a time, in the WORDS file that looks like this:

```
[HOBO]
This word is in the dictionary. Should it be deleted? (Y/N)
```

1. Press N for No.
2. Press N the next two times the message appears, for "hobo" and "annul."

SpellStar shows you this to tell you that the word in the first line is already in the dictionary; it asks you to confirm that you want the duplicate deleted. In other words, SpellStar asks you to double-check all words that it thinks should be deleted.

In this practice run on the WORDS file, you should enter N in response to all the double-check prompts SpellStar shows you.

Notice that SpellStar is adding the words in the WORDS file that weren't in the dictionary. By the time this maintenance run is finished, the line "Number of words added to dictionary" should say 5.

When the maintenance run is over, SpellStar gives you the usual message.

1. Respond to the prompt "Enter Return to return to WordStar, "R" to restart" by pressing RETURN.
2. When the "Opening" menu appears, press Y for "Delete a file."
3. When the prompt NAME OF FILE TO DELETE? appears, type SAMPLE.ADD, and press RETURN.

Since you have added the words in SAMPLE.ADD to both your main and supplemental dictionaries, you have no further use for this file. It is good to delete it so that it doesn't take up disk space unnecessarily.

The only time you would want to keep a .ADD file would be if you planned to make an addition to the document file to which it corresponds. Then, when you rechecked the file for spelling errors, SpellStar would remember all the Ignore commands it has stored in the .ADD file. So, SpellStar would pass over the words you previously told it to ignore when it checked the file for the second time.

Now you'll erase SPELSTAR.NEW and EMPLOYEE.SUP, since you may want to run this lesson again.

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1. Press Y, for "Delete a file."
2. When the prompt NAME OF FILE TO DELETE? appears, type B:SPELSTAR.NEW, and press RETURN.

Now do the same thing for EMPLOYEE.SUP.

1. Press Y, for "Delete a file."
2. When the prompt NAME OF FILE TO DELETE? appears, type A:EMPLOYEE.SUP, and press RETURN.

Remember, in normal maintenance, when you update a dictionary, you keep the new one and delete the old one. You've done just the opposite here—so that you can repeat this lesson if you wish.

End of the Extended Course

This concludes the Extended Course. By now you have become acquainted with every major WordStar feature. Here is a brief summary of what you have learned:

Lesson 13. You learned how to set conditional and unconditional page breaks for documents longer than one page.

Lesson 14. You learned how to add page headings and footings to a document to be printed, as well as how to print selected pages, pause for paper changes, and suspend a print job.

Lesson 15. You learned how to type the matrix and the data file for a form letter, with names and addresses inserted from the data file.

Lesson 16. You learned how to address envelopes, print mailing labels, format your data file, and how to combine several printing jobs into one.

Lesson 17. You learned how to type the matrix and several nested files for a letter of reply.

Lesson 18. You learned how to print a number of files in succession from a single command file (chain-printing) and how to print multiple copies of a document.

Lesson 19. You learned how to check a document for misspellings, correct errors, and set aside words to add to a dictionary.

Lesson 20. You learned how to run all SpellStar's dictionary maintenance operations—adding words, deleting words, combining add/delete, and creating a new dictionary.

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You have created the following files:

PRACTICE (Lesson 2)
LETTER (Lesson 3)
CONTROL (Lesson 6)
DISPLAY (Lesson 7)
TABLES (Lesson 8)
SPECIAL (Lessons 9)
X (Lesson 12)
Z (Lesson 12)
Y (Lesson 12)
DATASTAR (Lesson 13)
MAILING3 (Lesson 15)
LIST3.DAT (Lesson 15)
ENVELOP3 (Lesson 16)
LABEL3 (Lesson 16)
FORMAT3 (Lesson 16)
COMBINE3 (Lesson 16)
REPLY (Lesson 17)
HEADING (Lesson 17)
RADIO (Lesson 17)
TV (Lesson 17)
STEREO (Lesson 17)
GUIDE1 (Lesson 18)
GUIDE2 (Lesson 18)
GUIDE3 (Lesson 18)
PRINT01 (Lesson 18)
PRINT02 (Lesson 18)
WORDS (Lesson 20)

If you plan to repeat any of these lessons or you have no further use for these files, you may want to delete them now.

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Conclusion

Asking for Less Help

In Lesson 2 we talked about help levels, and recommended that you stay with level 3 until you finished this guide. If you feel that you are now ready to use WordStar with less help (and more screen space to work in), you can change the help level:

1. When the "Opening" menu appears, press H to request to set the help level.
2. When the prompt ENTER Space OR NEW HELP LEVEL (0, 1, 2, OR 3): appears, type 0, 1, or 2.

Turning WordStar Features Off

During the course of using this guide, you have always had all Wordstar features available to you. You may never want to turn any of them off. But if the need should ever arise, there are commands to shut off these WordStar features (also turn them back on again):

Maintaining Your Disk Files

Until now, you have not created a large number of files on your disk. But after you've done quite a bit of typing, you will have a lot of files and you will have to think about maintaining them and avoiding overflow on your disk. Your operating system provides you with a number of utility programs (some also in WordStar) that can help you in maintaining your disk files:

- displaying a listing of the disk directory
- displaying the amount of space left on the disk
- making a copy of an entire disk
- copying, renaming, or deleting a file
- printing screen displays on your printer

These programs can help you keep track of your disk files, make backup copies of them, and avoid filling up your disk. Refer to the publication that describes your operating system.

Word wrap (^O^W)
Justification (^O^J)
Variable tabbing (^O^V)
Ruler line display (^O^T)
Page break display (^O^P)
Print control display (^O^D)
Hyphen help (^O^H)
Temporary hyphen entry (^O^E)
File directory display (F or ^K^F)

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Finding Out More

You have now completed the WordStar training course. We have tried to cover every topic you will need to start working right away. (If we missed anything, please let us know.) At the end of this course, you should know all the major functions of WordStar. However, there are other things you can do with WordStar that haven't been mentioned in this booklet:

- Using another deletion key (delete character left)
- Setting your own ruler line
- Inserting a permanent hyphen
- Printing one line over another
- Changing margins or tabs in mid-paragraph
- Setting extra wide margins up to 240 columns
- Sophisticated searching techniques for Find and Replace
- Additional printing features:
  —changing ribbon color
  —selecting alternate character pitch
  —setting other print functions
  —setting fine adjustments for printing
  —selecting other printing options
- Additional MailMerge features:
  —changing diskettes
  —controlling print-time reformatting

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WordStar®

REFERENCE MANUAL

For Release 3.3

Copyright 1983
MicroPro International Corporation
33 San Pablo Avenue
San Rafael, California 94903 USA

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Introduction

Installing WordStar is easy. With this manual and the installation program, which you received on your distribution disk, you can install WordStar on almost any terminal and printer in minutes. Also, experienced WordStar users have the additional option of customizing WordStar by using the installation program's advanced features.

To install WordStar, you simply reply to a series of questions presented on your screen. Onscreen directions guide you to each next step, and this manual, organized to correspond with the progression of the program, provides additional information. The installation program helps you to create a WordStar program file tailored to your equipment (your computer, terminal, and printer) and your needs. Proper installation ensures top performance from WordStar.

MANUAL ORGANIZATION

This manual is divided into six chapters with two appendices:

- **Chapter 1, Basic Installation**, contains a brief description of the installation program's structure and basic installation instructions. The simple procedures outlined here are sufficient for most terminals and printers.

- **Chapter 2, Custom Terminal Installation**, and **Chapter 3, Custom Printer Installation**, explain the installation of terminals or printers not included on the menus. You'll find descriptions of each terminal and printer feature used by WordStar. If your equipment is not listed, you'll have to provide the WordStar program with additional information.

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- **Chapter 4, Protocols and Drivers,** discusses WordStar's requirements for communicating with your printer. This information should be particularly helpful for beginners.

- **Chapter 5, WordStar Features,** explains how you can tailor the WordStar program to your particular requirements. Once you are familiar with WordStar, you may want to change normal operations. For example, using the custom installation procedures described in this chapter, you can instruct WordStar to number pages only at your request.

- **Chapter 6, Testing Installation,** explains how to make sure you've installed WordStar properly.

- **Appendix A, ASCII Conversion Chart,** shows the conversion of ASCII codes to decimal and hexadecimal values.

- **Appendix B, Installation Quick Guide,** summarizes the WordStar installation procedure.

Everyone should begin with basic installation procedures in Chapter 1. If your system requires custom installation, you'll be instructed to proceed to the more advanced steps.

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RE-RUNNING INSTALLATION LATER

You may want to run the installation program again later. If you were to acquire a new printer or terminal, for example, or if you simply wanted to change a few standard features, you would use this manual to re-install the WordStar program.

ADDITIONAL INFORMATION

Use the following resources to answer some of your questions:

- Appendix A in this manual will help you convert values into three formats: ASCII, decimal, and hexadecimal.

- The glossary at the back of the WordStar Reference Manual will help you understand unfamiliar terms.
- Appendix A, "Program Specifications," in the reference manual will answer your questions about hardware and software requirements.
- Your terminal, printer, and computer manuals and your dealer will supply the specific information about your hardware requested by the installation program.

The following symbols are used in this manual:

RETURN KEY

REMEMBER

KEEP IN MIND

CAUTION

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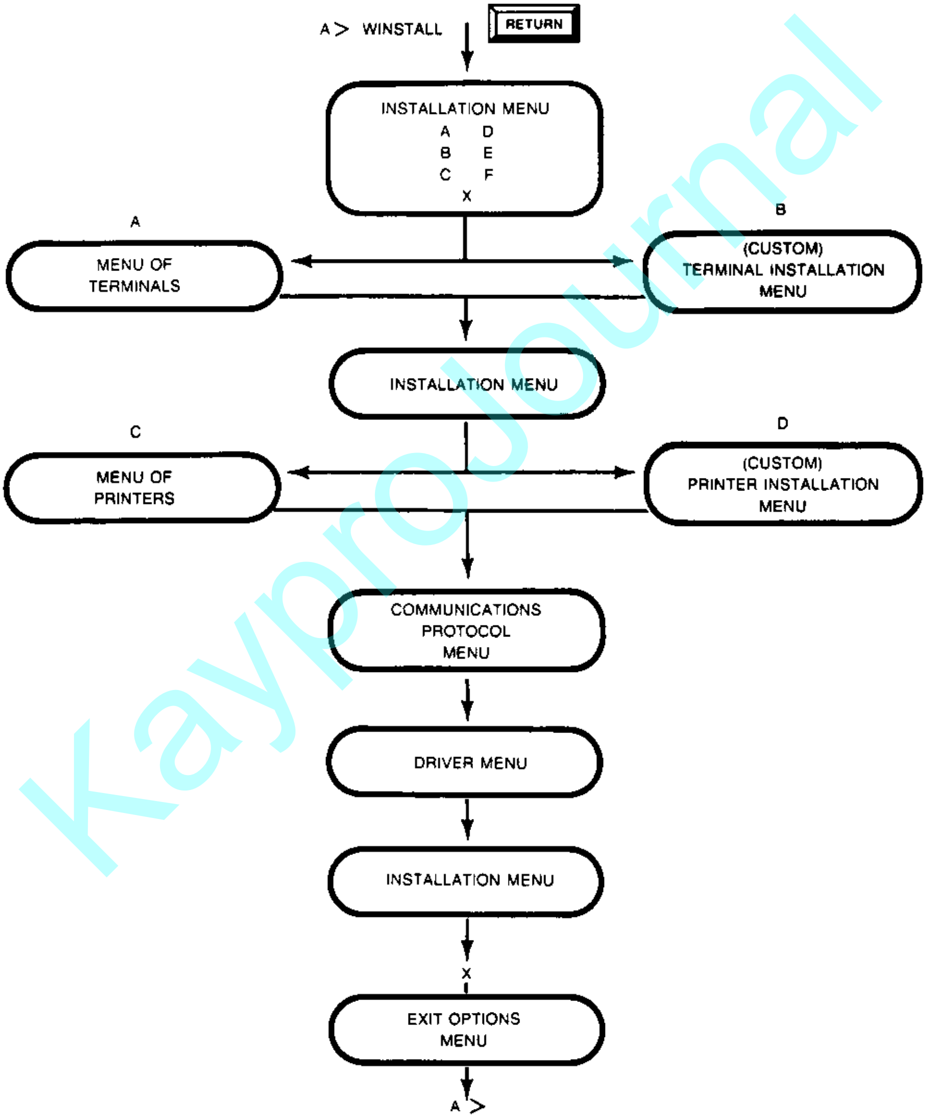
1. Basic Installation

STRUCTURE OF THE PROGRAM

You'll work from a series of menus making selections and responding to prompts. Your path through the program will depend on the type of hardware you are using. The following is a map of the menus you'll see as you install WordStar for the first time:



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WHAT YOU'LL NEED TO KNOW

Before you begin your WordStar installation, it's a good idea to gather the information you'll need. Ask your dealer or consult your terminal, printer, and computer manuals for the following information. Write it down for reference.

Terminal name: ______________________________

Printer name: ______________________________

Communications Protocol (if necessary):

____

Printer Driver: ______________________________

COPYING WORDSTAR

Before you run the installation program for the first time, you'll need to copy your WordStar Distribution disk. Your distribution disk contains the following WordStar program files and auxiliary files:

- WSU.COM
- WINSTALL.COM
- WS.INS
- PRINT.TST
- WSOVLY1.OVR
- WSMSGS.OVR

NOTE: IBM and other 16-bit computer systems use files with slightly different names. See the addendum to the reference manual for a list of files.

The instructions included here are general; refer to your system documentation for specific commands. If you have already copied the disk, go on to the next section, "Installation Procedures."

STEP 1 Turn on your computer.

STEP 2 Boot your system.

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STEP 3 Place your WordStar Distribution disk in drive A.

STEP 4 Place a formatted disk in drive B.

STEP 5 At your system prompt, type instructions to copy the files from the distribution disk in drive A to the disk in drive B.

You now have a copy of the WordStar Distribution Disk in drive B. If you purchased other MicroPro software for use with WordStar—SpellStar or MailMerge—follow the same steps to copy them as well. Once you have placed the original program disks in a safe place, you're ready to run the installation program.

NOTE: You can create a WordStar system disk, that is, a disk that includes the WordStar program *and* your operating system. This disk will enable you to boot the system and enter WordStar directly. Refer to your system documentation for specific instructions.

INSTALLATION PROCEDURES

Place the copy of the WordStar distribution disk in the logged disk drive and make sure the operating system prompt is on the screen.

STEP 1 TYPE **WINSTALL** RETURN

SEE copyright information

STEP 2 PRESS any key

SEE **Would you like to continue?**

STEP 3 RETURN or TYPE **Y** or **N**

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If you choose to leave the installation program at this point, no changes will be made to the file.

NOTE: If at some point an error message appears, follow the instructions on your screen to correct the problem.

SEE **Which MicroPro product would you like to install?**

STEP 4 TYPE **WS** RETURN

CAUTION

Be sure to enter the correct code for WordStar. Typing the wrong code will produce an error message.

NOTE: You can bypass steps 2-4 by typing WINSTALL and the product code on the same line. At the operating system prompt,

TYPE **WINSTALL WS** RETURN

TYPE any key

SEE an information screen

Be sure to read all onscreen information and instructions as you proceed through the installation program.

STEP 5 PRESS any key

PROGRAM EXIT

You can leave the installation program at any point by pressing ^C.

SEE disk drive name request

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If some of your WordStar installation files (WSU.COM, for example) are located on another disk drive, enter the disk drive name here. If all files are located on the logged disk drive, press RETURN.

SEE **Name of file to install or RETURN or WSU.COM**

At this screen, you first provide the name of the file to be installed or modified and then the name for the newly installed file. WSU.COM is the Uninstalled version of WordStar. WS.COM is the installed version you'll use to run WordStar.

STEP 6 RETURN

SEE **File to install is : WSU.COM**

NOTE: If you are re-installing WordStar you'll find slight differences between the onscreen text and descriptions in the manual. From this point on in the program, simply follow the instructions on the screen, using the manual as a reference; the steps will be the same.

SEE **Enter name of file for installed WordStar, or RETURN for WS.COM.**

STEP 7 RETURN

SEE doublecheck message

STEP 8 RETURN or TYPE **Y** if all information is accurate; otherwise TYPE N. If you type N, you'll return to the information screen.

SEE **INSTALL is copying the file *filename*. PLEASE WAIT.**

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Throughout the program, you'll be asked to confirm your responses. This safeguard lets you check your work and correct errors. If you type **N** (No), you will return to an earlier prompt where you can make necessary changes.

SEE **INSTALLATION MENU**

INSTALLATION MENU

From this main menu, you will make the necessary selections to install WordStar for your computer system. You'll return to the main menu each time you complete a selection. Each menu item is briefly described here:

- **A, Menu of Terminals.** From this menu, which lists most terminals, you will select the terminal you are using.
- **B, Custom Installation of Terminals.** If your terminal isn't listed on the Menu of Terminals, you'll choose this option to provide WordStar with the information it needs.
- **C, Menu of Printers.** From this menu, you'll select the printer you are using.
- **D, Custom Installation of Printers.** If your printer isn't listed on the Menu of Printers, you'll choose this option to provide WordStar with the information it needs.

CAUTION

- **E, Menu of WordStar Features.** By making selections from this menu, you can modify certain WordStar features. Wait until you have completed the training guide and have become familiar with the way WordStar works before you make changes.
- **F, Operating System Considerations.** If you have a multi-user operating system, MP/M, you'll select this option along with the others needed for installation.

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- **X, Exit from INSTALL.** This option lets you review your selections, make more changes if you like, and then return to the operating system. Only when you choose **X** are changes made to the installed WordStar file.

MULTI-USER SYSTEMS

If your operating system is MP/M, take step 9; if not, bypass this step:

STEP 9 TYPE **F**

SEE **Is this to be installed on an MP/M system?**
Currently . . .NO (it is not).

TYPE **C**

SEE **NOW . . .YES (it is).**

Choose this option only if your system is multi-user. The default setting is single-user.

SELECTING A TERMINAL

Your CRT must have a display area of at least 16 lines by 64 columns. The maximum display area depends on the amount of RAM available in your computer. The upper limit is about 57 lines by 120 columns.

WordStar can use the following features to enhance the performance of your terminal:

- Erase to end of line
- Line insert
- Line delete
- Either inverse video or bright/dim highlighting

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Responding to Prompts

Some commands cause a prompt to appear on the screen. You may, for example, be asked to name a file, to answer yes or no to a question, or to enter a number. The following guidelines apply when you respond to a prompt:

- Use either upper or lowercase letters.
- Type simply the first letter of yes or no; type **Y** or **N**.
- After your response (except Y or N), press the carriage return key RETURN
- If you have made an error, press ^U immediately to interrupt the current command. ↪ *1-14*
- Use special editing characters to simplify entering a file name. ↪ *1-14*

Toggle Switches

Some commands turn a feature off or on. These features are called toggle switches. Margin release, for example, is a WordStar toggle switch.

↪ *6-9*

STARTING WORK IN WORDSTAR

HOW TO ENTER WORDSTAR

Once you've installed WordStar, you're ready to go to work. After booting the system, you'll see your system prompt on the screen, usually a symbol, such as this one:

```
A>
```

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STEP 14 TYPE **C**

SEE **Printer is currently : no printer yet selected**

SEE **STANDARD PRINTER TYPES**

SELECTING A PRINTER

WordStar works with most printers on the market and can be installed to use most printer features, though some require special procedures (see Chapter 4 of this manual).

If your printer is capable of backspacing or carriage returns without line feed, you can use the following WordStar printing features:

- underlining
- boldface (multi-strike method)
- doublestriking
- overstriking

If you have a specialty printer, that is, a printer capable of incremental motion, you can use these WordStar printing features:

- microspace justification
- variable line height
- variable character pitch
- subscripts
- superscripts
- boldface (offset and restrike method)

The Standard Printer Types menus list several printers. Almost any printer can be installed by selecting **Standard printer**. If your printer can also backspace, select **Backspacing standard printer**. However, if you have a daisy-wheel or other specialty printer and you want to use all the print features available with WordStar, you must select your exact printer name from this menu.

Check the glossary in the WordStar Reference Manual to better understand unfamiliar terms.

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SPECIALTY PRINTER CAPABILITIES

Specialty printers (and those which are mechanically and functionally similar) are capable of backspacing, bidirectional printing, and spacing vertically and horizontally in increments smaller than one line or one character width. Specialty printers are sometimes called letter-quality printers.

If your printer name isn't listed, you can select **D** on the Installation Menu and perform a custom printer installation. Instructions are given in Chapter 3, "Custom Printer Installation."

Some printers have switches which must be properly set for WordStar operation. In Chapter 3, "Custom Printer Installation," you'll find information about setting these switches.

STEP 15 TYPE the appropriate letter

If your printer isn't listed, go on to the next menu. If you are viewing menu #1, for example, type **2** to see menu #2.

SEE **You have chosen :** your selection

SEE further information (with some selections)

STEP 16 RETURN or TYPE **Y**, if correct, **N** if you want to change your selection

SEE **Communications protocol is currently: No protocol**

SEE **COMMUNICATIONS PROTOCOL MENU**

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SETTING THE PROTOCOL

At the Communications Protocol Menu, you'll tell WordStar how to communicate with your printer. If you are unfamiliar with protocols, turn to Chapter 4, "Protocols and Drivers." You'll find an easy-to-understand explanation and more detailed instructions about how to set the communication protocol if one is required for your printer. Also, consult your printer manual to establish what protocol, if any, you need.

STEP 17 TYPE **A, B, C,** or RETURN

SEE **Communications protocol is now :** your selection

STEP 18 RETURN or TYPE **Y** or **N**

Depending on your protocol choice, you will or will not be required to give more information. If further information *is* required, see Chapter 4.

SEE **Driver is currently : No driver yet selected**

SEE **DRIVER MENU**

SETTING THE DRIVER

At the Driver Menu, you'll tell WordStar how to handle the communication between your computer and your printer. Again, refer to Chapter 4 of this manual and to your printer and computer manuals for the necessary information.

STEP 19 TYPE **A, B, C,** or RETURN

SEE **Driver is now :** your selection

SEE further information

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STEP 20 RETURN or TYPE **Y** or **N**

SEE further information

If further information is required at this point, see Chapter 4.

SEE **INSTALLATION MENU**

LEAVING THE INSTALLATION PROGRAM

The last steps give you the opportunity to recheck your work and to reenter the installation program if you want to make a change.

STEP 21 TYPE **X**

SEE **These are your current values.**
Exit options menu

STEP 22 TYPE **A, B,** or **C**

Choose **A** to save your modifications and return to the operating system. Choose **B** to leave the installation program without saving the changes you've made. Choose **C** to remain in the installation program and return to the INSTALLATION MENU.

TESTING YOUR INSTALLATION

Your installation is complete. You may want to run a test to verify that WordStar is properly installed. In Chapter 6, "Testing Installation," you'll find instructions for checking all aspects of the installation.

SAVING DISK SPACE

You may want to remove the installation program files from your disk to save space. To re-install any features later, you'll need to restore the files from your distribution disk copy.

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2. Custom Terminal Installation

Custom Installation of Terminals is selection **B** on the Installation Menu. If you have already checked selection **A, Menu of Terminals,** and have not found the name of your terminal listed, you'll need to do a custom installation to give WordStar information about the codes your terminal sends and receives. This information should be available in your terminal manual.

Check with your dealer before you begin a custom installation. If your terminal is similar to one listed on the Menu, you may be able to select that terminal for your installation.

WHAT YOU'LL NEED TO KNOW

Before you begin your terminal installation, it's a good idea to gather the information you'll need. Each item is listed in the "Features" section of this chapter. Using your terminal and computer manuals, locate the necessary information and write it down for reference in the space provided.

If this is the first installation of your terminal,

SEE	**INSTALLATION MENU**
TYPE	**B**
SEE	**TERMINAL INSTALLATION MENU**
TYPE	**A**
SEE	**Automatic installation of all features**

If you have already installed WordStar and you are returning to the program to modify a particular feature, select only that feature from the menu.

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THE PROMPTS

As you respond to the prompts, you'll see each feature's current (default) values displayed. To change a value, type **C**. If the value is correct, continue to the next feature by pressing RETURN. To complete the installation of some features, you'll have to enter more than two values. If you have chosen **A, Automatic installation,** not all the current values will be displayed at once. You must type **C** to view or change each value. After each response, you'll have the opportunity to confirm your answer before you go on to the next prompt.

The first time you install your terminal you should respond to every prompt because WordStar needs this information.

CHANGING A VALUE

To change some values, you must enter information in one of three formats — decimal, hexadecimal, or ASCII. (See the ASCII Conversion Chart in Appendix A.) When you type **C**, to change a value, you'll see a screen describing these formats and explaining how to change from one to another. You'll also see instructions about how to leave a value as is and how to end the sequence. Just above the values at the bottom of the screen is a statement telling you the maximum number of entries stored by that feature. Here is the screen:

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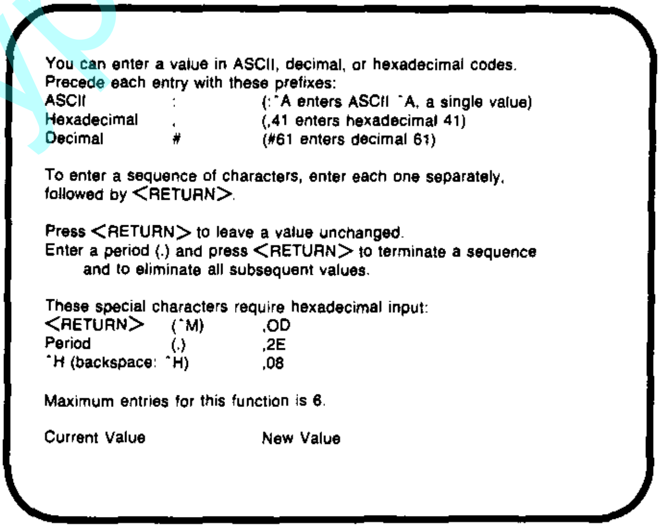

```
You can enter a value in ASCII, decimal, or hexadecimal codes.
Precede each entry with these prefixes:
ASCII           :            (:^A enters ASCII ^A, a single value)
Hexadecimal     ,            (,41 enters hexadecimal 41)
Decimal         #            (#61 enters decimal 61)

To enter a sequence of characters, enter each one separately,
followed by <RETURN>.

Press <RETURN> to leave a value unchanged.
Enter a period (.) and press <RETURN> to terminate a sequence
     and to eliminate all subsequent values.

These special characters require hexadecimal input:
<RETURN>      (^M)           ,OD
Period        (.)            ,2E
^H (backspace: ^H)           ,08

Maximum entries for this function is 6.

Current Value                New Value
```

A value typed in ASCII may include the control key. For example, if you press the control key and **A** together, **^A** will be entered as a single value. To enter a series of characters, such as **^Q^Q^C**, type **^Q** RETURN **^Q** RETURN **^C** RETURN.

FEATURES

TERMINAL NAME

B

Name: ____________

Select **B** to give WordStar a name for your terminal. Although your response doesn't affect the program, it does affect all messages that give the name of the terminal for which WordStar is installed.

SCREEN SIZE

C

Lines: ____________

Columns: ____________

Select **C** to provide the number of horizontal lines and vertical columns available on your terminal screen. (Defaults: *24 lines, 80 columns*)

CURSOR POSITIONING

D

To enable WordStar to position the cursor accurately on the screen, you must supply the following (if required by your terminal):

Code: ____________

- The character, or characters, that indicate the cursor is about to be moved

Code: ____________

- The characters sent between the coordinates of the move

Code: ____________

- The characters sent following a move

Code: ____________

- The characters representing line 1 and column 1

Code: ____________

- The code type representing line and column numbers: ASCII or BINARY

Code: ____________

- The order in which the column number and line number are sent

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E

Code: ______________

TERMINAL START-UP

Select **E** if your terminal requires that a sequence of codes be sent in preparation for WordStar. Examples are given on the screen.

F

Code: ______________

TERMINAL EXIT

Select **F** if your terminal also requires that a sequence of codes be sent to leave the terminal set as it was before you started WordStar.

G

Code: ______________

HIGHLIGHTING

Select **G** if your terminal has highlighting capabilities and requires a code sequence to turn highlighting on and off. (You will need to supply the codes for both on and off.)

H

Code: ______________

ERASE TO END OF LINE

Select **H** to provide the code for the feature that erases all characters from the cursor position to the end of the line. If this feature is not available on your terminal, WordStar will use another method to perform the same function.

I

Code: ______________

DELETE LINE

Select **I** to provide the code sequence for the delete line feature, which erases the line containing the cursor and moves the lines below up one line. If this feature is not available on your terminal, WordStar will use another method to perform the same function.

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J

Code: ______________

INSERT LINE

Select **J** to provide the code sequence for the insert line feature. This feature places a blank line at the cursor line and pushes the text down one line on the screen. Check your terminal manual; if your terminal inserts the blank line *below* the cursor, you'll have to precede the insertion code with a code sequence to move the cursor up a line. If the insert line feature is not available on your terminal, WordStar will use another method to perform the function.

K

Code: ______________

HANDLING OF LAST CHARACTER ON SCREEN

Select **K** and type **Y** at the prompt if your terminal scrolls up a line when it encounters a character at the bottom right of the screen. If your terminal doesn't use this convention, type **N**, and WordStar will use another method to cause the scrolling.

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3. Custom Printer Installation

Custom Installation of Printers is selection **D** on the Installation Menu. If you have already checked selection **C, Menu of Printers**, and have not found your printer on the list, you'll need to perform a custom installation to take advantage of all the capabilities of your printer. WordStar needs specific information, which you'll find in your printer manual. If you need more help, ask your dealer.

You'll be installing either a standard or specialty printer. Be sure your printer has all the capabilities outlined in Chapter 1 before you install it as a specialty printer.

WHAT YOU'LL NEED TO KNOW

Before you begin your printer installation, it's a good idea to gather the information you'll need. Each item is listed in the "Features" section of this chapter. Using your printer and computer manuals, locate the necessary information and write it down for reference in the space provided.

PRINTER SWITCHES

Some printers have switches that must be properly set for WordStar to control printing operations. The switches may be located on an external control panel, on a control panel under the printer cover, or on internal circuit boards. If your printer has any of the following options switches, they should be set as recommended:

- **AUTO CR** (CR = carriage return)
  Turn this switch off.

- **AUTO LF** (LF = line feed)
  Turn this switch off.

- **FORM LENGTH**
  If you are using WordStar's **Use form feeds** print option, set this switch to match the length of the paper you are using.

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- **LOCAL LF**
  Same as AUTO LF above. Turn off.

- **PARITY**
  Check your printer manual or check with your dealer for the correct setting for this switch.

- **SET TOF**
  If you're using WordStar's **Use form feeds** print option, press this switch after positioning your paper at the top of the form or at the perforation.

- **SPEED OR BAUD**
  Set this switch to match the speed at which your computer transmits characters.

In addition, some printers have a switch that must be set to activate a communication protocol when required. (See Chapter 4 for more information.) Check your printer manual to see if your printer has such a switch.

THE PROMPTS

As you respond to the prompts, you'll see each feature's current (default) values displayed. To change a value, type **C**. If the value is correct, continue to the next feature by pressing RETURN. To complete the installation of some features, you'll have to enter more than two values. If you have chosen **A** or **B**, **Automatic installation**, these features will not display all the current values at once. You must type **C** to view or change each value. After each response, you'll have the opportunity to confirm your answer before you go on to the next prompt.

The first time you install your printer you should respond to every prompt. WordStar needs all the information requested.

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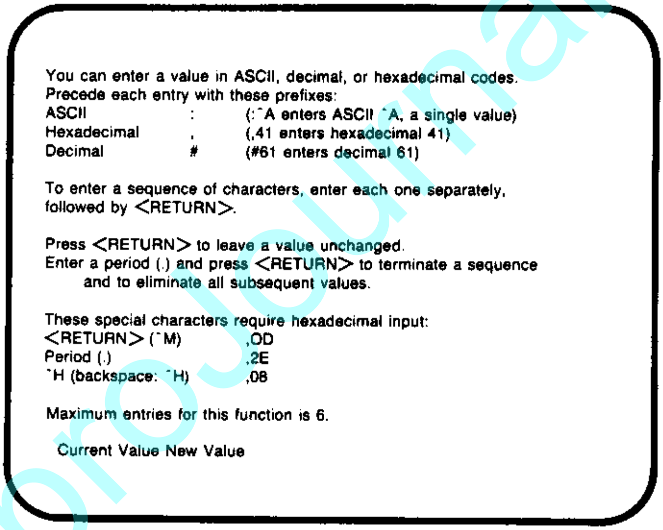
CHANGING A VALUE

To change some values, you must enter information in one of three formats — decimal, hexadecimal, or ASCII. (See the ASCII Conversion Chart in Appendix A.) When you type **C** to change a value, you'll see a screen describing how to enter a value. You'll also see instructions about how to leave a value as is and how to end the sequence. At the bottom of the screen is a statement telling you the maximum number of entries that can be stored at that feature. Here is the screen:



```
You can enter a value in ASCII, decimal, or hexadecimal codes.
Precede each entry with these prefixes:
ASCII              :       (:^A enters ASCII ^A, a single value)
Hexadecimal        ,       (,41 enters hexadecimal 41)
Decimal            #       (#61 enters decimal 61)

To enter a sequence of characters, enter each one separately,
followed by <RETURN>.

Press <RETURN> to leave a value unchanged.
Enter a period (.) and press <RETURN> to terminate a sequence
    and to eliminate all subsequent values.

These special characters require hexadecimal input:
<RETURN> (^M)          ,OD
Period (.)             ,2E
^H (backspace: ^H)     ,08

Maximum entries for this function is 6.

 Current Value New Value
```

A value typed in ASCII may include the control key. For example, if you press the control key and **A** together, **^A** will be entered as a single value. To enter a series of characters, such as **^Q^Q^C**, type **^Q** RETURN **^Q** RETURN **^C** RETURN.

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INSTALLATION

Begin at the Installation Menu:

TYPE **D**
SEE **PRINTER INSTALLATION MENU**

If you are installing your printer for the first time, choose **A**, Automatic installation for specialty printer (features C through M), or **B**, Automatic installation for standard printer (features C through H and N). Later, if you want to modify a particular feature, select the appropriate letter from the Printer Installation menu and respond to the prompts.

FEATURES

All Printers

WordStar must have information about all of the following features for all printers:

C

Name: ____________________

PRINTER NAME
Select **C** to give WordStar a name for your printer. This name, which doesn't affect the program, is used in all messages that specify the printer for which WordStar is installed.

D

Code: ____________________
Code: ____________________

INITIALIZATION
Select **D** to provide the code sequences that tell your printer to begin and end printing.

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E

Code: ____________

OVERPRINTING

Select **E** to tell WordStar how your printer backspaces. If you are installing a backspacing printer, you'll also have to know the code that tells the printer to backspace.

F

Code: ____________

BOLDFACING

Select **F** to specify how dark your boldfaced print will be. The default value is 2, the recommended value for specialty printers.

G

Protocol: ____________

PROTOCOL MENU

Select **G** to set any required protocol. Refer to Chapter 4 in this manual for detailed information about communications protocols.

H

Driver: ____________

DRIVER MENU

Select **H** to specify a printer driver. Refer to Chapter 4 in this manual for detailed information about printer drivers.

Specialty Printers Only

Install all of the following features on specialty printers to take advantage of WordStar's print features:

I

Code: ____________

RIBBON SELECTION

Select **I** to supply alternate and standard ribbon-selection code sequences if your printer is capable of two-color printing.

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J

VERTICAL MOTION

Select **J** if your printer is capable of the vertical movement necessary to produce sub- and superscript. You must supply the following values regarding the vertical motion index (VMI):

- Code sequences that tell the printer to prepare to move the platen up and down.

Code: ____________________

- Code sequences (called VMI trailer strings) that tell the printer the movement in vertical increments is complete. Very few printers require this information.

Code: ____________________

- The minimum value for VMI.

Value: ____________________

- The range of valid VMI values. If you don't know the range, subtract the minimum value from the maximum value.

Range: ____________________

- The code sequence for line feed.

Code: ____________________

- The code sequence for reverse line feed.

Code: ____________________

K

HORIZONTAL MOVEMENT

Select **K** if your printer is capable of incremental horizontal movement. You must supply the following values regarding horizontal motion index (HMI):

- Code sequences that tell the printer to prepare to move the print head left or right.

Code: ____________________

- The fraction (increment) in inches your printer moves the print head for HMI, either 1/60 or 1/120 inch.

Increment: ____________________

- The minimum value for HMI.

Value: ____________________

- The range of valid HMI values. If you don't know the range, subtract the minimum value from the maximum value.

Range: ____________________

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- The code sequence for a space forward.

Code: ____________________

- The code sequence for a backspace.

Code: ____________________

L

PRINT MODES

Select **L** to enter the codes for both forward and backward printing.

Forward
Code: ____________________
Backward
Code: ____________________

M

PHANTOM CHARACTERS

Select **M** if your print head contains two characters, nicknamed phantom space and phantom rubout,that are not represented on your keyboard. You can set two WordStar commands to represent these characters in your printed text. Check your print head for the characters and your printer manual for the code sequence representing each.

Code: ____________________
Code: ____________________

Standard Printers Only

N

RETURN/LINE FEED

Select **N** to tell WordStar whether your printer is capable of carriage returns with line feeds, with half-line feeds, or without line feeds. If your printer is capable of one or more of these returns, most WordStar features such as overstriking, overprinting, and underscoring will function. You'll need to supply the function code sequences for each of your printer's carriage returns.

LF Code: ____________________
1/2 LF Code: ________________
No LF Code: ________________

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Optional

These features are optional on all printers and depend on the special capabilities of your printer:

O

^PQ Code: ____________

^PW Code: ____________

^PE Code: ____________

^PR Code: ____________

USER-DEFINED FUNCTIONS

Select **O** to set four WordStar commands to perform actions of your choice. If your printer supplies another font, for example, you can set one of the commands to toggle the font on and off. The four commands you set are ^PQ, ^PW, ^PE, and ^PR. You'll need to provide the code sequence for each command you define.

Selections **I, Q,** and **P** are not strictly limited to ribbon selections and character pitch. Like the user-defined functions (selection **O**), these selections let you set the WordStar **^P** commands to the code sequences of your choice. You could, for example, select **I** to enter a code for double-width characters and select **Q** to enter a code for reduced-sized characters. You could also use these selections to assign the special print features of a dot matrix printer to WordStar commands.

P

Roll up

Code: ____________

Roll down

Code: ____________

CARRIAGE ROLL

Select **P** if your printer is capable of rolling the platen up and down a partial line. You'll need to enter the function code sequences for both up and down partial rolls.

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Q

Standard
Code: ______________________
Alternate
Code: ______________________

CHARACTER PITCH

Select **Q** if your printer is capable of altering the pitch (width between characters) of your printed text. You'll need to enter the function code sequences for standard character width and alternate character width.

X

EXIT

Type **X** to return to the Installation Menu.

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4. Protocols And Drivers

This chapter presents general information about protocols and drivers and then explains the options on both menus.

COMMUNICATIONS PROTOCOLS

A communications protocol is a system of codes that enables your printer and computer to talk to one another. If WordStar were to send 200 words per second from computer to printer, your printer, like a person taking dictation, would need a way of saying "Hold it! I can't transfer characters to paper that fast."

PRINTER BUFFER

Most printers have a good memory called the printer buffer. When receiving new information, your printer can use this buffer as storage space while printing information received earlier.

The size of this buffer is important. A buffer that holds only 500 words can become filled in seconds if WordStar is dictating 200 words per second. Any characters sent after the buffer is full will be lost.

Communications protocols require that the computer and printer *exchange* information or signals. The computer must be able to send information to the printer for printing, and the printer must be able to send signals back when it's ready to receive more information.

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DO YOU NEED A PROTOCOL?

You probably won't need a communications protocol if you have a specialty printer (or one with similar capabilities) that can receive information from the computer at 300 bits per second or less (that is, with a serial interface set at 300 baud or less) or a standard printer with a serial interface at 600 baud or less. However, your printer may operate so slowly that you will want to increase the baud rate. At a higher baud rate, you will need a communications protocol unless your printer is equipped with special hardware or cabling options. (See the next section on hardware protocol.) Without a communications protocol, you run the risk of losing characters before they can be printed.

HARDWARE PROTOCOL

Use a hardware protocol if one is available. A hardware protocol is a special cabling device that regulates the exchange of information between your computer and your printer. Many computer and printer manufacturers routinely supply hardware protocols with their products. Your dealer will help you select the proper protocol for your system.

To achieve a hardware protocol with certain machines (computers or printers), some rewiring may be necessary. Such hardware protocol is *still* preferred over any software protocol (see the following section). Your hardware manuals should supply the information you need. If you cannot find this information, contact your hardware dealer or manufacturer.

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SOFTWARE PROTOCOL

If a hardware protocol is unavailable, a software protocol—sometimes called "handshaking"—can be installed. Most printers are capable of using either the ETX/ACK protocol or the X-ON/X-OFF protocol. Many printers allow you to choose between the two.

Although the X-ON/X/OFF variety is generally preferred, consult your dealer or hardware manual to determine which software protocol is best to use with your printer. The WordStar program itself will handle either kind of software protocol.

Communications Protocol Menu

The Communications Protocol Menu appears after you choose **C** at the Installation Menu and then select the letter corresponding to the name of your printer (**A** - **L**) from the list of Standard Printer Types. If you are performing a custom printer installation, however, the Protocol Menu appears after you choose **D** at the Installation Menu and then **G** at the Printer Installation Menu.

A

NONE REQUIRED

Select **A** if your printer does not need a protocol or if the protocol is handled by the hardware. (See the previous section on hardware protocol.)

B

ETX/ACK PROTOCOL

Select **B** if your printer uses ETX/ACK protocol. WordStar will place a special character at the end of each information "message" it sends to the printer. This special character is known as an ETX (an acronym for **E**nd of **T**e**X**t) code and is represented by a value of 03. Once the printer has printed everything in the message up to the ETX code (a line, for example), it sends an ACK code (**ACK**nowledge) back to the computer. The ACK code (represented by a value of 06) tells the computer that the printer is ready to receive the next information message.

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CAUTION

Do not attempt to install or use code in the operating system to implement ETX/ACK protocol. If WordStar is to operate under this protocol, the protocol must be executed by WordStar.

Some specialty printers (or printers with similar capabilities) permit the use of this protocol as an alternative to X-ON/X-OFF. You should use ETX/ACK protocol when other considerations require its use—for example, when other software on your computer requires it.

When you use this protocol, WordStar must know how many characters can be "dictated" before the printer buffer becomes full. In addition, some printers may require specific procedures (such as setting a switch inside the printer) to activate ETX/ACK protocol. Check your printer manual.

After you type **B** and confirm your choice, the ETX/ACK message length prompt will appear on your screen. The number you enter must be equal to or less than half the size of the printer buffer. WordStar will keep two messages in the buffer at any given time. The default is 127 characters; this number indicates that the printer buffer can hold at least 254 characters. The maximum ETX/ACK message length is 254 characters.

CAUTION

Be sure to decrease this value if your printer has a smaller buffer. Otherwise, the messages will overlap in the buffer, and you will lose characters or print unwanted data.

Some printers have switches that make it possible to select two or more different buffer sizes. If your printer has such switches, check to make sure the switches are set to the correct buffer sizes.

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X-ON/X-OFF PROTOCOL

Select **C** for the X-ON/X-OFF protocol. When the printer is ready to receive an information message, it sends an X-ON code (transmit ON) to the computer. The X-ON code is represented by the ASCII code DC1 (which translates to a hexadecimal value 11). When it receives an information message, the printer sends an X-OFF (transmit OFF, ASCII code DC3, hexadecimal value 13) to the computer, telling it not to send any more messages before receiving the next X-ON code. This protocol is sometimes known as DC1/DC3.

X-ON/X-OFF protocol is the usual selection if you have a serial specialty printer interfaced at any rate over 300 baud. Most, but not all printers support this kink of protocol.

The ETX/ACK and X-ON/X-OFF protocols require that the computer and printer be able to *exchange* (i.e., transmit and receive) information. You must, therefore, select a printer driver which allows information to be *received from* as well as *transmitted to* the printer.

PRINTER DRIVERS

The printer driver is a program that works with the protocol to make sure that the printer and computer communicate properly. The driver tells them where to do the talking and where to do the listening. Without this information, your computer and printer couldn't "converse." They would be like people trying to carry on a phone conversation with one party speaking into the earpiece and the other listening at the mouthpiece—information could not pass between them.

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Protocols require that the computer and the printer be able to exchange (that is, transmit and receive) information. Some printer drivers make this exchange possible, whereas others permit information to be sent only from the computer to the printer. Be sure to select a driver that is compatible with the type of protocol you have installed.

Your WordStar program contains several different printer drivers. The following section, which presents descriptions of each option on the driver menu, will help you make the appropriate selection for your situation.

Driver Menu

The Driver Menu appears after you have selected your communications protocol during a standard installation. If you are performing a custom printer installation, however, the Driver Menu appears after you choose **H** at the Printer Installation Menu.

OPERATING SYSTEM PRIMARY LIST DEVICE

A

Select **A** to send characters to your printer through the printer driver in your operating system. If your selection of a protocol was **A** (No protocol required), the Operating System List Device is the usual selection.

If you select **A**, make sure that you have set up your operating system correctly, that is, that you have assigned the correct physical device (a printer) to this logical device (the list device). See your operating system manual for the appropriate commands.

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OPERATING SYSTEM SECONDARY LIST DEVICE

B

Select **B** if the primary list device in your operating system is assigned to a task other than printing your WordStar files. In some operating systems, a secondary list device is available.

The list device is usually not capable of exchanging information with the printer. That is, the list device will send information to the printer but will not listen for signals coming back. If you are using a software protocol (either ETX/ACK or X-ON/X-OFF), some adjustment will have to be made to your operating system. Ask your dealer for help with your particular system.

WORDSTAR'S PORT DRIVER

C

Select **C** to use WordStar's built-in Port Driver. This driver bypasses the operating system and exchanges information with the printer directly. If you use this driver, you will not have to adjust your operating system for two-way communication between computer and printer.

WordStar's port driver is recommended for use with a software protocol because the driver contains a test to check when the printer is busy. But to use this driver, you will need information about your computer's printer ports and the status bits at those ports.

Ports are logical places where your operating system can "plug in" to other devices. A port is not the actual plug or connector itself but has a very definite location and assigned number. Information (bits or bytes) is sent through a port on its way to another device (in this case, your printer). At the **status port** WordStar monitors the condition of the printer, that is, checks to see whether it's ready for more information.

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Status bits are special bits at the status port of your computer that change when the condition of the printer has changed.

If your printer interface involves more than one output data port, one output status port, one input data port, and one input status port, WordStar's Port Driver will not work.

After you have selected and confirmed option **C**, you will be asked a series of questions—first about the numbers of the output port and output status port, and then (unless you have chosen **no protocol)** about the numbers of the input ports and input status ports. You should be able to find in your computer manual the information necessary to answer these questions.

When you enter port numbers, use hexadecimal values. See Appendix A of this manual for a decimal/hexadecimal conversion table.

After you have entered port numbers, you will be asked which bits change at the status port. You should find this information in the section of your computer manual that provides port number information. The combination of all the bits that change must be represented as a single hexadecimal value. (If you are unfamiliar with converting binary values to hexadecimal values, ask your dealer for assistance.)

First, type the hexadecimal value that corresponds to the bits that change when the port can accept a character. For example, if the one and five bits change, enter the hexadecimal value 22 (which corresponds to the decimal value 34 or the binary value 00100010).

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After you have entered this hexadecimal value, you'll be asked for the hexadecimal value of the bits that change from off to on (from 0 to 1) when the printer is ready to accept more characters for printing. For example, if only the one bit changes, enter 2. If only the number 5 bit changes, enter 20. If both bits change, enter 22, just as you did before.

If you have chosen **no protocol**, the questions stop here. But if you are using a communications protocol, you'll be asked another series of questions similar to those just described—this time, about *input* ports and *input* status ports.

The input status port and status bits are used by WordStar to determine whether or not a character has been received by the printer. The number of the input data port is frequently, though not always, the same as that of the output data port. You will specify the input data port, input status port, and status bits in the same manner as you specified the output ports and bits.

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5. Wordstar Features

Once you're familiar with WordStar, you may want to change the way some features operate. With the installation program, you can customize the initial setting of 19 WordStar features. Your new settings become WordStar defaults. These defaults, in turn, can be altered during an editing session with a WordStar command. For example, the preset help level is 3. If you use Option A to change the level to 0, menus will not appear when you begin writing or editing, and you'll have a larger work area. Later, if you need to see a menu, you can temporarily reset the help level.

You may want to keep more than one version of WordStar (each with a different filename) on your disks. For example, a file called WS1.COM could begin WordStar in document mode and another called WS2.COM could begin the program in non-document mode. Different versions would be tailored to different tasks.

CAUTION

Be sure to complete the WordStar Training Guide before you change any feature settings. The guide was designed for use with standard settings, and you could easily become confused if you tried to complete exercises using a customized version of WordStar.

From the Installation Menu,

TYPE E

SEE **MENU OF WORDSTAR FEATURES**

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To modify a feature, type the appropriate letter and respond to the prompts on the screen. After each response, you'll have the opportunity to confirm your answer. You'll find information about each feature both on the screen and in the following discussion of menu choices. For additional information about all the features, see the WordStar Reference Manual.

FEATURES

A

INITIAL HELP LEVEL

Select **A** to set the level of onscreen help. To decide on the appropriate level of help, start WordStar and examine the screen under each level. As you become more familiar with the program, you'll find you need less and less help. You can later reset the level as needed. (Default: *3*)

B

DECIMAL POINT CHARACTER

Select **B** to set the decimal point character. This character is used for aligning columns of numbers according to the position of the decimal tab settings. (Default: *period* [.])

C

NON-DOCUMENT MODE

Select **C** to set the mode for editing a file you name on the command line as you start WordStar (e.g., WS *filename*). You may find it useful to set this feature to non-document mode when you are editing primarily data files. (Default: *document mode*)

D

INITIAL DIRECTORY DISPLAY

Select **D** to display or suppress the file directory at the Opening Menu. (Default: *on*)

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E

INITIAL INSERTION TOGGLE

Select **E** to specify the initial setting for the insertion toggle switch. With insertion off, characters will type over previously typed text, rather than move text right. (Default: *on*)

F

JUSTIFICATION TOGGLE

Select **F** to specify the initial setting for the justification toggle switch. With justification off, your text will have an uneven right margin. (Default: *on*)

G

HYPHEN HELP TOGGLE

Select **G** to specify the initial setting for the hyphen help toggle switch. With hyphen help off, WordStar will not hyphenate words during paragraph reforming but will simply move words extending beyond the margin to the next line. (Default: *on*)

H

OMIT-PAGE-NUMBERING

Select **H** to specify the initial setting of the omit-page-numbering toggle switch. If the toggle switch is off, the pages will be numbered during printing. (Default: *off*)

I

TOP MARGIN

Select **I** to specify the number of lines to be left blank at the top of the printed page. (Default: *3*)

J

BOTTOM MARGIN

Select **J** to specify the number of lines to be left blank at the bottom of the page. (Default: *8*)

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K

LEFT MARGIN

Select **K** to adjust the left margin on the screen and on the printed page. The left margin must not exceed the right margin and should be set at a number less than 240. (Default: *1*)

With the left margin set at 1, your text appears at the extreme left on your screen. When printed, however, your text will appear to the right of the space allocated for page offset (see selection **N**).

L

RIGHT MARGIN

Select **L** to adjust the right margin on the screen and on the printed page. The right margin has no theoretical limit but does have practical limits — page width and printer capacity. (Default: *65*)

M

NUMBER OF LINES PER PAGE

Select **M** to adjust the number of lines available on a page for printing WordStar documents. (Default: *66 lines, the setting for 11 inch paper*)

N

PAGE OFFSET

Select **N** to adjust the number of columns left blank at the left side of the printed page. The left margin will begin to the right of this setting. For example, a page offset of 8 and a left margin of 10 will cause printing to begin in column 18 on your paper. (Default: *8*)

O

FORM FEEDS TOGGLE

Select **O** to set the form feed toggle switch. The value you set becomes the default answer to the question, "Use form feeds?" This question appears prior to printing files with WordStar or MailMerge. When this toggle switch is on, form feeds are used; when off, line feeds are used. (Default: *form feeds off*)

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P

DATA FIELD SEPARATOR

Select **P** to specify the character to be used to separate fields in a datafile. You can choose any character. This feature applies only to the MailMerge option of WordStar. (Default: *comma* [,])

Q

VARIABLE NAME SYMBOL

Select **Q** to specify the characters to be used before and after variable names inserted into a file being merged. You can choose any character. This feature applies only to the MailMerge option of WordStar. (Default: *ampersand* [&])

R

SYSTEM DISK DRIVE

Select **R** to specify the disk drive where your .OVR files are stored. WordStar looks first for the files on your currently logged drive, which is the drive indicated by your operating system when you start a program. If your files are not found there, WordStar looks for them on the system drive.

X

EXIT

Type **X** to return to the Installation Menu.

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6. Testing Installation

This chapter contains a few, simple tests that will help you determine if your terminal and printer are correctly installed to work with WordStar.

CHECK WORDSTAR'S OPENING SCREEN

To test your installation, start WordStar running on your computer. At the system prompt,

TYPE **WS** [RETURN]

SEE Program version and serial number, copyright information, and the terminal, printer, communications protocol, and printer driver selections you made during installation

The display will remain on your screen for a few seconds (or until you press any key). Then you will see the WordStar Opening Menu.

CHECK CURSOR POSITIONING

The cursor should be positioned at the lower right of the Opening Menu. If lines run together on your screen and punctuation appears at random, the cursor positioning function codes are incorrect for your terminal. Check your terminal manual and the settings of all option switches on the terminal. Reinstall WordStar or correct your terminal settings.

TEST THE ERASE FUNCTION

With the Opening Menu on the screen, open a document file:

TYPE **D**

SEE **Name of file to edit?**

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If information from the Opening Menu remains on your screen, the erase to end-of-line function is not working correctly. Re-install your WordStar program with the correct function codes.

PRESS ESCape

CHECK HIGHLIGHTING

To check the highlighting feature, look at the Opening Menu. If highlighting is installed, the list of commands and the title <<<**OPENING MENU**>>> will appear brighter (or dimmer) than other characters on the screen or in inverse video. The type of highlighting depends on your installation.

First, check the contrast or brightness control on your terminal to be sure the screen is properly illuminated. If highlighting is not installed correctly, you'll see no contrast in brightness on the Opening Menu. Re-install the function codes correctly.

PRINT TEST

From the Opening Menu, you should be able to print a file. Make sure your printer is on and ready to print.

TYPE **P**

SEE **Name of file to print?**

TYPE **PRINT.TST**

PRESS ESCape

The PRINT.TST file should print, exhibiting many of the print features available in WordStar. If printing doesn't begin or if the features you've installed don't operate correctly, you'll need to re-install your printer.

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END THE TESTS

After the file finishes printing, the Opening Menu will return to the screen. Return to your operating system:

TYPE **X**

SEE your operating system prompt

You can now be assured that WordStar is ready to go to work. If you are new to word processing, you should go on to the WordStar Training Guide now. Otherwise, use the WordStar Reference Manual to learn the fine points of the WordStar program. Enjoy!

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Appendix A

ASCII Conversion Chart

ASCII	DECIMAL	HEXA DECIMAL	ASCII	DECIMAL	HEXA DECIMAL
!	33	21H	G	71	47H
”	34	22H	H	72	48H
#	35	23H	I	73	49H
$	36	24H	J	74	4AH
%	37	25H	K	75	4BH
&	38	26H	L	76	4CH
’	39	27H	M	77	4DH
(	40	28H	N	78	4EH
)	41	29H	O	79	4FH
*	42	2AH	P	80	50H
+	43	2BH	Q	81	51H
,	44	2CH	R	82	52H
-	45	2DH	S	83	53H
.	46	2EH	T	84	54H
/	47	2FH	U	85	55H
			V	86	56H
			W	87	57H
0	48	30H	X	88	58H
1	49	31H	Y	89	59H
2	50	32H	Z	90	5AH
3	51	33H	[	91	5BH
4	52	34H	/	92	5CH
5	53	35H	]	92	5CH
6	54	36H	^	94	5EH
7	55	37H	—	95	5FH
8	56	38H			
9	57	39H	‘	96	60H
:	58	3AH	a	97	61H
;	59	3BH	b	98	62H
	60	3CH	c	99	63H
=	61	3DH	d	100	64H
	62	3EH	e	101	65H
?	63	3FH	f	102	66H
			g	103	67H
	64	40H	h	104	68H
A	65	41H	i	105	69H
B	66	42H	j	106	6AH
C	67	43H	k	107	6BH
D	68	44H	l	108	6CH
E	69	45H	m	109	6DH
F	70	46H	n	110	6EH

- continued -

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ASCII	DECIMAL	HEXA DECIMAL	ASCII	DECIMAL	HEXA DECIMAL
o	111	6FH	w	119	77H
p	112	70H	x	120	78H
q	113	71H	y	121	79H
r	114	72H	z	122	7AH
s	115	73H		123	7BH
t	116	74H		124	7CH
u	117	75H		125	7DH
v	118	76H		126	7EH
			DEL	127	7FH

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Appendix B

Quick Guide

The steps below summarize the WordStar installation procedure. If you are installing WordStar for the first time, use the manual to help you with each step.

STEP 1 **COPY YOUR DISK**

Copy your distribution disk and store the original in a safe place.

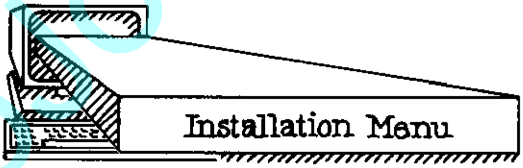
STEP 2 **BEGIN INSTALLATION PROGRAM**

To enter the installation program:

TYPE WINSTALL RETURN
and respond to the prompts.

INSTALLATION FOR MULTI-USER

SEE:



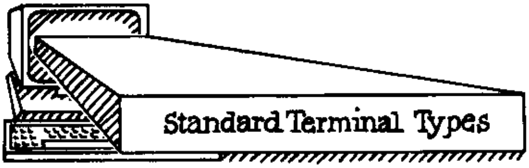
If you are installing under an MP/M operating system:

TYPE F and respond to the prompts.

STEP 3 **INSTALL YOUR TERMINAL**

TYPE A

SEE:



TYPE the letter representing your terminal

OR, if your terminal isn't on the list,

TYPE B

SEE:

TYPE A or B and respond to the prompts.

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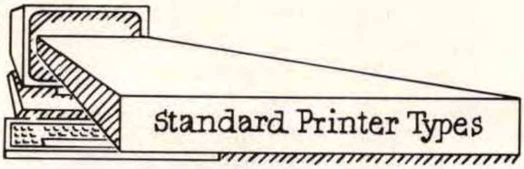
STEP 4 **INSTALL YOUR PRINTER** **SEE: INSTALLATION MENU**

TYPE C
SEE:



TYPE the letter representing your printer

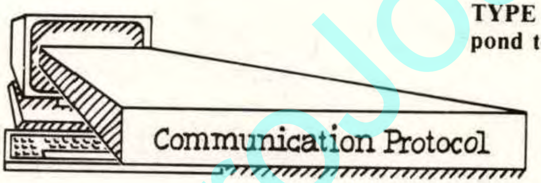
OR, if your printer isn't on the list,

TYPE D
SEE:

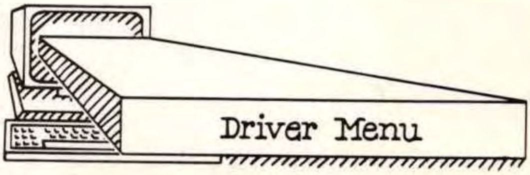
Printer Installation

TYPE A or B and respond to the prompts

SEE:



TYPE A, B, C, or RETURN **SEE:**

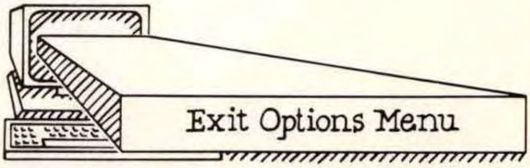


TYPE A, B, C, OR RETURN

STEP 5 **COMPLETE THE INSTALLATION** **SEE INSTALLATION MENU**

TYPE X

SEE:



TYPE A, B, or C

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