STYLOGRAPH

WORD PROCESSOR

COLOR COMPUTER VERSION

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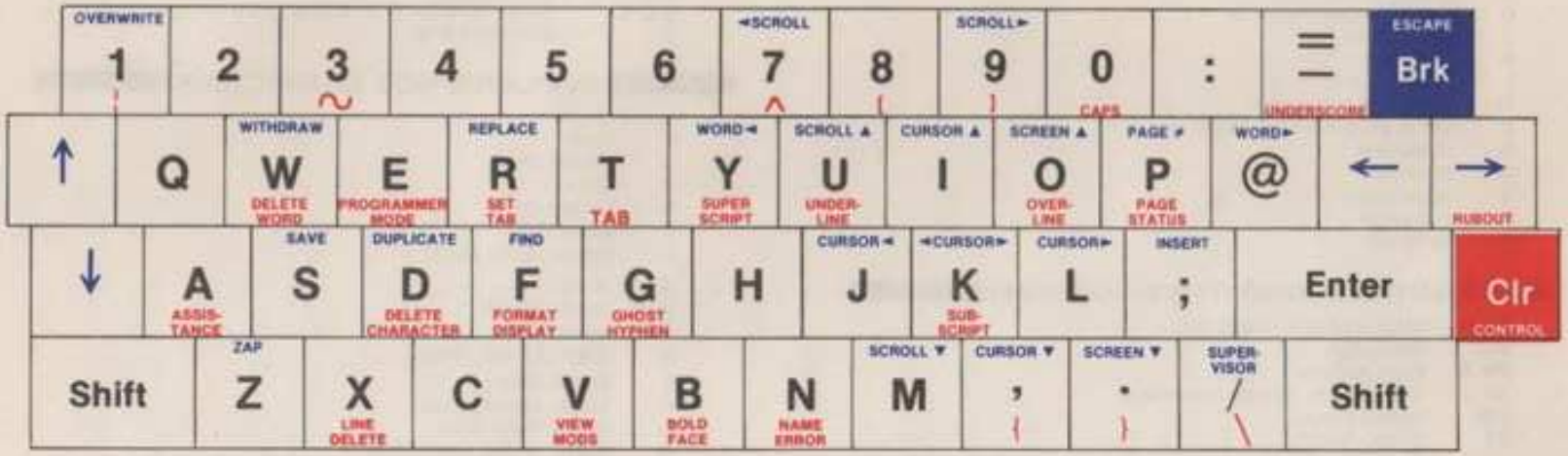
STYLOGRAPH III KEYBOARD FUNCTIONS
OS9 COLOR COMPUTER

ESCAPE (CLR BRK)

CONTROL



ESCAPE COMMANDS

Text Block Commands

S	Save text from cursor to marker
W	Withdraw saved text
D	Duplicate (without withdrawing) saved text
Z	Zap (delete) text from cursor to marker
F	Find string
R	Replace string
}}	Marker characters
A	Insert one character

Screen Commands

U	Scroll up one line
M	Scroll down one line
O	Scroll up one screen
.	Scroll down one screen
7	Scroll left
9	Scroll right
P	Go to page #

Program Modes

;	Go to insert mode
/	Go to supervisor mode
1	Go to overwrite mode
ESC	Editor mode

Cursor Commands

J	Cursor left ←
L	Cursor right →
I	Cursor up
,	Cursor down
K	Cursor left then right ← then →
Y	Cursor word left ←
@	Cursor word right →

CONTROL COMMANDS

P	Page status
N	Name the last error
V	View/hide character mods
F	Format command display
A	Upper case lock
A	Assistance
W	Delete word
D	Delete single character
X	Delete line
R	Set a tab
I	Move to tab
G	Insert ghost hyphen
E	Go to programmers mode
U	Underline
O	Overline
Y	Superscript
K	Subscript
B	Boldface

VERTICAL FORMATTING COMMANDS

.PL N	Page length N lines/page
.PG	New page
.PN N	Page number
.TF	Top of form (printer command)
.HD	Define header
.FT	Define footer
..	End header or footer definition
.SP N	Space N lines (print parameter)
.SS N	Set spacing N sp. ± line (print parameter)
.VT N	Vertical tab to Nth line (print parameter)
.VS N	Vertical spacing lines/in (print parameter)
.NL N	Need N lines on same page

HORIZONTAL FORMATTING COMMANDS

.CE N	Center N lines
.RJ N	Right justify N lines
.JU	Justify
.NJ	No justify
.LL N	Line lenght of N
.IN N	Indent N spaces
.SI N	Indent one line N spaces
.LM N,N	Set left margin N spaces (print parameter)
.CS N	Character spacing N char/in (print parameter)
.PS	Start proportional spacing
.NPS	Non-proportional, normal spacing
.RU N, N, etc.	Ruler (sets line definition) N1 = LL, N2 = IN, N3 - NN = Tabs

MISC. FORMATTING COMMANDS

.PP	Paragraph
.PPNL N	Paragraph need N lines on same page
.PPSP N	Paragraph space N lines
.PPSI N	Paragraph single indent
.BFS N	Boldface strike N times at printout
.PADC C	Pad character C for non-pad spaces on print
.MMC C	Mail Merge character C
.PC C	Print character C to delimit print strings
.*	Comment line

DISPLAYED MOD CHARACTERS

_	Under
3	Bold
4	Under, Bold
5	Over
6	Under, Over
7	Bold, Over
8	Under, Bold, Over
A	Super
B	Super, Under
C	Super, Bold
D	Super, Under, Bold
E	Super, Over
F	Super, Under, Over
G	Super, Bold, Over
H	Super, Under, Bold, Over
a	Subs
b	Subs, Under
c	Subs, Bold
d	Subs, Under, Bold
e	Subs, Over
f	Subs, Under, Over
g	Subs, Bold, Over
h	Subs, Under, Bold, Over

STYLOGRAPH WORD PROCESSING SYSTEM

CONTENTS

OVERVIEW OF THE STYLOGRAPH WORD PROCESSING SYSTEM

The STYLOGRAPH text processing system is a very easy to use but powerful method of creating and printing text. It allows you to type text on a video terminal, modifying and correcting it as you go, and then print it out when the complete text is finished. The STYLOGRAPH system is cursor-oriented with dynamic screen formatting. Cursor-based editing means that you may work on any portion of the text by moving the cursor to that point. Dynamic screen formatting means that the text is formatted on the screen in the same way it will appear on the printed copy. The display is continuously updated to show you how the text will appear. This is a very important feature normally available only on very expensive commercial word processing systems. It significantly reduces the time that it takes to produce finished copy.

FULL FEATURED TEXT EDITING

There is a full array of commands to help in the creation and modification of the text. The text displayed on the screen may be moved up, down, left or right. Also, the cursor can be moved to any page or to any specified series of letters or words. The cursor itself can be moved left, right, up, down, to any tab position, or to the extreme left or right. Any block of text can be moved, copied or deleted. You may also do a global replace so that all occurrences of a given string will be replaced with or without a "prompt" asking you if you wish the item replaced.

OPERATOR CONVENIENCE

At the beginning of the text, the operator normally types in a few simple commands indicating the line length, left margin, and so forth, and then enters the header and footer as they should appear. After that point the operator need not worry about the formatting of the page since it is taken care of automatically. Words that extend beyond the end of the line are automatically removed and placed on the next line. Headers and footers are also automatically inserted so that the operator always knows what portion of the page is being worked on. Ghost hyphens can also be entered so that if the word falls at the end of a line, and a ghost hyphen has been inserted, the hyphen will automatically be added.

FLEXIBLE DISPLAY

A command allows you to view the formatting commands or make them disappear from the screen. Another command allows you to see which characters will be modified at printout by underlining, superscripting, boldface, and so forth. A page status command allows you to see the current format values and other useful information.

COMPLETE FORMATTING CONTROL

The text or individual lines may be centered, left justified, right justified, or right and left justified. Tabs can be set or cleared at any point. Spacing of the lines on the text is under complete operator control with end of page, spacing, and vertical tab commands.

POWERFUL PRINTING OPTIONS

Underlining is supported on TTY type printers. For those people who have specialty printers there are a variety of additional CAPABILITIES including:

operator controllable pitch

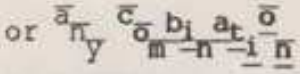
1.5 line spacing

BOLDFACE

superscript[1]

subscript$_2$

underline, overline,

or 

Also, right and left justification of text is accomplished by incremental printing and true proportional spacing is supported on the specialty printers.

OPERATING SYSTEM COMPATIBILITY

STYLOGRAPH is fully compatible with the powerful FLEX,UniFLEX,and OS-9 disk operating systems. BASIC and assembler programs prepared using STYLOGRAPH are directly useable by other software. (This significantly aids software development since cursor based editing allows full viewing of the text being worked on thereby reducing errors and decreasing programming time.) The size of the file being edited is limited only by the capacity of the disk system. Files may be loaded into the text at any point making it possible to rapidly create "boiler plate" documents using portions of text that have been previously saved to a text file. Also, to complement this feature, any portion of a text may be saved to a text file for use at a later point. The printer output may also be directed to a disk file for later print spooling. Most disk operating system commands are directly accessible without leaving the STYLOGRAPH system.

NO OBSOLESCENCE

STYLOGRAPH is guaranteed to be free of "bugs" for three months after the date of purchase. After that point new versions of STYLOGRAPH may be purchased for a modest update fee plus the price difference between the old and new versions. This means that you will not have to pay full price for new versions as they appear.

COMPLETE INSTRUCTIONS

The manual is written so that people with little or no experience with computers can learn to use STYLOGRAPH in a few hours. A text file is included which demonstrates most of the features of STYLOGRAPH and allows the operator to practice most of the functions. The logical arrangement of the commands and the immediate display of the results greatly simplifies the learning process. The manual also contains instructions for limited modification of STYLOGRAPH for special applications.

INTRODUCTION

STARTING STYLOGRAPH

STYLOGRAPH can be started in three different ways. The first, and most common, way is to enter the STYLOGRAPH command followed by the text file that you wish to edit. The command line would look something like this:

STYLO LETTER

This would cause STYLOGRAPH to be called and the text file by the name LETTER to be loaded in. If no such file name exists on the disk then no file will be loaded but STYLOGRAPH will remember the name in case you want to use it when you save the file at a later time.

The second method is to call STYLOGRAPH specifying both an input and output file. A typical command line from FLEX might look like this:

STYLO LETTER1 LETTER2

This would cause the file by the name LETTER1 to be loaded by STYLOGRAPH. The file name LETTER2 would be remembered by STYLOGRAPH so you can save the file under that name when you are finished editing. If two files are listed when STYLOGRAPH is called, the first file must exist on the disk or an error will result.

The third method is to specify no file name at all such as:

STYLO

In this case STYLOGRAPH is called but no file will be loaded into memory. This method is normally not used since you will usually want to save the file when it is completed. It can be useful when you want to create a short letter or memo and do not want to save it on the disk.

You should be aware that there is no absolute necessity for specifying files at all when calling STYLOGRAPH since files may be loaded or saved under any name at any time. You can look at the current input and output file names by using the PAGE STATUS command which is explained in the CONTROL COMMANDS section of this manual.

COMMAND LINE OPTIONS

There are additional options that may be specified on the calling line from the disk operating system. These options would follow the file name when calling up Stylo.

-T=x - Specifies a different terminal driver
-P=x - Specifies a different printer definition
#xK - Increases the size of the memory buffer
-M=x - Increases the number of pages

All of these options are configured and set in Stylo using the Styfix program. However, for ease of use and flexibility, Stylo allows you to change any of the defaults as you load Stylo into memory.

The **x** value in each of the options represents some numerical value.

The **-T=x** and **-P=x** options normally won't need to be changed because you don't switch terminals and printers too often. Primarily they are a convenience that allows Stylo to be used quickly and easily on a wide variety of hardware configurations. For example, you could type the following command.

STYLO REPORT -T=16 -P=1

This **-T=16** option would load in the terminal driver (Heath/Zenith H-19) which is defined in the T16 slot in the System Map located in the Styfix program. The **-P=1** option will load in the printer (Epson MX-80) defined in the number one slot which is also found in the Styfix program.

The **#xK** option allows a person to only increase the size of the memory buffer, not decrease. This refers to the amount of memory set aside as work space for entering text.

For example, I have preset using the Styfix program that Stylo will default to 20K of buffer space. I now have a large document that I want to work on which is larger than 20K. When I call up Stylo, I would designate more memory if it is available.

STYLO REPORT #40K

This command would allocate 40K of buffer space.

STYLO REPORT #15K

This command would have no affect and the buffer size would remain at 20K.

The **-M=x** option is used to increase the number of pages Stylo is able to edit at one time. When Stylo is first executed, it sets aside approximately 40 bytes of memory for each serial page. Therefore, you do not want to allocate a large number of pages if you normally only work on a few pages at a time.

The Styfix program allows you designate how many pages you want to be able to work on at one time. The default is set at 20 pages.

The basic idea is simply to set Stylo to a reasonable number of pages. If you need more pages on occasion, use the **-M=x** option. If you have more pages in memory than STYLOGRAPH will allow, you will not be able to move the cursor beyond the last page, even though the rest of the text will be visible on the screen.

Twenty pages should be enough for most applications but in some circumstances where there are many short lines, such as with a mailing list, it may be desirable to increase the maximum number of pages. To increase the number of pages by a calling line option you may use the "**-M=x**" option. The "**x**" refers to the number of pages. For example, the following line will increase the maximum number of pages to 35:

STYLO REPORT -M=35

USING DIFFERENT TERMINALS AND PRINTERS

Stylograph must know what kind of terminal and printer you are using before it will work correctly. You many configure STYLOGRAPH for your particular equipment by using the "STYFIX" command which is included on your STYLOGRAPH disk. The operation of this command is explained in the "Operating System Notes" section of this manual. You may also specify the terminal and printer on the calling line. This portion of the command consists of a "+" sign, a "T" for terminal or a "P" for printer, and a number specifying the particular equipment. The terminal and printer numbers are listed in an appendix of this manual. A command line for specifying a Diablo printer and a SOROC IQ-130 terminal would look like this:

```
STYLO LETTER +T3 +P0
```

EXPANDING THE PAGE LIMIT

There is one additional option that may be specified on the calling line from the disk operating system. The maximum number of pages that Stylograph can work with can be changed. Stylograph defaults to a maximum of 15. This should be enough for most applications but in some circumstances were there are many short lines such as with a mailing list it may be DESIRABLE to increase the maximum number of pages. This maximum can also be set with the STYFIX command. If you have more pages in memory than Stylograph will allow, you will not be able to move the cursor beyond the last page, even though the rest of the text will be visible on the screen. Also, Stylograph will prevent you from inserting text on the last line of the last page. To increase the number of pages by a calling line option you may use the "+Mx" option. The "x" refers to the number of pages. For example, the following line would increase the maximum number of pages to 35:

```
STYLO LETTER +M35
```

HOW STYLOGRAPH WORKS

STYLOGRAPH is always in one of three operating modes. These are the ESCAPE, INSERT, and SUPERVISOR modes. Each mode has its own special characteristics. After calling STYLOGRAPH from the disk operating system you are in the SUPERVISOR mode. In this mode all of the keys on the terminal have special meanings. A cluster of 12 keys on the right side of the keyboard is used to move the cursor around on the screen, move the screen up and down or change to one of the other operating modes. The letters on the keys have no special meaning since they are arranged to make their functions easy to remember and use. For example, to move the cursor left, right, up, or down you will will use keys that are arranged in the corresponding positions in the cluster. There are several keys on the left side of the keyboard that are used to find, replace, duplicate, and move portions of the text around. On these keys the letter signifies it's function. So, for example, the "F" key is used to Find some part of the text.

In the INSERT mode STYLOGRAPH acts very much like a typewriter. This is the mode you will be in when you are typing (also called "entering") the text. There are several important differences, however. You do not have to watch for the end of the line and insert a carriage return since STYLOGRAPH automatically puts a word on the next line if it is too large for the previous line. Also, if you make a mistake, you can simply backspace over your mistake and retype it. The major difference between typing on a typewriter and using STYLOGRAPH is that there are also FORMAT COMMANDS that can be entered while using STYLOGRAPH. These commands are typed in like normal text and cause the appearance of the text to change in some way. For example, there are format commands that can change the length of the lines and the size of the margin. These FORMAT COMMANDS are displayed on the screen but do not appear on the printed copy.

The SUPERVISOR mode is used to start the printing and to interact with the disk operating system. In this mode the text is not displayed on the screen. This mode is menu driven and self-prompting. This means that you will be given a list of actions that you can take. After making your choice, you may be asked one or more questions. This method of printing and interacting with the disk operating system is very simple and takes almost no practice to use.

LEARNING THE SYSTEM

Most parts of this manual are designed so that very little knowledge of computer systems is needed to use it effectively. Some KNOWLEDGE of the disk operating system is needed, however, so that you can get STYLOGRAPH started and handle the disk files that are created. Normally it will take a person with reasonable typing skills only a few hours to start using STYLOGRAPH competently. The best way to learn to use STYLOGRAPH is to sit down in front of the terminal and practice all of the commands as they are explained in the tutorial at the end of this manual. After going through the tutorial you should go through this manual to learn all of the functions not explained in the tutorial. A practice text with the name "INTRO" is included on the supplied disk. This is an ideal text to work with initially to show how STYLOGRAPH works,because it makes use of many of the special functions ot STYLOGRAPH. To load this text simply enter (type) the following command line from the FLEX disk operating system:

STYLO INTRO

This file is the overview section of manual. By using this file you can see how a STYLOGRAPH file looks on the screen and also see how the printed output will look. When working with this file you need not worry about making mistakes or destroying it since you will normally not be saving it. You should experiment freely so you can become completely familiar with the system. After you have experimented with this text and are familiar with the STYLOGRAPH text processing system you should then try to start creating your own text files from scratch.

Another very useful feature of STYLOGRAPH is that it is virtually impossible to type too fast. Many times while you are entering text, STYLOGRAPH will be readjusting lines below the cursor. For example, if you

type in something which causes a word at the end of the line to be bumped off to the next line, STYLOGRAPH will immediately start rewriting all of the following lines. You do not have to wait for this to be completed. You may continue typing and STYLOGRAPH will finish the rest of the screen without missing any characters that are being entered. The line that you are typing on will always be displayed correctly even though the rest of the screen may be in the process of being updated.

An important advantage that STYLOGRAPH has over most other word processing systems is that formatting is done on the screen. This makes learning the system especially easy since the effects of most of the commands are immediately visible. There are some differences between the display on the screen and the printed output, however. Spaces between the lines (for example, if you are double spacing) are not shown on the screen. This is so you can view as much text as possible on the screen without scrolling up or down. The left margin is also not displayed on the screen. Several special printing characteristics such as underlining, proportional spacing, and so forth cannot be displayed on the screen because of limitations of the display device. Also it is possible to insert special printer commands in the text. These commands will, of course, not actually be printed out.

You will find that almost any common text processing task can be easily accomplished using the STYLOGRAPH word processing system. Often a re-reading of the manual will help in devising new methods of making the word processing task easier. Every user of STYLOGRAPH eventually develops their own "tricks of the trade." For example, most people find that it is unnecessary to enter the header and footer information at the beginning of each editing session since it is easier to create a file with this information already on it and then call it in at the beginning of each new text file.

ESCAPE MODE

The escape mode is a kind of "home base" for all of the various functions of the STYLOGRAPH word processor. It may be entered at any time by simply hitting the "ESC" key on the keyboard. This will cause the text to be displayed on the screen and allow you to do a number of important editing functions.

Many of the characteristics of the display will be explained later but it is important to understand the meaning of a couple of the characteristics from the start. The double vertical lines on the right of the screen indicate that the line ends with a "RETURN". Lines that end with a hyphen at the far right of the screen are "processor created" lines and were not typed in at the place that they actually appear on the screen. (see example in tutorial)The exact way in which the display is modified and created will become clearer as you become more familiar with the system. If there is no text in the memory of the computer, only the line indicating the first page and a single "RETURN" at the right of the screen will appear on the screen.

CURSOR CONTROL

There are five keys which control the position of the cursor on the screen. These keys are arranged in the shape of a cross to make it easy to remember their functions:

```
    I
J K L
    ,
```

The center key in this cross is the "K" key with the four keys "JIL," on the outside. The top key "I" moves the cursor up. The bottom key "," moves the cursor down, and the "J" and "L" keys move it left and right respectively. The "K" key is a special express key which moves the cursor from one end of the line to the other. Hitting this key once will move the cursor to the far left and hitting it twice will move it to the far right. You should practice moving the cursor to various parts of the screen so you can see how it works.

You will notice several important characteristics of the cursor. The cursor will only move to a portion of the screen in which a character (a character is a letter, number, punctuation, or space) has previously been entered so that the cursor will sometimes unexpectedly jump rapidly from place to place. If you move the cursor to a portion of the text in which the lines are right and left justified, you will find there are some spaces that the cursor cannot move to. This occurs because these spaces were not actually typed in but were added by STYLOGRAPH to even out the lines. If you can move the cursor to a space it means that a "SPACE" from the keyboard was entered there. If you cannot move the cursor there, then no space exists at that place.

You will also notice that it is impossible to move the cursor off the top or bottom of the text. If you try to do this you will hear the error bell. (To find out what error you have made, hold down the "CTRL" and simultaneously depress the "N" key, once to display the error message and

again to return to the ESCAPE mode.) The cursor cannot be moved to the "processor created" lines at the top and the bottom of the page since these have been inserted by the STYLOGRAPH word processor and can only be changed by editing at the point they were defined earlier in the text. The text will automatically scroll up or down if you try to move the cursor off the bottom or top of the screen.

The tab key can also be used to move the cursor. To move to the next defined tab location press the "CNTRL" key and simultaneously depress the "T" key. This function is explained more fully in the section on CONTROL commands. Sometimes the TAB function will not cause the cursor to move. This means that a character does not exist at the next tab position.

SCROLLING UP AND DOWN

The four keys "UO.M" located in the corners of the cursor control keys are for scrolling up and down:

```
U I O
J K L
M , .
```

The "U" key causes the whole screen to move up one line and the "M" key causes it to move down. Some terminals are not capable of scrolling down without a complete screen rewrite so the scroll down function is not as useful on these terminals. The "O" and "." keys cause the screen to move up or down respectively by the size of the screen. These keys are useful for rapidly scanning through the text since new text will appear on the screen as rapidly as the terminal can rewrite the screen. The "O" key, for example, causes the text to be moved up so that the line that appeared on the bottom of the screen now appears on the top. The easiest way to remember the effects of the "O" and "." keys is to keep in mind that moving your finger up to the "O" key causes the text to move up and moving you finger down causes the text to move down.

SCROLLING LEFT AND RIGHT

Hitting the "7" key causes the entire screen to shift 25 characters to the left and hitting the "9" key causes it to move 25 characters to the right. This is the way text is normally displayed. These commands are useful when the lines are wider than the screen. If part of the text extends off of the screen you will see arrows at the edge to indicate this. If there is text extending off to the left of the screen there will be left pointing arrows "<" on the left side. If the text extends off to the right side, you will see right pointing arrows ">" on the right side.

FINDING A PAGE

Every page, as it appears on the screen, has a serial page number. This number appears on the page boundary which will look like this:

---------- PAGE 5 ----------

This number is to help you keep track of your place in the text and to provide a convenient way of getting from one place in the text to another. To move to a given page simply hit the "P" key and a message will appear on the screen like this:

********** PAGE=

Simply type in the page number that you want and hit RETURN. If you enter a number which is larger than the number of pages available, the cursor will simply move to the last line and the error bell will ring. This provides a convenient way of moving to the bottom of the text. You may move to the top of the text by simply hitting the "P" key twice. As with virtually all other commands, you may hit the ESC key at any time to return to the ESCAPE mode without taking any action.

The number that is used in the page command and which appears on the page boundary is called the "serial" page number. It is important to remember that the serial page number may not be the same as the "printed" page number. The printed page number is set by a format command that is explained later. The printed page number can appear in the header (top margin) or footer (bottom margin) of the page.

FINDING A STRING

A string consists of one or more characters. Words, phrases, numbers, or even single characters are called strings. You may move the cursor to any given string by using the find , "F", command. When you hit the "F" key a space will open up at the top of the screen and the following message will appear:

*** FIND {

Enter the string you want to find and hit RETURN. The cursor will then move to the next occurrence of that string and the following message will appear:

*** STOP (RET) OR CONTINUE (SP)?

This means that to stop and leave the cursor in its present position, hit the RETURN key. To continue on to the next occurrence of the string, hit the space bar. This allows you to move rapidly through the text to find a particular portion of the text. If the string does not exist below the cursor, the screen will return to normal and the error bell will ring. Remember that the FIND command will only search for strings below the cursor so if you want to search the entire text you must move the cursor to the top first using the "PP" command.

REPLACING A STRING

You may replace one string with another with the REPLACE, "R", command. This command is similar to the FIND command except that it will not only find the string but it will replace the string with a second string. When you hit the "R" key the following message will appear:

*** REPLACE {

Enter the string you want replaced, hit return, and the next message will appear:

*** WITH {

Enter the replacement string, hit RETURN, and the cursor will move to the next occurrence of the first string with the following message:

```
REPLACE (Y-N-A)?
```

To replace the string type, in a "Y" for yes. If you decide not to replace the string, enter an "N" for no. If you want to replace all of the strings without being asked, hit the "A" for all. Unless you know exactly what you are doing you should not use the "A" option since you will not be able to see the strings before and after they have been replaced. After you have responded, a message will appear asking you if you want to continue or not as it did with the FIND command:

```
*** STOP (RET) OR CONTINUE (SP)?
```

Hit the RETURN if you want to stop at this point and hit the space bar if you want to go on to the next occurrence of the string. As with the find command, this will only search for strings which are below the cursor. Again, remember that the ESC key may be hit at any time if you want to go back to the normal display. The REPLACE function has one additional feature which may be useful if you want to replace or add RETURNS. This could be used if you have an old text file, that was prepared using a line oriented editor, which has a number of RETURNS that must be removed. While using the FIND or REPLACE, the "|" character can be entered as a substitute for the RETURN. For example, to replace the "RETURNS" with a space, you would enter the "|" and a SPACE so the screen would appear as follows:

```
REPLACE   {|}
WITH      { }
```

You could then go down through the text and selectively replace only those RETURNS that need to be removed.

The FIND and REPLACE commands can do a search for both upper and lower case characters by hitting the CTRL and U keys instead of the RETURN key, as would normally be the case. At that point, the search would disregard the case of the characters in conducting its search for the desired string.

MOVING A STRING

There are many times during text editing that you will want to move a string from one place to another. This is easily accomplished with the SAVE, "S", and WITHDRAW, "W" functions. To do this you must first set a marker at the end of the string. This is done by moving the cursor to the end of the string and entering two marker characters "}}". Do not worry about these unwanted marker characters appearing in the text since they will automatically disappear when you save the text. Now move the cursor to the beginning of the string and hit the "S" key indicating a SAVE. The text between the cursor and the markers will then disappear from the screen. Then move the cursor to the place that you want the text to appear and hit the "W" key to WITHDRAW the text. This is a very useful command but it takes some thought and planning to use correctly since you must include the correct number of spaces and/or RETURNS for the text to be formatted after you are finished. It is not a particularly serious matter

if you have made an error, however, since the errors are normally easily correctible.

DUPLICATING A STRING

Duplicating a string is very similar to moving a string. This is an especially useful feature if a particular string occurs many times. By using this command you will not have to re-enter the string every time it is needed. To duplicate a string you must set a pair of markers and SAVE the string as you did when moving a string. The only difference is that when you want the string to reappear at the cursor you enter a "D" to duplicate the string. You may do this as often as you wish. The last place that you want to duplicate the string you must enter "W" to withdraw the text.

REMOVING TEXT

The easiest method of erasing (removing) a large portion of the text is to use the ZAP, "Z", command. To use this function, set a couple of markers at the end of the string that you want to delete and move the cursor to the beginning of the string. Hit the "Z" key and a message will appear similar to this:

*** DELETE 345 CHARACTERS?

Answer with a "Y" for yes or a "N" for no. This message is so you can be sure that you are deleting the correct number of characters and will not accidently delete a large portion of your text. There are a few other ways of deleting text but these will be explained later.

SINGLE CHARACTER OVERWRITE

One of the most common typographical errors to make is to hit the wrong key. STYLOGRAPH has a convenient way of correcting this in the ESCAPE mode. You can hit the "1" (number one) key and the next key you hit will overwrite the character that the cursor is on. This command is easy to remember because you are overwriting "1" character.

SINGLE CHARACTER INSERT

Another common typographical error is to simply miss a key. To insert just one character just move the cursor to the point that you want to insert the character, hit the "^" (up arrow) and the next key that you hit will be inserted in front of the cursor. All of the characters under and to the right of the cursor will be bumped to make room.

SUPERVISOR AND INSERT MODES

You may enter the SUPERVISOR mode by hitting the "/" key and the INSERT mode by hitting the ";" key. There are separate sections in this manual fully explaining these modes.

INSERT MODE

The INSERT mode is the mode that you will be spending the most time in, since this is the mode that is actually used to enter text. Before entering text you must move the cursor to the point that you would like to start entering text. You then leave the ESCAPE mode and enter the INSERT mode by hitting the ";" key once. At this point the cursor line will have a different appearance to make it easier to enter the text and to indicate that you are in the INSERT mode. The text to the left of the cursor will appear normally on the left but the text to the right will be put on the far right with a string of hyphens in between. The number of hyphens indicates how much room there is on the line before a word will be bumped down to the next line. On some terminals the shape of the cursor will also change or it may change from flashing to solid to indicate that you are in the INSERT mode.

When in the INSERT mode you can type in the text just as you would on a typewriter. If you make a mistake you may simply backspace over your error and continue typing. You should not hit the RETURN as you approach the end of a line since STYLOGRAPH automatically picks up the word at the end of the line and puts it on the next line if it is too long. All of the text, with the exception of the cursor line will, as always, be formatted as it will appear on the printed copy.

RETURNS (these are equivalent to "carriage returns" on a typewriter) are only used when you want to start the next line at the beginning of the line. You would start a new paragraph or set up neatly arranged columns by starting the line with a RETURN. Any time you want some text to appear in a certain column of the page, such as in charts or tables, you must start out the line with a RETURN. The presence of the RETURN is always indicated by a double vertical line on the far right of the screen.

There are a couple of things to keep in mind when placing the cursor before starting to enter text. If you are inserting text somewhere inside a line it makes the most sense to put the cursor on top of a space and then enter a space as the first character. This assures that the words that you are entering will always have a space before and after them as they would normally have when you are done. If you are starting a complete new line which starts at the left side of the screen, it is usually easiest to move the cursor to the previous RETURN and enter a RETURN as the first character. This will usually cause the next line to be completely empty and will reduce distracting cursor movement on some terminals.

CHARACTER MODS

While you are entering text you may specify that the characters that you are entering will have some kind of modification when they are printed such as underlining, superscript, boldface, and so forth. These character modifications are done with "control" keys. To start underlining characters simply hold down the "CTRL" key, hit the "U" key and continue entering text. When you want to stop underlining hit the DEL key (this is called the RUB key on some keyboards). BOLDFACE works in the same way except that the "CTRL" and "B" key starts the boldface.

There are five different kinds of modifications that can be specified: (a) underlining, (2) overlining, (3) boldface, (4) superscript, and (5) subscipt. Any logical combination of the five can be specified by hitting the appropriate control keys:

Key	Function
U	underline
O	overline
I	superscript
K	subscript
B	boldface

As an example, you might want to have a superscripted character which you want to be in boldface with an underline. To do this first hold down the "CTRL" key and then hit the "U", "I", and "B" keys one after another. Then release the "CTRL" key and enter the character that you want modified. Now hit the DEL (or RUB) key to stop modifying characters in this way and continue entering text.

On most terminals the modified characters will appear in low intensity, indicating that they have been modified. On some terminals the MOD characters will be indicated by a "reverse" field. You may look at the modification by using the "VIEW" key. Hold down the control (CNTRL) key and hit the "V" key and all of the character modifications will be displayed. Hit the control "V" key again and the display will return to normal. On the example just given in the previous paragraph, the modified character would be replace by a "C" when the VIEW key is hit. The meaning of these characters is listed in Appendix B of this manual or you can use the "ASSIST" command which will be explained later.

GHOST HYPHENS

You may enter normal hyphens as you are entering text and STYLOGRAPH will automatically break the word at the hyphen if it falls off the end of the line. The only potential problem with this is that if you modify text at some later point, the hyphenated word might then appear in the center of the line with the hyphen still there. You would then have to remove the hyphen. One way around this problem is to insert ghost hyphens as you are entering text. When you come to a point, normally in a long word, where you think a soft hyphen may be needed, hold down the CTRL key and hit the "G" key. The hyphen will not normally appear on the screen at this point. You then continue entering text. The ghost hyphen will automatically appear and disappear depending on whether the word falls at the end of the line or not.

There are a couple of things to keep in mind about ghost hyphens. If you are using right and left justified text the hyphens are often not really needed. This is especially true if you are using a "specialty" printer version of STYLOGRAPH since the characters will be evenly spaced throughout the line. Also, it is often most convenient to go back through the text and insert the ghost hyphens in the ESCAPE mode just before the final printout so you need not worry about inserting them while entering text.

LONG LINES

When you are working with lines that are wider than the screen STYLOGRAPH will always keep the cursor on the screen by shifting the line right or left if needed so you can see what you are typing. This means that at times the position of the line may be different than the rest of the screen. The line will return to normal when you go back to the ESCAPE mode.

FORMAT COMMANDS

Format commands are entered while you are in the INSERT mode. These tell STYLOGRAPH how the text is to be formatted on the screen and at printout time. The format commands start in the first column with a comma followed by the command. The format commands must always be preceeded by a RETURN and followed by a RETURN. In many cases the format command is followed by a number or a character. There must always be a space between the command and the number or character..

Since these commands do not appear on the printout it is often desireable to view the screen without them. This is done with the FORMAT command. To make the format commands disappear from the screen press the CTRL key and simultaneously press the "F" key. To return the screen to normal, press the CTRL and "F" keys again.

STYLOGRAPH starts out with format commands and values that are preset. These preset commands are called "default values". For example, if you enter no format commands in your text, STYLOGRAPH will use the default value of "66" for the page length. To change the page length you must enter a new format command. The normal default values are listed on the command summary in Appendix A. If you are using STYLOGRAPH primarily for one application, such as for manuscript editing, it might be appropriate to create a modified version of STYLOGRAPH which starts out with different format values. This will save some effort since the format commands will not have to be entered at the start of each separate piece of text. This modification should only be attempted by experienced computer operators.

It is possible that format commands will be entered incorrectly. For example, you could forget to put a space between the format command and the number which would be an error. In this case STYLOGRAPH would simply ignore the command altogether. The error bell will then sound whenever the cursor moves from the erroneous line to the next line, indicating that there has been an error.

Also, you will notice that many format commands require no format values (also called format parameters). Even for those commands that need a value, you may omit the value and STYLOGRAPH will automatically use the smallest value. So, for example, the following two format commands have the same meaning:

```
,ce
,ce 1
```

These are centering commands and in both cases will cause only one line to be centered.

A brief description of each of the format commands follows. Most of the commands are used at some point in the INTRO text file so you can see how they work. The best way to learn their use is to try each of them and then observe the result.

,ce X CENTERING

To center a line or lines simply type in the center command and enter the number of lines you want centered in place of the X. If you only want to center one line you may omit the number. For example, the following two lines are legitimate centering commands:

```
,ce 4
,ce
```

The command on the first line would center the next four lines and the command on the next line would center only one. It only makes sense to center a line which has been preceeded with a RETURN and which is followed by a RETURN so you will know exactly where the beginning and end of the line will be. The following lines are not legal format lines:

```
,ce4
 ,ce
```

The first command is incorrect because there is no space between the command and the number while the second is incorrect because it does not start in the first column.

,rj X RIGHT JUSTIFICATION

Right justification works exactly like the centering command except that the following line or lines are set to the far right side of the page. The following would be legal right justification commands:

```
,rj 3
,rj
```

The first command would right justify three lines and the second would right justify one.

,ju JUSTIFY

The justify command causes the lines to be right and left justified. The line will not be justified if it ends with a RETURN. The text on this page was created with the justify command. If you are using a proportional spacing printer, the printed output will look slightly different than on the screen since the line is evened out on the screen by putting spaces between the words while on the printed output all of the letters are evenly spaced apart. For tty type printers the lines will have the same spacing on the screen as on the printed output.

,nj NO JUSTIFY

This command will cause the lines to have a ragged right edge. It is only used if the ,ju command has previously been used.

,ll X LINE LENGTH

The line length command changes the length of the line on the screen. The following two examples show the use of this command:

```
,ll 65
,ll 120
```

The first command sets the line length for the screen and the second command sets it to 120. After the second command the lines will be longer than the screen so the screen will have to be scrolled left and right to view some of the text. If the lines extend off the side of the screen there will be right facing arrows ">" on the right side.

,in X INDENT

The indent command causes all of the following lines to be spaced to the right by "X" lines. This causes the line length to be reduced also. Here are two examples of correct indent commands:

```
,in 7
,in
```

The first example causes 7 spaces to be added to the left hand column of all of the following lines. If the current line length in this example is 65, then the actual line length is now really 58. The second example causes the indent to go back to zero and is the same as entering ",in 0". The line length must never be reduced to less than 10 by this command.

,si X SINGLE INDENT

The single indent command is useful when you want an indent for only one line. You could, for example, use this command to create an indent at the beginning of every paragraph (although it would be easier to simply type in the spaces or use a TAB). This is the only command that will accept a minus number. A minus number will cause the next line to be spaced out to the left by "X" columns. Before using a minus single indent you must be sure that there is enough room on the left side by using the ",in" indent command. The following two examples will show how this might work:

```
,si 6
,si -4
```

The first example causes the next line to be indented by 6 spaces and the effective line length to be reduced by 6. The second example causes the next line to stick out four columns to the left of the normal line and the line length to be increased by 4. For the second example to work, an indent of 4 or greater must have been set.

,lm X LEFT MARGIN

The left margin on the printed page can be set to any value as long as the line length and the left margin do not exceed the width of the printed page. This command differs from the indent command in that it affects headers and footers as well as the text. Also, the margin does not appear on the screen but only appears on the printout.

,cs X CHARACTER SPACING

The character spacing can be set for those people who have versions for "specialty" printers. The value X is the number of characters per inch. This value would normally only be set at 10 or 12 for "elite" and "pica" spacing respectively. Other values may be set for special applications but the error bell will sound as a warning that a non-normal value has been entered.

When using ",cs X" and ",ps" commands the number of microincrements required by a space in your STYPS file must agree with the characters/inch set by ",cs X" command. ,cs 10 means "STYPS" microincrements for a space must be 12 and ,cs 12 means "STYPS" microincrements for a space must be 10.

,ps PROPORTIONAL SPACING

Specialty printers and Centronics 737 and 739 printers support a special printing method called proportional spacing. What this means is that the characters are set in the line so that their widths are adjusted for. This causes the printout to look "typeset". To do this kind of printing you must have first established a "STYPS" file on your disk and a special print wheel must be installed. The following section on the proportional spacing command presents some details not needed for elementary text processing; you may want to go on to other format commands until you need to know more about the ,ps command.

Some printers, such as Diablo, Qume, NEC, and Centronics 737 are capable of true proportional spacing. This means that each character has a different width so that the placement of a character on the line is different for each character. When a text is proportionally spaced, an "i" will take less space than an "m".

Before STYLOGRAPH can operate with proportional spacing, it must know two characteristics of the type face. First of all, it must know the width of the character, and second, it must know the actual character to be output. The width of the character will vary from printer to printer and from one type face to another. Also, some printers require that the character that is output to the printer be different than the character seen on the video monitor. This is because the proportionally spaced characters are actually arranged differently on the print wheel than standard characters. For example, to print a proportionally spaced "x" on a Diablo printer, you must actually send it a "v". The correspondence between the standard character set and the proportional set is referred to as the "translation".

STYLOGRAPH obtains the character width and the translation from a proportional spacing file on the disk. This file should be named "STYPS". You will normally create one of these files by renaming one of the STYPS files that are supplied on the disk. Before STYLOGRAPH can correctly handle proportionally spaced text, it must first read in one of these proportional spacing files. Setting up these files is described in the section on your disk operating system. The original Stylograph disk contains proportional spacing tables for different printers and the most common print wheels. For print wheels that are not supported you may create a new proportional spacing table by editing one of the existing tables. These tables are standard text files which can be edited by Stylograph. Each of the tables contains three rows of constants. Here is a partial list of one of the tables:

```
'r   8   '<
's   8   $7C
't   8   '{
'u  10   '?
'v  10   '0
'w  14   $7E
'x  10   'v
'y  10   '!
'z  10   'g
'{  10   -'u   NEC ONLY
'|  10   '.
'}  10   'k
'~  10   'w
$7F 10   'p
```

The first column contains a list of the standard ASCII character set. The third row contains the character that must be output to get these characters. The middle row contains the number increments required for the width of the character. Notice that there are two ways of specifying the characters. If the actual characters are used, the character is preceded by an apostrophe. The character may also be specified by its ASCII code. This is indicated by preceding the hex number with a "$". Some of the third row characters are preceded by a minus sign. This is used only with the NEC printers, to indicate that the character is one of the 32 shifted characters on the print thimble, since the thimble actually has 128 positions.

When producing a proportional spacing table, several things should be kept in mind. First, the width of the character should be an even number for the Diablo, Qume, and NEC printer. This number should be double the width that is listed for these characters in the printer documentation. Second, characters which are printable but are not available from the keyboard must be entered with the ASCII code. The DEL character would be one of these for most terminals. Finally, it is possible, although very tedious, to create one of these tables without any documentation on the print wheel, by printing all of the characters from a text which is not set to proportional spacing. You can then figure out what the translation table must look like, and you may estimate the character widths. After a few trials of adjusting the translations and the widths it should be possible to get a satisfactory printout.

,nps NO PROPORTIONAL SPACING

This causes Stylograph to go back to the normal printing mode if proportional spacing has been set.

,pl X PAGE LENGTH

This command sets the length of the page. It must be set to a number between 10 and 100. It is important to realize, when using this command, that the header (top margin) and footer (bottom margin) count as lines on the page so the page length must be set large enough to allow some text lines on each page. So, for example, if you leave the page length at the default value of 66 and have 6 lines in the header and 6 lines in the footer, there will be a total of 54 lines of text on each page.

,pg NEW PAGE

You may start on a new page by the use of this command. This will cause the footer to be put at the bottom of the page and the next line to appear after the header on the top of the next page.

,pn X PAGE NUMBER

This command sets the page number which can appear in the header or footer of the page as explained in the header and footer description. This does not affect the serial page number which appears on the page boundary on the screen and which is used in the "find page number" escape command.

,tf TOP OF FORM

This is a command which has no effect on the display on the screen but causes a TOP OF FORM command to be sent to the printer. It is normally used with printers that are using special forms paper or are using a single sheet feeder. If used, it should be inserted in the header so that a new sheet will be fed at the top of the page.

,hd DEFINE HEADER
,ft DEFINE FOOTER
,, END DEFINITION

These three commands are used to set up the header and footer of the page. For example, the following 5 lines will cause a simple three line header to appear at the top of all of the following pages:

```
,hd

INTRO

,,
```

This would cause the first line at the top of the page to be a space, the word "INTRO" to appear on the second line and another space to appear on the third line. You may also cause the page number to appear in the header or footer by entering the characters ### at any point. When STYLOGRAPH sees these characters it will replace them with the page number. You may enter one or more of these characters at any place. STYLOGRAPH always replaces these characters with a left justified number and replaces the remaining "#" characters with spaces.

You may also use any of the following formatting commands in a header or footer:

,ll line length
,ce center
,rj right justify

These commands affect only the headers and footers and do not affect the rest of the text. This means that if you set the line length for the text you may also have to set the line length for the headers and footers to the same length. This also means that you may allow the headers and footers to extend beyond the normal right margin since the header and footer line lengths are specified separately from the rest of the text.

The following would be an example of how the headers and footers were set up for this portion of the manual:

```
,hd

,rj
FORMAT COMMANDS


,,
,ft
,ll 65

,ce
PAGE ##


,,
```

The line length for the headers and footers must be set separately and can be different than the line length for the rest of the text. This allows the lines in the header or footer to extend out from the text on the rest of the screen. The header does not appear on the first page so the footer contains the line length since it will be the first one to be used by STYLOGRAPH.
NOTE: There is a limit on the length of the headers and footers.

,sp X SPACE LINES

Extra spaces between lines can be inserted by this command. The PARAMETER "X" specifies how many lines are to be inserted. Spaces are not carried over from one page to the next so that all of the spaces may not actually appear on the printout if you are too close to the bottom. The following are legal spacing commands:

```
,sp 22
,sp
```

The first command will cause 22 lines to be spaced on the page. If, for example, there are only 13 lines remaining on the page before the footer, then only 13 lines will be spaced. The second command spaces only one line.

.ss X SET SPACING

This particular command is for setting the spacing between the lines. It has the same function as single, double, or triple spacing on a typewriter. Although the spaces between the lines do not appear on the screen display,STYLOGRAPH does keep track of the line number on the page so that the headers and footers will be inserted in the proper places.

,vt X VERTICAL TAB

This command will cause the next line to be printed on the specified line number on the page. The following command would cause the next line to be printed on the 20th line:

```
,vt 20
```

If the present line number on the page is greater than 20, the error bell will sound and the command will be ignored.

,vs X VERTICAL SPACING

The spacing between the lines can also be set using this command. As with the character spacing command, it is only useable on those versions of STYLOGRAPH that support a "specialty" printer. The use of any value other than 4, 6, or 8 will result in a warning that a non-normal line spacing is in use. Remember that when using this command you must also change the number of lines on the page. For example, if you set the vertical spacing to 4 (this is equivalent to "space and a half" spacing on some typewriters) you must also set to number of lines on the page to 44 for a normal 11 inch page. This is because there will be 4 lines per inch and there are 11 inches on the page, making a total of 44 lines per page.

,nl X NEED LINES

There are some cases where you will need to be sure that a portion of text, such as a table or illustration, appears on one page. The ,nl command checks to see if there are enough lines on the page. If there is not, a new page will be started. Since Stylograph actually formats correctly on the screen, there is normally no need to use this command since you can always readily see where you are on the page. Its primary purpose is to be used with the MAIL MERGE program when you may not have a chance to preview the text.

,PP PARAGRAPH

This causes a new paragraph to be started. This will have no effect unless one or more of the next three commands have been set. It causes three things to happen. (1). The **,ppnl** value is checked to see that there are enough lines left on the page to start a new paragraph. If there are not, a new page is started. (2). The number of lines, indicated by the **,ppsp** command, are spaced. (3). The first line is indented according to the **,ppsi** command.

,ppnl X PARAGRAPH NEED LINES

This has exactly the same effect as the ,nl command except that it has its effect whenever the ,pp command is entered.

,ppsp X PARAGRAPH SPACE

This has the same effect as the ,sp command except that it has its effect whenever the ,pp command is entered. Remember that these spaces between the lines will not appear on the screen but will appear on the printout.

,ppsi X PARAGRAPH SINGLE INDENT

This causes a single indent to appear whenever the ,pp paragraph command is encountered. As with the ,si command, the indent must have previously been set if the ,ppsi is set to a negative value.

,bfs X BOLDFACE STRIKE

This controls the number of times that the boldface character is printed. Stylograph initially starts out with this value set to 4. If you wish the boldface to be darker you may increase this value.

,padc C PAD SPACE CHARACTER

Stylograph uses the space character as a separator. That is, when the end of a line is reached Stylograph will start the new line at a space. Also, on TTY printers, Stylograph will add spaces between words, if justification is on, to make the text right and left justified. You may cause a space to be treated as a normal character rather than as a separator by using the ",padc" command. This command causes the character "C" to be printed on the printer as a space although it will be displayed normally on the screen. For example, let's assume that you have entered the following command:

,padc &

After this point the character "&" will be printed out as space on the printer. One common use for this is to prevent abbreviations and other strings from being broken at the end of the line. For example, the name J.

M. Johnson on this line should all be on one line. If you have J.&M. Johnson, the line will not be broken up. On the printed output the "&" will be replaced by a space.

,mmc C MAIL MERGE CHARACTER

This command sets the character for the mail merge program which is available separately. Its use is explained in that manual.

,pc C PRINTER CHARACTER

This command sets the printer character which allows special commands to be sent to the printer. This should only be used by people who are thoroughly familiar with ASCII protocol of their particular printer. Some printers allow special characteristics such as double height, double width, or other enhanced printing. This command allows those special commands to be embedded in the text. For example, the printer character could be set as follows:

```
,pc \
```

This means that all sequences between the two "\" characters will be sent to the printer. The sequences may be specified in three different ways; ASCII character, decimal number, or hexidecimal number. Each of these printer command characters must be separated by a space or comma. ASCII characters are indicated by an apostrophe ' preceding the character. Decimal numbers are entered without any preceding character and hexidecimal numbers are preceded by a dollar sign $. A typical printer control sequence in a text might look like this:

```
This sequence \$1B,14\ will produce elongated characters
on the Centronics 737 printer. The sequence \$1b $14\ will
select the condensed character set and the sequence \'a,'b,'c\
will cause the sequence "abc" to be printed on the printer.
```

There are three other commands that may be specified between the "PC" characters for special printer operations:

```
S   stops the printer for changing printwheels, etc.
B   backspaces one space for overprinting
Tx  tabs printer to the "x" column
```

Presuming the command **,pc ** has been previously executed, the following would be legal commands:

```
x\b\e
\t70\12345
\t70,'1,'2,'3,'4,'5\

The first will cause the printer to backspace one character
and overprint the "x" with an "e".
The second and third will both have the same effect,that is,
the numbers "12345" will be printed starting in column 70.
```

Notice that these printer sequences are not taken into account when the line length is set so the line with these sequences embedded will look longer than a normal line on the screen but will be the correct length on the printer.

,* COMMENTS

There may be situations in which you will want to enter comments in the text which should not appear on the printed copy. For example, you may want to leave a reminder for the next person who might be working on the text. This could indicate the type of print wheel you want to be used or it could be a simple note about the purpose of the text. It is often a good idea to use these comment commands to document the history of the text and its various revisions. To enter these comments you need to enter the ",*" on the left edge of the screen and follow it with a comment. The comment must end with a return and cannot extend beyond the end of the line. This is not really a formatting command like the previous commands since it does not change the appearance of the printed copy. Typical comments might appear like this:

```
,* use a pica print wheel for this text
,* written 4/5/1775, Ben Franklin
,* revised 5/22/1975 Thomas Jefferson
```

CONTROL COMMANDS

CONTROL commands can be executed from either the ESCAPE mode or the INSERT mode. To execute a CONTROL command you must press the CTRL key and the designated key at the same time. Some of the CONTROL commands have already been briefly described.

CNTRL P PAGE STATUS

The page status command causes the screen to be replaced with information about the current status of the text. The input and output file names, their status, a number of format parameters, and the room left in memory are all listed. To redisplay the text hit "CNTRL P" again. Notice that many of the formatting commands thenselves are displayed here. This is a quick way of recalling these commands if you have forgotten them.

CNTRL N NAME THE ERROR

Whenever the error bell sounds it means that STYLOGRAPH has encountered an error. If you want to see a description of the error just simultaneously press the "CNTRL" and "N" keys and the cursor line will be replaced with a description of the error. To return to the normal text do the command again or hit the ESC key.

Most of the time the cause of the error will be obvious since the error usually is the result of something you have just entered. The error bell will also sound whenever the cursor passes a line in which there is a format command error. This can be particularly puzzling when using the FIND, REPLACE, or FIND PAGE commands since the error bell can sound whenever you are moving from one portion of the text to another. In this circumstance the only way to find the line that caused the error is to move the cursor back up through the text and then move the cursor down through the text until the bell sounds again.

CNTRL ^ UPPER CASE LOCK

By hitting the CNTRL and "up arrow" it will cause only upper case characters to be entered from the keyboard. To return to normal keyboard operation execute the "UPPER CASE LOCK" command again. This command takes place of the "TTY" or upper case lock key for those terminals that do not have it.

CNTRL F FORMAT DISPLAY/CONCEAL

The format lines can be displayed or removed from the screen by this command. This is useful when you want to look at the text without the format lines. There are some commands such as the FIND command that cause STYLOGRAPH to display the format commands.Please note that the cursor must not be on a FORMAT CMD line when this control command is invoked.No harm will be done,but the error bell will sound and nothing else happens.

CNTRL V VIEW

This command will cause the character mods to be displayed rather than the characters themselves. You can find the meaning of these character mods by looking them up in the appendix of the manual or by using the "Assistance" command. To return the display to normal, press the CNTRL V keys again.

CNTRL A ASSISTANCE

If you forget a particular command you may get some "assistance" by

hitting the Control "A" key. This will cause the screen to be erased and a "menu" to appear. This is like a table of contents since it indicates your choices of other things to look at. There is a pointer on the left side of the menu. To choose an item on the menu you simply move the cursor up and down on the menu using the "I" and "," keys as you would when moving the cursor up and down on the screen. When the cursor is at the correct line, simply hit the "RETURN" key and the screen will be replaced with a list of the appropriate commands. The best way to learn the use of this function is to try the various items on the menu. You will notice that the disk will be accessed when you choose an item on the menu. This is because the various tables are being read off the disk. For the command to work, the "STYHLP" files must exist on your execution disk. If the table does appear, it means that the tables cannot be found on the disk.

The assistance command is especially useful while you are first learning the system. This command will cause a "menu" to be displayed on the screen. This menu is a list of different kinds of assistance you can get. Notice that there are three different lists of format commands. The horizontal commands affect the horizontal positioning of the text. The indent, line length, centering, and justification commands would be examples of this. The vertical commands affect the placement of the lines on the page. The page length, header, footer, as set spacing commands would be examples of vertical formatting commands.

CNTRL S SINGLE CHARACTER DELETE

This command deletes the character on which the cursor is superimposed. The cursor then moves to the next character. Remember that in the INSERT mode the cursor may not be directly on top of the character since the gap in the line has been filled with hyphens. In the INSERT mode the deleted character will always be at the end of the line of hyphens.

CNTRL W WORD DELETE

The word that the cursor is setting on and the following spaces, if there are any, will be deleted by this command. The cursor will then move to the first character of the next word. The RETURN is considered to be a word so that if the cursor is sitting on a RETURN it will be deleted by this command.

CNTRL X LINE DELETE

This command will delete a line if it is bracketed by RETURNs. This means that if the cursor line was started by hitting the RETURN and ends with a RETURN, that line will be deleted. The RETURN at the end will remain in case you want to enter a new line. To delete the RETURN, do a single character delete. A series of lines can be deleted by alternately depressing the "X" and "S" keys while holding down the "CNTRL" key.

CNTRL T MOVE CURSOR TO A TAB POSITION

The tab functions in STYLOGRAPH operate very much like those on a typewriter. The CTRL T command has a slightly different function in the ESCAPE mode than in the INSERT mode. In the insert mode the line must be started by a RETURN for it to work at all. If there is a RETURN at the end of the previous line, STYLOGRAPH will add the proper number of spaces to the line to move the cursor to the next valid tab position. In the ESCAPE mode the cursor will move to the next tab position only if there is already a character there. When STYLOGRAPH starts out, tabs are automatically set to every 8th character position. These may be removed or changed at will.

CNTRL R SET A TAB

A tab will be set at the cursor postion when the CNTRL R keys are pressed.

CNTRL Y CLEAR A TAB

If a tab has been set at the present cursor position it will be cleared by this command.

CNTRL G GHOST HYPHEN

Ghost hyphens can be inserted anywhere in a word by moving the cursor to the appropriate position and hitting the CNTRL G. The most logical use of this command is to scan the text, just before it is to be printed out, for lines that are short and are also followed by a large word. To cause the large word to be hyphenated simply move the cursor to the place that you would like to place the hyphen and press the CNTRL G. STYLOGRAPH will automatically move the first part of the word to the previous line if it will fit. Ghost hyphens can also be entered when inserting text.

CNTRL U UNDERLINE
CNTRL O OVERLINE
CNTRL I SUPERSCRIPT
CNTRL K SUBSCRIPT
CNTRL B BOLDFACE

All of the control commands are referred to as MOD commands. These character MODS can be specified in either the INSERT or ESCAPE modes although the method is slightly different for each mode. All of the modifications are specified with CONTROL keys. For example, underlining is done by holding down the CTRL key and hitting the "U" key.

In the ESCAPE mode the CTRL+U keys cause the character at the cursor to be underlined and the cursor to move one character to the right. Note that the space bar can also move the cursor to the right in the ESCAPE mode. Therefore, to underline a series of words, but not the spaces between them, you can hold down the CTRL key and hit the "U" to underline the words and the space bar to skip between the words. All of the character mods work in this manner. If the character is already modified, the new modification will be added to it. Also, the DEL (RUB on some keyboards) can be used in the same manner to remove modifications of the character.

In the INSERT mode the CTRL+U keys cause all characters entered after this point to be underlined. This will continue until the DEL key is hit. After this point none of the entered characters will be modified. It is possible for a character to have more than one modification. If, for example, you wanted a word to be boldfaced and underlined, you would first hold down the CTRL key and hit the "U" key and then the "B" key. You would then type in the word and then hit the DEL key.

Many printers can print these modifications but they cannot be displayed on the screen. The presence of these modified characters is indicated on the screen by some change in the display. Normally these characters will be displayed in low intensity although they are in reverse field on some terminals. You can examine these modifications by use of the

VIEW control command. To do this you must hold down the CTRL key and hit the "V" key. This will cause all of the modified characters to be changed to "symbolic" characters. The meaning of these characters is listed in Appendix B. The display will return to normal by hitting the CRTL+V keys again. The meaning of these symbolic characters can also be shown with the "ASSISTANCE" command.

SUPERVISOR COMMANDS

The SUPERVISOR mode is entered from the ESCAPE mode by hitting the "/" key. This will cause the text to disappear from the screen and a "menu" to appear. This menu is a list of actions that you can take. The cursor and arrow can be moved up and down with the "I" and "," keys the same as in the ESCAPE mode. You execute a command by moving the cursor to that point and then hitting the RETURN. You will then be prompted for any further information if it is needed. In many cases you will be asked for a yes or no response to a question. In many cases there will be an asterisk * beside one of the responses such as "(Y/N*)". The asterisk indicates that you may give that response by hitting the RETURN. In most cases this will be the most common answer to the question so you can simply hit the RETURN in response to most of the questions.

EDIT

This command has the same effect as hitting the ESC key. It causes Stylograph to go back to the escape mode so that the text is displayed on the screen.

PRINT

This command will cause the current text in memory to be printed out on the printer. When this command is executed you will first be asked if you want to change the print driver. Stylograph normally uses a print driver named "STYPRINT". If you want to use a different print driver you may answer "Y" to the first question. Stylograph will then prompt you for the name of the print driver file. This file, which is explained more fully in the section on the disk operating system, is the program that actually controls the printer. When calling an alternate print driver, remember that the driver must already be set up to work correctly with your printer. You cannot specify print options with this command as you can from the disk operating system.

After the print driver has been loaded, STYLOGRAPH will ask you if you want to stop for new pages. This is in case you are not using continuous feed paper in your printer and need to hand load each sheet. When the printer has stopped to allow you to load a new sheet you will see another prompt on the screen. You may resume printing by hitting any key except the "ESC" key. The "ESC" key will cause the printing to stop.

Stylograph will then ask you if you want to print all of the pages. If you answer "N" you will then be asked for the numbers of the first and last pages that you want printed. Remember that these numbers refer to the serial page numbers and not to the numbers that appear on the printout.

SAVE & RETURN

This command is simply a time saver that allows you to save the text file and then exit to the disk operating system. It operates exactly like the SAVE command except that after it is done, STYLOGRAPH is exited and you will be back under control of the disk operating system. If all of the text has not been read in from the disk, STYLOGRAPH will automatically read in the remaining text and send it to the output file. This is the ONLY way you will be able to permanently save text files which are larger than memory, or if you have dumped any of the text to an output file; if you attempt to execute a simple **SAVE** command (see below) when the file is still open, STYLOGRAPH will give you an error.

SAVE

The save command causes the text in memory to be saved to a disk file. You will first be asked if you want to save the file under the present file name. The present file name will be the file name that was used when STYLOGRAPH was first called. If you do not want to save it under this name, you will be prompted for the file name. If you also specified an output file name when you initially called STYLOGRAPH, the output file name will be used by the SAVE command. This command will be prohibited if there are any files still open. This is to prevent you from erroneously saving part of a file when you intended to save the whole file. If files are open and you still want to save part of the text, you must use the SAVE TO MARK command.

If there is already a file by that name when the SAVE command is executed, STYLOGRAPH will rename the old file so that it is a backup file. If there is already a backup file by that name, STYLOGRAPH will ask you if you want the old file deleted. You may answer with a "Y" or "N". If you answer no, no action is taken.

SAVE TO MARK

This command may be used to save a smaller portion of the text. For example, you may have a certain paragraph or part of one text that you will also be needing in another text. To save the portion simply enter two marker characters "}}" at the end of the block of the text and then move the cursor to the front of the text. Then execute the SAVE TO MARK command. After using this command you will normally want to go back and delete the "}}" characters.

RETURN

This command allows you to return to the disk operating system without saving the file. To be sure you are not making a mistake, STYLOGRAPH will first ask you if the text is secure (that is, is there a copy on the disk?) before going to the disk operating system.

LOAD

This command causes a text file to be loaded into memory at the position of the cursor. The command will prompt you for the name of the file you want to load. Remember that when STYLOGRAPH is first called from the disk operating system, the file name on the command line will be loaded at the start so in many cases it will not be necessary to use the LOAD command.

The LOAD command provides a convenient way of producing "boilerplate" documents. Separate parts of a manuscript can be created and saved to a disk file. At a later point any assortment of files that exist on disk files can be loaded to create a finished manuscript. This could be used for legal documents and form letters in which identical parts of a text are used in many different documents.

ERASE

All of the text in memory can be erased with this command. To be sure you are not destroying a valuable text, STYLOGRAPH first asks you twice if you are sure. You must answer "Y" to each question before the text is erased. This command should, obviously, be used with caution. This command will be prohibited if any files are open.

SPECIAL

This command has the opposite function of the TTY command. It allows "specialty printer" versions of STYLOGRAPH to go back to printing on a specialty printer after having printed on a tty type printer.

TTY

If your version is configured by the STYFIX command for a "specialty" printer you may also cause STYLOGRAPH to act as if it were outputting to a "tty" type printer by the use of this command. The printed output will then appear without many of the special effects such as boldface and proportional spacing. This command is useful if you also have a high speed line printer and would like to get a rapid printout of the text.

PASS

This command allows you to pass a command to the operating system. You will be prompted for the command line. This is particularly useful if you want to do a catalog of the contents of a disk. It is also useful for listing the contents of other files to obtain information from these files. On the Flex disk operating system, this command will be prohibited if files are open since some disk operations will cause files to be closed prematurely, thereby destroying your text file.

SPOOL

This command is similar to the PRINT command except that the output is directed to a disk file. This allows the text to be printed out at another time using the print spooler option if it is available on your system. You will be prompted for the name of the output file.

WHEEL

This command loads in a proportional spacing table. Stylograph can be configured to load in a proportional spacing table at startup so this command is normally only used if the print wheel is being changed. The proportional spacing table that is usually loaded in is named "STYPS". You will first be asked if you want to load a table by this name. You will be prompted for a different name if you wish.

NEW

This command is for working with files larger than memory. Stylograph can only work on text that is in the memory of the computer. If the text will not fit in the memory, then part of it will be kept on the disk. There are two files that this excess text is kept on, the "read" file and the "write" file. When Stylograph is called, it first loads in text from the read file until memory is nearly full. You may then edit and work on this portion of the file until you are ready to go on to the next portion of text. You will use the NEW command to dump your present text to the "write" file and bring in some more text from the read file. Notice that once you are finished with a portion of text and have dumped it to the write file, you cannot then go back and work on it during this editing session. This means that you may only use the new command to go forward through the text.

The NEW command actually consists of two different steps, "dumping" and "filling". "Dumping" consists of dumping the present text in memory to the write file and "filling" consists of outputting text to the write file. You will be given a choice of doing either or both of these operations. You may use the "PAGE STATUS" command to see if either or both of the files are open. The read file is open if there is still text in it which has not

been read in to the memory. The write file is open whenever a portion of text has been dumped to the write file.

When dumping text, all of the text above the cursor page is dumped to the write file. Therefore, if you are finished working with pages 1-5 you may put the cursor somewhere on page 6 before executing the NEW command. If you put the cursor on the first page, no text will be dumped and you will see a message indicating that the cursor is on the first page. If you are dumping text for the first time, you will be asked if you wish to use the present file name. If you do not, you will be asked for a new file name. Also, if there is an old backup file of that name, you will be asked if you want to delete the old backup file. There are occasions where you will want to dump text to the write file but will not want to do any filling. You might do this to create more free space in memory to do additional editing. For example, you might want to make room for additions to the text at some point. Also, you might want to make room to load in another file or make a large block move. Remember that you can only print out text that is in memory, so you might want to print the text before dumping it.

Text will be filled from the read file if there is any remaining. The new text will be added to the bottom of the present text in memory. Stylograph will leave a little room left in memory so you can do some additional editing. Working with text files larger than memory is a great convenience but it should be done with caution. Having a large text in one file greatly increases the chance of losing the text, either through a power loss or disk error. If you are working with a large text it makes sense to always keep a recent copy of the text on a backup disk so that you can always easily recover from such an error. In many cases it makes more sense to break a large text into several smaller sections, such as chapters, and then print out all of the files together using the **MAIL MERGE** program. This simplifies editing and decreases the chances of losing a large text file.

FLEX OPERATING SYSTEM

STYLOGRAPH OPERATION UNDER FLEX

STYLOGRAPH was originally developed to run under the FLEX operating system. Since STYLOGRAPH is highly interactive and uses dynamic screen formatting, you should run your system terminal at as high baud rate as possible. We recommend 9600 or 19,200 baud.

INITIAL SETUP

When you receive the disk the following files should be on it:

FILE NAME	FUNCTION
STYLO.CMD	STYLOGRAPH program
INTRO.TXT	A File of part of manual for practice editing
STYFIX.CMD	Program for configuring STYLOGRAPH
STYHLP1-6.TXT	6 text files for assistance command
STYPS-D.TXT	proportional spacing table for DIABLO
STYPS-N.TXT	proportional spacing table for NEC
STYPS-7.TXT	proportional spacing table for 737/9
STYPS-B.TXT	proportional spacing table for BROTHER HR-15
DIAB.BIN	relocatable Diablo print driver
DIAB-ETX.BIN	print driver with ETX/ACK protocol
NEC.BIN	relocatable NEC print driver
NEC-ETX.BIN	print driver with ETX/ACK protocol
SPRINT3.BIN	relocatable Q.CMD replacement
STYTEXT.TXT	source code of STYLOGRAPH text
STYIO.TXT	source code of STYLOGRAPH I/O
STYIOSSB.TXT	source code of STYLOGRAPH I/O for SSB systems
FBPRINT.TXT	source code of relocatable print drivers
STY-130.TXT	source for SOROC terminal driver
STY-ADM3.TXT	source for ADM-3 terminal driver
STY-CT82.TXT	source for CT-82 terminal driver
STY-PE.TXT	source for Perkin-Elmer terminal driver
STYGIMIX.TXT	source for GIMIX 24x80 video terminal
STYGIMIX.BIN	object code for GIMIX terminal
READ-ME.TXT	optional additional instructions & comments
HISTORY.TXT	historical file of changes and upgrades to Stylo

To set up STYLOGRAPH on your system disk you will normally have to take the following steps:

1. Use the STYFIX command to configure STYLOGRAPH for your terminal and printer and put it on your systems disk.
2. Verify if the PRINT.SYS print driver is on your systems disk.
3. Copy all of the STYHLP.TXT files to your systems disk.
4. If you plan to use proportional printing, copy the appropriate STYPS file to the systems disk and rename it to STYPS.TXT.

To be sure that characters from the keyboard are never missed during some operations, STYLOGRAPH relies upon interrupts from the keyboard. Be sure that the interface card to your terminal is set up so that the IRQ is connected.

STYFIX COMMAND

The STYFIX command is normally used to set up three different characteristics of STYLOGRAPH: the terminal type, the printer type, and whether or not it loads up a proportional spacing table when it is first called. It can also set the maximum number of pages that STYLOGRAPH can work on and will specify memory boundaries for people who are creating customized versions. The normal method of operation is to place your STYLOGRAPH disk, or preferably a backup copy of it, in your system drive and the disk that you want the new copy of STYLOGRAPH on in the working drive. You should then execute the following command:

```
+++STYFIX,0.STYLO,1.STYLO
```

This will cause STYFIX to get the copy of STYLOGRAPH from systems drive 0 and put the modified copy in drive 1. The STYFIX command is menu driven and self prompting. It will give you 6 choices. Simply enter the number of your choice and answer the questions. Show screen mask here. Consult Appendix C of the manual for the particular number of your printer and terminal. After you have specified the printer and terminal types you may simply return to FLEX and the modified copy will be saved. If there is already a file by that name on your disk, you will be asked if you wish to first delete that copy, and you must answer "yes".

There are three ways that STYFIX can be called:

```
+++STYFIX
+++STYFIX 0.STYLO
+++STYFIX 0.STYLO 1.STYLO2
```

In the first case STYFIX will modify the file named STYLO.CMD on the working drive. In the second case it will modify STYLO.CMD located on drive 0. In the third case the STYLO.CMD file is taken from drive 0 and the modified file is put on drive 1 and named STYLO2.CMD.

You may also change the number of pages that STYLOGRAPH can work on at one time. This limit is now set to 15. This should normally be enough for working on most text files. If you find that you need to work with more pages than this at one time, you may increase the number by using the STYFIX command. If there are more pages in memory than are allowed, you may not move the cursor below the last page. No other operations are affected, however, and no text is lost or destroyed. Increasing the number of pages usually will not help if you are working with very long files. This is because the common limitation is that the files are longer than memory space and not that your printout exceeds the page limit.

PRINT DRIVER

FLEX VERSIONS USING "PRINT.SYS"--- STYLOGRAPH has been modified so that it now looks for a printer driver called PRINT.SYS by default. Thus, you can use the print driver that presently works with your system. When printing from STYLOGRAPH, and it asks you 'Different Printer' --- answer by typing <RETURN>, which is 'No' by default.You must, of course, have the "PRINT.SYS" file on your STYLOGRAPH System disk.

FLEX VERSIONS USING RELOCATABLE DRIVERS--- It is not necessary to use the print drivers supplied with STYLOGRAPH since the print driver that you presently use will probably work. They are only supplied as a convenience to allow printing at the higher baud rate and to save some wear and tear on the printer by doing backward printing on alternate lines. After the appropriate binary file has been appended to "P.COR" you may use the command as a normal FLEX print command for most applications. You will normally want to rename or copy this print command and give it the name "PRINT.SYS" since this is the default name that STYLOGRAPH looks for. Be sure to reserve at least 600 bytes using the RM command before entering STYLOGRAPH. This should normally be done in the STARTUP file.

Print drivers are supplied for the NEC Spinwriter, Diablo, and Qume printers that will print backwards on alternate lines. These print drivers are not necessary for the operation of STYLOGRAPH but are only provided for convenience. If the line sent out to the printer contains any escape sequences, the line is automatically printed forwards. This is to prevent sending the escape sequences backwards which the printer could not interpret. The TTYSET should be set for NL=0. These print drivers were designed to allow the serial interface to be operated at 1200 baud without losing characters.

There are basically two ways to avoid overfilling the printer's character buffer at 1200 baud. The first method is to use the ETX/ACK protocol. The print drivers with the suffix "-ETX" use this method. The second method is to connect the handshaking line from the printer to the CTS input on the serial interface. The NEC printer and most of the later models of Diablo printers have this handshaking line. If your printer has this handshaking line then you may use the print driver without the "-ETX" suffix.

SWTPC FLEX USING "Q.CMD--- If you have a printer supplied by SWTPC that has its own parallel interface and which uses the "Q.CMD" for printing, you must use a file labeled "SPRINT3.BIN" on your disk. This print driver does not do forward-backward printing. It MUST be appended to "P.COR". Be sure to reserve at least 2000 bytes using the RM command before entering STYLOGRAPH. Use the P0 printer option in STYLOGRAPH. This supplied driver must be used with STYLOGRAPH since the print driver supplied by SWTPC does not observe the escape sequences that STYLOGRAPH requires for proper operation.

PORT ADDRESS

You may also have to change the vector file for the serial port if the port is not located at $C30E in the binary file.

MODIFYING STYLOGRAPH FOR OTHER SYSTEMS

Normally, the only change that will have to be made to STYLOGRAPH when you get it is to set it up for your terminal and printer using the STYFIX command. If you have a system which has a different hardware or software configuration, then you will have to make some other modification. STYLOGRAPH is designed so that several parts of it can be reassembled for a variety of situations. These modifications should not be attempted by the inexperienced or faint-hearted. You must have complete familiarity with 6809 assembly language and with your particular needs before you should attempt any of these modifications. Great Plains Computer Co. will answer questions about these adaptations, but cannot do your system's programming and cannot guarantee the result.

All of these modifications involve using the source code files that are supplied with STYLOGRAPH. These files cannot be used until they are ORG'ed in the proper place. To find these locations in your particular copy of STYLOGRAPH, you may use the STYFIX command. When this command is called, one of the menu options is to list out these locations. After the proper location has been determined, the equate ("EQU") at the beginning of these programs must be set to the appropriate value. Also, you must be sure that the file that you eventually assemble does not extend beyond the boundary listed by the STYFIX command.

STYLOGRAPH also contains an encoded serial number at $20. This location must not be tampered with. This is the number that we use to verify the source of a given copy of STYLOGRAPH and it is unique to every copy. Changing this number constitutes a violation of copyright and a person possessing a copy with an illegal number is liable for statutory damages under U.S. and international copyright laws. After modifying STYLOGRAPH it is a good idea to verify that the bytes in these locations have not been changed.

CHANGING STYLOGRAPH TERMINAL I/O

STYLOGRAPH gets its characters directly from the ACIA rather than through normal Flex routines. This was done primarily because Flex always echoes characters to the screen, and STYLOGRAPH does not permit this. In addition, it allows STYLOGRAPH to get its characters by interrupts so that no characters are ever missed from the keyboard.
If your system has a non-standard terminal I/O, or does not use the standard IRQ interrupt vector at $DFC8, then you must use a new I/O routine. The source code for the present I/O driver is the "STYIO" file. This may be revised and appended to STYLOGRAPH.CMD. The object

code must be ORG'ed at "IOBEG" and must not assemble beyond "IOEND". These values are found by using the STYFIX command. When assembling this file, you must be sure that all of the initial constants and the initial branch table assemble in the exact same location as the STYIO file assembles when it is ORG'ed at the proper place.

MODIFYING STYLOGRAPH FOR NON-SUPPORTED SERIAL TERMINALS

If you have a serial terminal on your Flex system which is not listed in Appendix C, then read Appendix D which details your options. If you chose to create your own terminal driver in Appendix D, then the following command line would create the new version:

```
+++APPEND 0.STYLO.CMD STYTERM.BIN 0.STYLO2.CMD
```

After this point the "STYLO2.CMD" will be configured for the new terminal. You will notice that the file is now several sectors longer than the original STYLO file. It can be easily reduced back to the old size by using the STYFIX command. Simply use STYFIX to set either the printer or terminal number on this new version of STYLOGRAPH and the new file will be reduced to the old size.

MEMORY-MAPPED TERMINALS

The only memory-mapped board that is presently supported is the Gimix 24 X 80 board. If you have this board and are using a Gimix system, you may append the file named STYGIMIX.BIN to STYLOGRAPH and it will work as is. This will destroy all other terminal drivers on this copy of STYLOGRAPH. If you have this board but are using it in a nonstandard way, you will have to modify the source file STYGIMIX.TXT to conform to your system. Normally the only things that will have to be changed are the addresses of the screen memory video control port and the keyboard input.

If you have another memory-mapped system it is possible to write a driver of your own using the Gimix driver as a model. This represents a very significant task and should be attempted only by experienced programmers who are knowledgeable about the particular hardware being used.

CHANGING TEXT CONSTANTS

Many STYLOGRAPH constants may be changed. For example, all of the ESCAPE mode keys and the CONTROL keys could be redefined. Some people may wish to do this to take advantage of special keyboards. In general this is not a good idea. The STYLOGRAPH keyboard functions are arranged in logical groups and any modification usually destroys these groups and makes the reference card useless. Furthermore, some of the extra keys on most keyboards are already defined STYLOGRAPH functions so these will have to be changed as well. It is usually best to learn to use STYLOGRAPH as it is presently designed. This makes it easier to follow the manual and reference card and makes it

possible to move from one brand of terminal to another with a minimum of difficulty.

If you must change some of STYLOGRAPH's constants see Appendix E. After the text has been modified and assembled as per Appendix E, there should abe a binary file called STYTEXT.BIN on your disk. This should be appended to the present STYLOGRAPH file by the following FLEX command:

+++APPEND 0.STYLO.CMD 1.STYTEXT.BIN 0.STYLO3.CMD

After this point STYLO3 will operate exactly as the old version except that the character constants will be changed. The new file will be longer than the original file. It may be reduced in size by using the STYFIX command to specify a printer or terminal.

NON-STANDARD INTERRUPT I/O

If you have a non-standard interrupt I/O then you need to put your interrupt vector at INTVEC, and be sure that FLXFLG is set to 1 (it normally is). Stylograph will then service all interrupts and check to see if a keyboard character has been input. If no character is present, Stylograph returns control to your interrupt routine pointed to by INTVEC.

GENERAL OPERATION

STYLOGRAPH II has been adapted to operate on the Radio Shack Color Computer using FHL or Data Comp versions of FLEX. All features of STYLOGRAPH available on other systems have been preserved in this version. However, due to the limitations of the Color Computer, some explanation of special features and special procedures is necessary.

The major limitation of the Coco is its small screen size. STYLOGRAPH is setup to use the 24x51, high resolution screen. Since this format is smaller than the standard line length of 80 columns, the following procedure is recommended. Do not set the desired line length until all text has been entered, proofread, and corrected. If no line length is specified, the default line length will be the width of the screen display. If the final line length is set at the beginning, the built in horizontal scrolling functions will have to be used extensively to view all of the text.

Once the text is determined to be correct, then use the ',LL' command to enter the desired line length at the appropriate location(s) in the text. Once the ',LL' commands are entered, the displayed text will be reformatted. At this point, you should verify that the overall format of the page is correct. This includes indenting, centering of titles, paragraph spacing, headers, footers, etc. The text should then be saved to a file and/or printed as desired.

KEYBOARD INFORMATION

Since each version of FLEX for the Color Computer implements the keyboard scanning function differently, it was decided that STYLOGRAPH should have its own keyboard scanner so that all functions are the same, regardless of which version of Flex is being used. Auto repeat and 4 key roll-over are also implemented for the Stylo keyboard.

The keyboard scanner in STYLOGRAPH is very similar to that used in Color BASIC with some changes and improvements. All of the key functions in color BASIC are preserved except the 'clear' and 'break' which have been redefined as the 'control' and 'escape' keys, respectively.

CONTROL The Radio Shack 'clear' key serves as the standard 'Control' key. Hold this key down and press any other key to obtain their respective control function.

ESCAPE The 'break' key generates the escape code (ascii $1B) when hit. The same code is produced by shift-break. 'clear'-break' produces a null.

CAP-LOK Shift-0 is the CAPS-lock or shift-lock. When STYLOGRAPH begins execution, the keyboard will be in lower-case mode. In this mode, the shift key must be used to produce upper-case characters. Typing shift-0 places the keyboard in upper-case mode. Where all alpha keys will generate the upper-case character. Typing shift-0 again returns to lower-case mode.

BACKSPACE Control-H or the 'left arrow' may be used to backspace in STYLOGRAPH. Both generate the ASCII code $08.

MARKER The Stylo "MARKER" character is used to delimit areas of text for delete, move, or save operations. The CONTROL 'period' key produces the right bracket character, '}', which Stylo use as a 'MARKER'.

AUTO REPEAT After a 1 second delay, any key will start repeating at a 10 per second rate.

RUBOUT Control-left arrow generates ASCII 7F or 'RUBOUT'. It is used to terminate character modification or to remove a modification from a previously modified character or string of characters. After modifying a character or string, type 'control-left arrow' to stop the modification. To remove the modification from a previously modified character or string, position the cursor over the first modified character and type 'control-left arrow'. The character under the cursor will be changed to a normal unmodified character and the cursor advanced to the next character. By holding down the 'control' key and repeatedly typing 'left arrow' an entire modified string can thus be normalized.

COLOR COMPUTER KEYBOARD

KEY	UNSHIFTED	SHIFTED	CONTROL	CAPS
@	$40=@	60='	00=NUL	40
A	61=a	41=A	01=soh	41
B	62=b	42=B	02=stx	42
C	63=c	43=C	03=etc	43
D	64=d	44=D	04=eot	44
E	65=e	45=E	05=enq	45
F	66=f	46=F	06=ack	46
G	67=g	47=G	07=bel	47
H	68=h	48=H	08=bs	48
I	69=i	49=I	09=ht	49
J	6A=j	4A=J	0A=lf	4A
K	6B=k	4B=K	0B=yt	4B
L	6C=l	4C=L	0C=ff	4C
M	6D=m	4D=M	0D=cr	4D
N	6E=n	4E=N	0E=so	4E
O	6F=o	4F=O	0F=si	4F
P	70=p	50=P	10=dle	50
Q	71=q	51=Q	11=dc1	51
R	72=r	52=R	12=dc2	52
S	73=s	53=S	13=dc3	53
T	74=t	54=T	14=dc4	54
U	75=u	55=U	15=nak	55
V	76=v	56=V	16=syn	56
W	77=w	57=W	17=etb	57
X	78=x	58=X	18=can	58
Y	79=y	59=Y	19=em	59
Z	7A=z	5A=Z	1A=sub	5A
up arr	1B=esc	1B=esc	1B 35=e5	
dn arr	1B 36=e6	1B 37=e7	1B 38=e8	
lft arr	08=BS	1B 39=e9	7F=rubout	
rt arr	1B 3B=e;	1B 3C=e<	1B 3D=e=	
BREAK	1B=esc	1B=esc	1B =esc	
CLEAR	control	control	-------	
0	30 = 0	Caps toggle	1B 31=e1	
1	31 = 1	21 = !	7C = |	
2	32 = 2	22 = "	7E = ~	
3	33 = 3	23 = #	5E = ^	
4	34 = 4	24 = $	1C = fs	
5	35 = 5	25 = %	1D = gs	
6	36 = 6	26 = &	1E = rs	
7	37 = 7	27 = '	1F = ys	
8	38 = 8	28 = (	5B = [	
9	39 = 9	29 =)	5D =]	
:	3A = :	2A = *	1B 41=eA	
;	3B = ;	2B = +	1B 32=e2	
,	2C = ,	3C = <	7B = {	
-	2D = -	3D = =	5F = _	
.	2E = .	3E = >	7D = }	
/	2F = /	3F = ?	5C = \	

TERMINAL CONFIGURATION

The supplied copy of STYLOGRAPH is configured for the Datacomp version of Flex. This is terminal number T3. The only other configuration currently possible is for the Frank Hogg Labs version of Flex. To configure for FHL, use the Styfix command as described in the manual and select terminal #1. No provision is made to allow Stylo to operate with an external terminal connected to the Color computer. Terminal numbers 2, 4, and 5 are not implemented at this time but may be used in the future as other versions of Flex become available.

PRINTER INTERFACE

The supplied copy of STYLOGRAPH is setup to use a TTY type of printer with backspace capability. To use any other type of printer, follow the instructions in the Stylo manual, FLEX Configuration Chapter. This explains the use of the Styfix command to select the default printer type.

PRINTER DRIVERS

In order to use your printer, you must copy your current PRINT.SYS file onto the Stylo system disk.

HELP FILES

Operation of the HELP files is described in the STYLOGRAPH Manual except the number of help files has been increased. In the original version of Stylo, some of the help displays were too large to fit on the small screen display of the Color Computer. These files have been divided into two or three parts for ease of viewing.

PAGE STATUS DISPLAY

The page status display has been changed slightly from the description in the Stylo manual. In order to display all of the information available, it was necessary to divide the display into two parts. Entering Control-P causes the first status page to be displayed. This page includes the current file status and some of the page status information. At this point, typing 'break' will return Stylo to the Edit mode. To view the second page of status information, type another Ctrl-P. Either 'break' or Ctrl-P will then return to the Edit mode.

INTERRUPTS IN STYLOGRAPH

Radio Shack has made life very difficult for anyone to program with interrupts since all interrupt vectors are in low memory (in the address range of $0100-$0111). Just about all major Flex application programs load in this area and overwrite the vectors. When Stylo loads into memory, ALL interrupt vectors are set to point to the Flex Coldstart entry. The 16.67ms field-sync clock interrupt is then disabled at the PIA. Stylo currently doesn't make use of interrupts in its Coco version. Instead, every time Stylo outputs a character to the screen, it also scans the keyboard for the presence of a character and if one is present, fetches that character into a temporary buffer. This is done to minimize the possibility of lost characters when typing rapidly in "insert" mode. Future versions of Stylo for the CoCo may use the 16ms clock interrupt for this function.

UniFLEX OPERATING SYSTEM

STYLOGRAPH OPERATION UNDER UNIFLEX

Stylograph can be used very effectively under a multi-user environment such as UniFLEX. Since STYLOGRAPH is highly interactive and uses dynamic screen formatting there are a couple of things to keep in mind. First of all, STYLOGRAPH is much easier to use at higher baud rates. The rate of 1200 baud recommended in the UniFLEX manual is simply too slow. You should turn the baud rate up to at least 4800 for proper operation. Also, since UniFLEX is very I/O bound and STYLOGRAPH is constantly outputting characters to the screen, you should develop some operator habits which will reduce the demand on UniFLEX. You should do most of your editing on the bottom of the screen since that reduces the amount that STYLOGRAPH has to update the screen. Also, if you operate in the Typing mode with a RETURN on the right side of the typing line, this will reduce the updating that is required on that line. Scrolling and paging through the text also consume a lot of computer time so this should be kept to a minimum. None of these things will hurt the operation of STYLOGRAPH but if too many operators are scrolling or paging at the same time, the operation of the entire system will be slowed down.

INITIAL SETUP

When you receive the disk the following files should be on the root directory of the disk:

FILE NAME	FUNCTION
stylo	STYLOGRAPH program
intro	text file of part of manual for practice editing
styfix	program for configuring STYLOGRAPH
styhlpl-6	6 text files for assistance command
styps-d	proportional spacing table for DIABLO
styps-n	proportional spacing table for NEC
styps-7	proportional spacing table for 737/9
stytext	source code of STYLOGRAPH text
sty-130	source for SOROC IQ-130 terminal driver
sty-adm3	source for ADM-3 terminal driver
sty-CT82	source for CT-82 terminal driver
styappen	program for appending binary files to STYLOGRAPH

To set up STYLOGRAPH on your system you will have to establish a "sty" directory in your root directory and transfer several files to this directory. If you plan to use proportional printing, you will need to copy the appropriate STYPS file to the system disk. You will then have to establish the "stylo" file in your "/bin" directory. If you place the Stylograph disk in drive 1, the proper UniFLEX command sequence would be as follows:

```
/etc/mount /dev/fd1 /usr2
crdir /sty
chd /usr2
copy styhlp* intro /sty
copy stylo styfix /bin
/etc/unmount /dev/fd1
```

Printer drivers

Current Versions of UniFLEX--- You must create a print driver in your "/dev" directory by the name "styprint". This is because Stylograph will look for a print driver by the name "/dev/styprint" by default when using the print command. Your "/dev" directory should retain the original print driver, to be used by UniFLEX when not running STYLO. If you have not established this device driver you may, of course, specify any other device name when you are printing. Establish this print driver by using the "/etc/makdev" command. Consult the systems configuration manual or look at the "/etc/crdisk" file to see how this is done.

UniFLEX versions prior to VER. 1.07--- If you are using Diablo compatible printers such as Diablo, Qume, Starwriter, or NEC 5515/25 printers you may notice some extra line feeds being inserted at various points throughout the printout. If this effect re-occurs, notify us.

SWTPC UniFLEX using the "NEC.CMD" (>/dev/nec)---If you have a printer that has its own parallel interface and which uses "NEC.CMD", for printing, you must rename the "NEC.CMD" to "STYPRINT" and use the TTY (P30) printer option. Your "/dev" directory should contain both the renamed "STYPRINT" command and the original "NEC.CMD", to be used by UniFLEX when not running STYLO.

STYFIX COMMAND

The STYFIX command is normally used to set up three different characteristics of Stylograph; the teminal type, the printer type, and whether it loads up a proportional spacing table when it is first called. It can also set the maximum number of pages that Stylograph can work on and will specify memory boundaries for people that are creating customized versions. The normal method of operation is to first establish Stylograph in your binary file as indicated above. You should then execute the following command:

```
styfix /bin/stylo
```

The STYFIX command is menu driven and self prompting. It will give you 7 choices. Simply enter the number of your choice and answer the questions. You must consult Appendix C of the manual for the particular number of your printer and terminal. After you have specified the printer and terminal types you may simply return to UniFLEX and your copy of Stylograph will be correctly configured for your particular printer and terminal.

You may also change the number of pages that Stylograph can work on at one time. This limit is now set to 22. This should normally be enough for working on most text files. If you find that you need to work with more pages than this at one time, you may increase the number by using the STYFIX command. If there are more pages in memory than are allowed, you may not move the cursor below the last page. No other operations are affected, however, and no text is lost or destroyed.

MODIFYING STYLOGRAPH FOR NON-SUPPORTED SERIAL TERMINALS

If you have a serial terminal which is not listed in appendix C, then you may return your Stylograph disk to us for modification. When you return your disk, also include a copy of the portion of the terminal user's manual which includes the control codes that it uses, or preferably, you may send the entire manual. Terminal updates will be done for a $50.00 charge. Any manuals sent will be returned with the completed update.

If you wish, and are capable of assembly code work, you may do the modifications yourself. The terminal driver consists of two different parts: a stack of pointers located $20 bytes above TRMBEG, and a stack of ASCII control sequences located at TRMSEQ. The source code for two different terminal drivers, a CT-82 and an ADM-3A, are included in your disk. They may be used as models for constructing your own terminal driver. The easiest course of action is to edit one of these files to create your own file. The method of modifying one of these drivers is explained in the Appendix D --- "MODIFYING STYLOGRAPH FOR NON-SUPPORTED SERIAL TERMINALS".

After the new source code has been created, the binary file will have to be appended to the present Stylograph file by using the "styappen" program. Assuming that the new terminal driver is named "styterm" and the "styappen" file has been put in the "/bin" directory, the following command should cause Stylograph to work with the new terminal:

```
styappen /bin/stylo styterm
```

Whenever a new terminal driver is made, all other terminal drivers are destroyed. That is, after these modifications are made you may no longer specify the terminal type on the calling line. Also, the terminal number must now be a "1". This is normally set by an FCB in the source code, but can also be set by STYFIX. This FCB is at the beginning of the example terminal drives.

CHANGING TEXT CONSTANTS

A text file by the name "stytext" is supplied on your disk. This file may be modified, assembled and appended to Stylograph to change any of the text constants. The procedures for changing this text file are explained in Appendix E of this manual. After this binary file has been created it may be appended to Stylograph by using the "styappen" command as explained .

OS9 OPERATING SYSTEM

STYLOGRAPH OPERATION UNDER OS9

Stylograph can be used very effectively under a multi-user environment such as OS9. Since Stylograph is highly interactive and uses dynamic screen formatting there are a couple of things to keep in mind. First of all, Stylograph is much easier to use at higher baud rates. Also, since OS9 is very I/O bound and Stylograph is constantly outputting characters to the screen, you should develop some operator habits which will reduce the demand on OS9. You should do most of your editing on the bottom of the screen since that reduces the amount that Stylograph has to update the screen. Also, if you operate in the insert mode with a RETURN on the right side of the insert line, this will reduce the updating that is required on that line. Scrolling and paging through the text also consume a lot of computer time so this should be kept to a minimum. None of these things will hurt the operation of Stylograph but if too many operators are scrolling or paging at the same time, the operation of the entire system will be slowed down. These considerations need not apply if you are using level one of OS9 and only have one operator on the system.

INITIAL SETUP

When you receive the disk the following files should be on the root directory of the disk:

FILE NAME	FUNCTION
readme	Initial setup and description of files on this disk
stylo	Stylograph program
styfix	program for configuring Stylograph
styappen	program for appending binary files to Stylograph
history	text file listing previous updates and fixes to system
sty	directory holding various Stylo related files
styintro	test file of part of manual for practice editing
styhlpl-6	6 text files for assistance command
styps-d	proportional spacing table for DIABLO
styps-b	for Brother HR-15
styps-n	proportional spacing table for NEC
styps-7	proportional spacing table for 737/9
stytest	source code of stylograph prompts and constants
sty-130	source for SOROC IQ-130 terminal driver
sty-adm3	source for ADM-3 terminal driver
sty-CT82	source for CT-82 terminal driver

To set up Stylogrpah on your system, first establish a directory that contains the files contained in the Sty directory as received from GPCCI. The only files that are required in the Sty directory are: Styhlpl-6, Styerr (COCO only), Stystat (COCO only). The rest of the files in the Sty directory are only for certain applications as needed. The Sty directory is a good place to keep them, however. Stylograph assumes that this directory will be called /D0/Sty, but this can be changed by using Styfix with option #6.

If you are doing proportional spacing, rename the proper proportional spacing table (Styps-d, Styps-7, Styps-n, Styps-b (COCO only)), to "Styps" and move it into your "Sty" directory or its equivelent. Then establish the Stylo file in your "CMDS" directory.

PRINTER DRIVERS

Stylograph looks for a printer descriptor by the name /p1 by default. If you wish to change the default descriptor name, see the instructions under the STYFIX command.

THE STYFIX PROGRAM

STYFIX is an executable program and should be put in the CMDS directory of your disk. To execute STYFIX type the following:

```
styfix filename
```

where filename = stylo or mm or spell. STYFIX will use the program name to determine which of three menus (STYLO, MM, or SPELL) to bring up. The following explanations describe each of the three menus.

STYFIX STYLO

This is the menu that appears if the filename is STYLO:

```
------- STYLOGRAPH configuration program -------

        1. Set default terminal type.
        2. Printer menu.
        3. Set proportional table load at startup.
        4. Set maximum pages.
        5. List memory boundaries.
        6. Set default STY directory pathname.
        7. Set default data buffer size(work area).
        8. Return to OS-9.
        Choice?
```

Select the proper choice by typing the corresponding number followed by a carriage return(CR).

If the choice is #1 of the STYLOGRAPH MENU the following prompt will appear:

```
Terminal number?
```

These numbers can be found in Appendix C PRINTER AND TERMINAL NUMBERS in this manual. Type the number followed by a carriage return and the MAIN MENU will reappear ready for the next choice.

If the choice is #2 of the STYLOGRAPH MENU the following menu will appear:

```
------- PRINTER menu -------
        1. Set default printer type.
        2. Set default printer pathname.
        3. Return to main menu.
        Choice?
```

These options have to do with printer defaults.

If the choice is "1 of the PRINTER MENU the following prompt will appear:

```
Printer number?
```

These numbers can be found in Appendix C PRINTER AND TERMINAL NUMBERS in this manual. Type the number followed by a carriage return and the PRINTER MENU will reappear ready for your next choice.

If the choice is #2 of the PRINTER MENU the following prompt will appear:

```
Pathname(/p,/p1,H0/STY/DICT etc.30 chars max)?
```

This prompt expects an OS9 pathname of not more than 30 characters giving the path (complete OS9 pathlist) of the desired printer.

If the choice is #3 of the PRINTER MENU the program will return to the MAIN MENU.

If the choice is #3 of the STYLOGRAPH MENU the following prompt will appear:

```
Load STYPS proportional spacing table at startup (Y/N)?
```

This prompt wants to know if the proportional spacing table should be loaded with STYLO to do proportional spaced printing. Type a Y or a N accordingly.

If the choice is #4 of the STYLOGRAPH MENU the following prompt will appear:

```
This is the maximum number of printed pages
that STYLO can edit or print at a given time.
The number of characters or lines on each
printed page is not critical. Typically 10
to 40 pages. Numbers higher than necessary
may waste data space!

Maximum pages that Stylograph can edit?
```

The default value for STYLO is 20 (COCO OS9 STYLO 10) until changed by the user. This selection determines the number of printed pages that STYLO can work with at one time. The default value should normally be enough for working with text files. If there is more text in memory than will fit on the specified number of pages then you may not move the cursor below the last page. No other operations are affected, however, and no text is lost or destroyed.

If the choice is #5 of the STYLOGRAPH MENU the following table will appear:

LABEL	FUNCTION	ADDRESS
TXTBEG	Beginning of text area ----------	$0123
TXTEND	End of text area ----------	$4567
BINEND	End of Stylograph binary code ----	$89AB
TRMBEG	Beginning of terminal driver -----	$CDEF
TRMSEQ	Beginning of terminal sequence ---	$0123
TRMEND	End of terminal driver ----------	$4567

This table displays various addresses for use with the STYAPPEN command (not available in COCO STYLO).

If the choice is #6 of the STYLOGRAPH MENU the following prompt will appear:

```
Pathname(/p,/p1,/H0/STY/DICT etc.30  chars max)?
```

This prompt expects an OS9 pathname of not more than 30 characters giving the path(complete OS9 pathlist) of what is sent to you as the STY directory (for example on the disk received from GPCCI the complete pathlist for the STY directory is /d0/STY or /D1/STY depending on the disk drive used). This directory (no matter what its name) should contain those files specified in the README file on the GPCCI supplied disk. These files include: styhlp_6, styerr(coco only), stypstat(coco only), styps_b, styps_d, styps_n, styps_7, intro, sty_ct82(not on coco), sty_adm3(not on coco), sty_130(not on coco), stytext(not on coco).

If the choice is #7 of the STYLOGRAPH MENU the following prompt will appear:

> This size is the default module permanent storage requirement. It has the same effect as the command line:
>
> STYLO MYFILENAME #nk
>
> where n=number of kilobytes etc. This size can be increased from the command line but not decreased except from STYFIX. Minimum data buffer size in bytes?
>
> (Min = 6144 bytes Max = 65535 bytes)

This choice allows the module header permanent storage requirement to be increased or decreased in size to adapt STYLO to use the amount of memory that is best suited to any specific system. The minimum is set due to the fact that STYLO requires approximatly that amount for its own uses. The maximum is only limited by the largest contiguous memory block available on a system.

If the choice is #8 of the STYLOGRAPH MENU then STYFIX will complete its task and return to the operating system.

STYFIX MM

This is the menu that appears if the filename is MM:

------- MAILMERGE configuration program -------

1. Set default printer type.
2. Set default STYPS pathname.
3. Return to OS-9.

If the choice is #1 of the MAILMERGE MENU the following prompt will appear:

Printer number?

These numbers can be found in this Mail Merge Manual on page 4. Type the number followed by a carriage return and the MAILMERGE MENU will reappear ready for your next choice.

If the choice is #2 of the MAILMERGE MENU the following prompt will appear:

```
Pathname(/p,/pl,/HO/STY/DICT etc.30 chars max)?
```

This prompt expects an OS9 pathname of not more than 30 characters giving the path (complete OS9 filename) of the STYPS proportional spacing table file.

If the choice is #3 of the MAILMERGE MENU then STYFIX will complete its task and return to the operating system.

STYFIX SPELL

This is the menu that appears if the filename is SPELL:

```
------- SPELL CHECKER configuration program -------

        1. Set default primary dictionary path(DICT).
           (/D1/STY/DICT, /h0/mydir/sam/dict, etc.)
        2. Set default secondary dictionary path(SUPP).
           (/D1/STY/SUPP, /h0/mydir/sam/supp, etc.)
        3. Return to OS-9.
```

If the choice is #1 of the SPELL CHECKER MENU the following prompt will appear:

```
Pathname(/p,/pl,/HO/STY/DICT etc.30 chars max)?
```

This prompt expects a OS9 pathname of not more than 30 characters giving the path(complete OS9 filename) of the DICT main dictionary file.

If the choice is #2 of the SPELL CHECKER MENU the following prompt will appear:

```
Pathname(/p,/pl,/HO/STY/DICT etc.30 chars max)?
```

This prompt expects a OS9 pathname of not more than 30 characters giving the path(complete OS9 filename) of the SUPP secondary or supplimentary dictionary file.

If the choice is #3 of the SPELL CHECKER MENU then STYFIX will complete its task and return to the operating system.

MODIFYING STYLOGRAPH FOR NON-SUPPORTED SERIAL TERMINALS

If you have a serial terminal which is not listed in appendix C, then you may return your Stylograph disk to us for modification. When you return your disk, also include a copy of the terminal user's manual which includes the control codes. Terminal updates will be done for a $50.00 charge.

If you wish, and are capable of assembly code work, you may do the modifications yourself. The terminal driver consists of two different parts: a stack of pointers located $20 bytes above TRMBEG, and a stack of ASCII control sequences located at TRMSEQ. The source code for two different terminal drivers, a CT-82 and an ADM-3A, are included in your disk. They may be used as models for constructing your own terminal driver. The easiest course of action is to edit one of these files to create your own file. The method of modifying one of these drivers is explained in the Appendix D --- "MODIFYING STYLOGRAPH FOR NON-SUPPORTED SERIAL TERMINALS".

After the new source code has been created, the binary file must be appended to the present Stylograph file by using the "styappen" program. Assuming that the new terminal driver is named "styterm" and the "styappen" file has been put in the "cmds" directory, the following command should cause Stylograph to work with the new terminal:

```
styappen cmds/stylo styterm
```

CHANGING TEXT CONSTANTS

A text file by the name "stytext" is supplied on your disk. This file may be modified, assembled and appended to Stylograph to change any of the text constants. The procedures for changing this text file are explained in Appendix E of this manual.

PRINTING SPOOLED FILES

Files that have been spooled to a disk for later printing, by means of the "SPOOL" command, can be printed as follows:

For example suppose you have spooled a file "MYFILE" TO "MYDIR" on drive /d1. This spooled file can be printed using the OS-9 "COPY" command as shown below.

```
chd /d1/mydir
copy myfile /p
```

Do not use the right arrow (>) symbol.

GENERAL OPERATION

STYLOGRAPH II has been adapted to operate on the Radio Shack Color Computer using the OS9 operating system. All features of STYLOGRAPH available on other systems have been preserved in this version. However, due to the limitations of the Color Computer, some explanation of special features and special procedures is necessary.

The major limitation of the Coco is its small screen size. STYLOGRAPH is set up for the 24x51, high resolution screen using FHL O-PAK. Since this format is smaller than the standard line length of 80 columns, the following procedure is recommended. Do not set the desired line length until all text has been entered, proofread, and corrected. If no line length is specified, the default line length will be the width of the screen display. If the final line length is set at the beginning, the built in horizontal scrolling functions will have to be used extensively to view all of the text.

Once the text is determined to be correct, then use the ',LL' command to enter the desired line length. The displayed text will be reformatted, and at this point, you should verify that the overall format of the page is correct. The text should then be saved to a file and/or printed as desired.

INITIAL SETUP

This STYLOGRAPH disk should contain five files and one directory.

FILE NAME	FUNCTION
README	A brief explanation on getting started with STYLO
STYLO	The main word processor
STYFIX	The configuration program
HISTORY	Contains recent changes to STYLO
MAKESTYLO	A Shell Procedure File which configures STYLO
STY	A DIRECTORY containing the files below
Styhlp (1-6)	These files contain HELP text (clear A)
Styerr	This file contains error message text (clear N)
Stypstat	This file contains page status (clear P)
Styps_b	Porportional Spacing table for BROTHER HR-15 printer
Styps_d	Porportional Spacing table for DIABLO printer
Styps_n	Porportional Spacing table for NEC printer
Styps_7	Porportional Spacing table for CENTRONICS printer
Intro	A STYLO introductory sample file

STYLO and STYFIX are executable programs and will be put in your CMDS directory with the following procedures.

GETTING STARTED WITH STYLOGRAPH

For your own protection MAKE A BACKUP COPY OF THE DISK RECEIVED FROM GPCCI BEFORE DOING ANYTHING ELSE.

PROCEDURE

1. Place a blank or scratch disk in drive /D1 and your OS/9 system disk in /D0.

```
OS9: FORMAT /D1
OS9: BACKUP /D0 /D1
```

NOTE: When the backup program pauses for verification, switch your OS/9 system disk in /D0, with the Stylograph master disk received from GPCCI.

2. Put the original Stylograph Master Diskette away in a safe place.

3. Now let us create a bootable Stylograph system disk. Place a blank or scratch disk in /D1, and insert your **ORIGINAL RADIO SHACK OS/9 SYSTEM MASTER DISKETTE** in /D0.

```
OS9: FORMAT /D1
OS9: BACKUP /D0 /D1
```

4. Remove RS Master Disk and put it in a safe place. Insert your new system disk from /D1 into /D0 and place your Stylo copy disk in /D1.

```
OS9: /D1/MAKESTYLO
```

NOTE: MAKESTYLO deletes your DEFS directory and your present STARTUP file. It puts STYLO and STYFIX into your Commands directory and puts all of the files STYLO needs into the STY directory. It also creates a new STARTUP file which gives you High Resolution and faster screen scrolling.

5. STYLO is meant to be used with FHL'S O-PAK so it is necessary to have the programs HIRES and STDCS in your CMDS directory.

i.) Insert your **ORIGINAL** FHL O-Pak program disk in /D1.
ii.) Your new OS/9 system should still be in /D0.

```
OS9: COPY /D1/HIRES /D0/cmds/HIRES
OS9: COPY /D1/STDCS /D0/cmds/STDCS
```

You now have a bootable Stylograph System Disk ready to go to work for you. To call the Stylo program up simply type the following:

OS9: **STYLO /D0/STY/INTRO**

This will bring up STYLO with a test file called INTRO.

At this point you should refer to the tutorial as outlined in the documentation.

One final step would be to format a blank disk to be used in /D1 as a data disk for files.

DEFAULTS

Stylo assumes that the STY directory will be found at the root level of drive #0(/D0). Stylo assumes that the printer is /P. However, any of these may be changed if necessary by using the program STYFIX.

STYFIX

See the OS9 STYFIX STYLO description on page 50.

KEYBOARD INFORMATION

Since the Color Computer keyboard scanner is rather limited, Auto repeat and 4 key roll-over are not available for Stylo.

CONTROL — The Radio Shack 'clear' key serves as the standard 'Control' key. Hold this key down and press any other key to obtain their respective control function.

ESCAPE — The 'clear-break' sequence generates the escape code (ascii $1B).

CAP-LOK — 'Clear'-0 is the CAPS-lock or SHIFT-lock. When STYLOGRAPH begins execution, the keyboard will be in upper-case mode. Typing clear-0 places the keyboard in lower-case mode. In this mode, the shift key must be used to produce upper-case characters. Typing clear-0 again returns to upper-case mode. In this mode, all alphabet keys will generate the upper-case character.

BACKSPACE — Control-H or the 'left arrow' may be used to backspace in STYLOGRAPH. Both generate the ASCII code $08.

MARKER — The Stylo "MARKER" character is used to delimit areas of text for delete, move, or save operations. The CONTROL 'period' key produces the right bracket character, '}', which Stylo use as a 'MARKER'.

RUBOUT Control-right arrow generates ASCII 7F or 'RUBOUT'. It is used to terminate character modifications or to remove the modification from a previously modified character or string of characters. After modifying a character or string, type 'control- right arrow' to stop the modification. To remove the modification from a previously modified character or string, position the cursor over the first modified character and type 'control-right arrow'. The character under the cursor will be changed to a normal unmodified character and the cursor advanced to the next character. By holding down the 'control' key and repeatedly typing 'right arrow' an entire modified string can thus be normalized.

INSERT-1 To insert a single character into your text file enter the excape mode 'clear-break' and then type the '^' key. This is the 'Control 7' key on the Color Computer. Then type the character to be inserted.

OVERWRITE-1 To overwrite a single character on your text file enter the escape mode 'clear-break' and then type the '1' key followed by the new character.

COLOR COMPUTER KEYBOARD

KEY	UNSHIFTED	SHIFTED	CONTROL	CAPS
@	$40=@	60='	00=NUL	40
A	61=a	41=A	01=soh	41
B	62=b	42=B	02=stx	42
C	63=c	43=C	03=etc	43
D	64=d	44=D	04=eot	44
E	65=e	45=E	05=enq	45
F	66=f	46=F	06=ack	46
G	67=g	47=G	07=bel	47
H	68=h	48=H	08=bs	48
I	69=i	49=I	09=ht	49
J	6A=j	4A=J	0A=lf	4A
K	6B=k	4B=K	0B=yt	4B
L	6C=l	4C=L	0C=ff	4C
M	6D=m	4D=M	0D=cr	4D
N	6E=n	4E=N	0E=so	4E
O	6F=o	4F=O	0F=si	4F
P	70=p	50=P	10=dle	50
Q	71=q	51=Q	11=dc1	51
R	72=r	52=R	12=dc2	52
S	73=s	53=S	13=dc3	53
T	74=t	54=T	14=dc4	54
U	75=u	55=U	15=nak	55
V	76=v	56=V	16=syn	56
W	77=w	57=W	17=etb	57
X	78=x	58=X	18=can	58
Y	79=y	59=Y	19=em	59
Z	7A=z	5A=Z	1A=sub	5A
up arr	0C	1C	13	
dn arr	0A	1A	12	
lft arr	08	18	10	
rt arr	09	19	11=mod removal	
BREAK	05	03	1B=escape	
CLEAR	control	control	-------	
0	30 = 0	30= 0	TOGGLE CAP	
1	31 = 1	21 = !	7C = |	
2	32 = 2	22 = "	00	
3	33 = 3	23 = #	7E = ~	
4	34 = 4	24 = $	00	
5	35 = 5	25 = %	00	
6	36 = 6	26 = &	00	
7	37 = 7	27 = '	5E = ^	
8	38 = 8	28 = (	5B = [	
9	39 = 9	29 =)	5D =]	
:	3A = :	2A = *	00	
;	3B = ;	2B = +	00	
,	2C = ,	3C = <	7B = {	
-	2D = -	3D = =	5F = _	
.	2E = .	3E = >	7D = }	
/	2F = /	3F = ?	5C = \	

TERMINAL CONFIGURATION

The supplied copy of STYLOGRAPH is configured for the FHL O-PAK screen driver. This is terminal number T1. No provision is made to allow Stylo to operate with an external terminal connected to the Color computer.

PRINTER INTERFACE

The supplied copy of STYLOGRAPH is setup to use a TTY type of printer with backspace capability. To use any other type of printer, follow the instructions in the Stylo manual, OS9 Configuration Chapter for using STYFIX to select the default printer type.

PRINTER DRIVERS

In order to use your printer, you must copy your current file onto the Stylo System disk.

HELP FILES

Operation of the HELP files is as described in the STYLOGRAPH Manual except that the number of help files has been increased. In the original version of Stylo, some of the help displays were too large to fit on the small screen display of the Color Computer. These files were divided into two or three parts.

PAGE STATUS DISPLAY

The page status display has been changed slightly from the description in the Stylo manual. In order to display all of the information available, it was necessary to divide the display into two parts. Entering Control-P causes the first status page to be displayed. This page includes the current file status and som of the page status information. At this point, typing 'break' will return Stylo to the Edit mode. To view the second page of status information, type another Ctrl-P. Either 'break' or Ctrl-P will then return to the Edit mode.

STYLOGRAPH III WORD PROCESSING SYSTEM

STYLOGRAPH CONFIGURATION PROGRAM

The following sections explain how to set up your computer, terminal and printer so that they will work together and understand each other.

STYFIX

Styfix is the name of the program which is used to configure the Stylograph Word Processing System to various terminals and printers.

Styfix is a command file and can be called up from any disk drive as long as the full path name is used. Using a backup copy of the original Stylograph disk, you would call the program up as follows:

1. OS9 system disk in /d0
2. Stylograph disk located in /d1
3. OS9: /d1/styfix /d1/stylo

Note: Both styfix and stylo can be put into the commands directory containing other OS9 commands.

STYFIX MENU

After initiating the correct command the following menu will appear on the screen:

```
----STYLOGRAPH Configuration Program----
 1. Configure terminal.
 2. Configure System Map
 3. Configure printer.
 4. Toggle(on/off) proportional table load at startup.
 5. Set maximum pages.
 6. List memory boundaries.
 7. Set default STY directory pathname.
 8. Set default data buffer size(work area)
 9. Configure Keyboard
10. Return to OS-9.
Choice?
```

The configuration program is menu driven. Simply enter the number or letter of the function you want to perform and that option will be activated.

Enter "1" to select the proper terminal driver you are using.

Don't forget to press the 'RETURN'.

1. CONFIGURE TERMINAL

This option is designed to step you through setting up your terminal with Stylograph. This permits Stylograph to identify in an easy fashion what terminal each person on the system is using. This is very nice and convenient in a multi-user environment.

The first screen to appear is below.

DEVICE CONFIGURATION

0- HAZELTINE ESPRIT	1- SOROC IQ-120	2- SOROC IQ-140
3- SOROC IQ-130/135	4- TVI 912/920; ADM -31	5- HAZELTINE 1500/1420
6- HAZELTINE 1400	7- ADM -3A	8- ADM -42
9- MIME -2A	10- ACT -5A	11- INTERTUBE II
12- ADDS VIEWPOINT /60	13- SWTPC CT-8209/12	14- DEC VT-52
15- ADDS REGENT 25	16- HEATH/ZENITH H19/Z10	17- TEC 510,610
18- BEEHIVE MICRO B2	19- BEEHIVE B100	20- VOLKER-CRAIG VC-404
21- H.P. 2621 A/P	22- ADDS VIEWPOINT	23- MOTOROLA EXORTERM
24- VISUAL 300	25- TEC 70	26- TANDBER TVD 2220
27-	28- VOLKER-CRAIG VC4404	29- CYBERNEX XL 87
30- PERKIN-ELMER 550	31- ADM-5	32-
33-	34-	35-

If your device is listed above remember its number for the system map.
(Hit <cr> to exit, any key to add a new device)

You have two responses to choose from at this point.

1. The terminals listed here are ones which already have the correct code sequences. If your terminal model is currently listed all you need to do is remember the number associated with the terminal and hit "return". This will return you to the main menu. Option 2 is the next step to choose to finish configuring the terminal drivers for your system.

2. If your terminal model is not listed, press any key to continue on and the following question will appear.

Enter (device # to modify, <cr> to exit)

At this time it would be adviseable to have your terminal manual handy for reference. Try to choose an existing terminal model which is similar to yours if possible. This will minimize the number of modifications needing to be made.

For example purposes, I will choose #16 (Heath/Zenith H19,Z19).

A new screen will appear displaying the current screen codes for #16.

TERMINAL CONFIGURATION CHOICES

A list of terminal configuration choices will now appear on the screen.

SEQUENCE CONFIGURATION

Description	Choice	Sequence (Hex)
CURSOR POSITIONING	A	1b,59
CURSOR ON	B	1b,79,35
CURSOR OFF	C	1b,78,35
CURSOR BLINK	D	1b,78,34
CURSOR SOLID	E	1b,79,34
CLEAR THE SCREEN	F	1b,48,1b,4a
ERASE LINE FROM CURSOR TO END	G	1b,4b
SCROLL SCREEN UP	H	1b,59,37,20,0a
SCROLL SCREEN DOWN	I	1b,48,1b,49
INITIALIZE TERMINAL	J	1b,78,34,1b,07
RESET THE TERMINAL	K	1b,7a
INSERT MODE/CHAR-MOD OFF	L	1b,71
INSERT MODE/CHAR-MOD ON	M	1b,70
INSERT LINE	N	0
INSERT CHARACTER 1	O	0
INSERT CHARACTER 2	P	0
DELETE LINE	Q	0

Enter (Choice A-Q); <cr> to exit

There are three column headings:

Description - defines function being performed
Choice - allows you to change the code sequence.
Sequence - existing code sequence.

Here you will need to have your terminal manual in hand to compare the code sequences displayed on the screen. If you have no changes hit "<cr>" and continue on.

If there are changes to be made simply enter in the appropriate letter corresponding to the code sequence and type in the new sequence. Refer to the section on "Terminal Configuration Codes" for further information on each of the the code sequences. Also, a Terminal Configuration Work Sheet has been is included at the end of this section as a convenient tool to use when setting your terminal up.

When all sequences are correct hit <cr> and the following question will appear.

Save New Changes (Y*/N) ?

Answer "Y" to this question to continue on after making the correct code entries.

STYLOGRAPH III

Terminal Configuration

	Heath H-19	Hazeltine Esprit	Define Your Own Terminal
A. Cursor Positioning Sequence			
# of Rows	24	24	
# of Columns	80	80	
Automatic Scroll	Y	Y	
R-(Row/column) C-(Column/row)	R	C	
Direct Cursor Adress Offset or Hex 20 (y/n)	Y	N	
Sequence	1b,59	1b,11	
B. Cursor On Sequence	1b,79,35	00	
C. Cursor Off Sequence	1b,78,35	00	
D. Cursor Blink Sequence	1b,78,34	00	
E. Cursor Solid Sequence	1b,79,34	00	
F. Clear the Screen Sequence	1b,48,1b,4a	1b,1c	
G. Erase line from Cursor to End of Line	1b,4b	0d,1b,0f	
H. Scroll Screen up Sequence	1b,59,37,20,0a	1b,11,00,17,0a	
I. Scroll Screen Down Sequence	1b,48,1b,49	1b,12,1b,1a	
J. Initialize Terminal Sequence	1b,78,34,1b,07	1b,06,1b,24,1b,1f	
K. Reset the Terminal Sequence	1b,7a	00	
L. Insert Mode Character Mod Off	1b,71	1b,1f	
M. Insert Mode Character Mod On	1b,70	1b,19	
N. Insert Line Sequence (Not Used)	00	00	
O. Insert Character 1 Sequence (Not Used)	00	00	
P. Insert Character 2 Sequence (Not Used)	00	00	
Q. Delete Line Sequence (Not Used)	00	00	

TERMINAL DEFINITIONS

After saving the new changes one final screen will appear.

TERMINAL CONFIGURATION

0- HAZELTINE ESPRIT	1- SOROC IQ-120	2- SOROC IQ-140
3- SOROC IQ-130/135	4- TVI 912/920; ADM -31	5- HAZELTINE 1500/1420
6- HAZELTINE 1400	7- ADM -3A	8- ADM -42
9- MIME -2A	10- ACT -5A	11- INTERTUBE II
12- ADDS VIEWPOINT /60	13- SWTPC CT-8209/12	14- DEC VT-52
15- ADDS REGENT 25	16- HEATH/ZENITH H19/Z10	17- TEC 510,610
18- BEEHIVE MICRO B2	19- BEEHIVE B100	20- VOLKER-CRAIG VC-404
21- H.P. 2621 A/P	22- ADDS VIEWPOINT	23- MOTOROLA EXORTERM
24- VISUAL 300	25- TEC 70	26- TANDBER TVD 2220
27-	28- VOLKER-CRAIG VC4404	29- CYBERNEX XL 87
30- PERKIN-ELMER 550	31- ADM-5	32-
33-	34-	35-

Enter the DEVICE NUMBER (0-35) to Save this driver.
Note: This will destroy the driver at that Number!!
Enter number (RETURN when correct): **16**
The Device Description (20 chars. max.)
Enter description (RETURN when correct): **HEATH/ZENITH H19,Z19**

This screen contains all the terminal models currently defined on the system. If you have just modified one of the currently exiting terminal models it would be advisable to choose an empty number slot and put your new defined terminal model there.

At the bottom of the screen you are prompted to assign any number (0-35) and define the new terminal model anyway you desire (20 characters maximum)

For example, the above screen shows I modified #16 (Heath/Zenith H19,Z19) to arrive at a new terminal model. I would now choose an empty slot number, say #33, and rename the terminal model to QUME 102.

After entering the new terminal model into the table hit <cr> and you will be returned to the main menu.

TERMINAL CONFIGURATION CODES

You will be prompted through each function and all changes will appear on the revised screen display.

Some of the values may already be correct as they are listed. If so, leave them alone. You need to change only those values that don't correspond to your terminal specifications.

A. CURSOR POSITIONING

A list of five questions concerning your screen size and operation procedures will now appear on your screen one at a time.

CURSOR POSITIONING

This sequence is the Direct Cursor Addressing lead-in code.

How many ROWS does the screen have ? 24
How many COLUMNS does the screen have ? 80
When a character is typed in the last column of the last line
does the terminal automatically scroll up one line?

YES will subtract one column (Y/N) ? Y
Which comes first when using a Direct Cursor Address
ROW (y-axis) or COLUMN (x-axis) (R/C) ? R
Does a Direct Cursor Address need an offset of Hex 20 (Y/N) ? Y

If the answers match your terminal specifications press the "RETURN" key and the next question will appear.

To make changes in the specifications simply enter in the correct answers at the bottom of the screen or where ever the cursor is positioned.

After you answer the first five questions a new screen will appear.

This sequence is the Direct Cursor Addressing lead in code.

If CORRECT press: CARRIAGE RETURN (CR)
If INCORRECT enter NEW sequence followed by a CR.
Numbers larger than 127 decimal = 7f hex are NOT ALLOWED.

The CURRENT sequence is: 1b,59
Enter the NEW sequence here:

If the sequence code on the screen matches the sequence code in your terminal manual press "RETURN" and continue.

If the sequence code doesn't match, enter in the correct code from your manual, press the "RETURN" key and continue.

Notice that any changes you have made now appear on the menu.
Remember you only need to change those sequence codes that don't match your particular terminal specifications.

The following information is for those people who own or operate one of the four listed terminals below. Stylograph contains special machine code routines which must be used for cursor moves on these terminals only.

HEWLETT PACKARD 2621	-	00,7F
TEC 70	-	01,7F
ANSI STANDARD	-	02,7F
GIMIX VIDEO BOARD	-	03,7F

Enter the appropriate code sequence for option A above.

B. CURSOR ON

This screen will appear:

CURSOR ON

This sequence Turns the Cursor On.

If CORRECT press: CARRIAGE RETURN (CR)
If INCORRECT enter NEW sequence followed by a CR.
Numbers larger than 127 decimal = 7f hex are NOT ALLOWED.

The CURRENT sequence is: 1b,79,35
Enter the NEW sequence here:

Enter the appropriate sequence code in the space provided and press "RETURN".

C. CURSOR OFF

This screen will appear:

CURSOR OFF

This sequence Turns the Cursor Off.

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,78,35
Enter the NEW sequence here:

Enter the appropriate sequence code and press "RETURN" to continue on.

D. CURSOR BLINK

The following screen will appear:

CURSOR BLINK

This sequence Causes the Cursor to Blink.

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,78,34
Enter the NEW sequence here:

Enter the appropriate code and press "RETURN".

E. CURSOR SOLID

This screen will appear:

CURSOR SOLID

This sequence Causes the Cursor to Stop Blinking.

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,79,34
Enter the NEW sequence here:

Enter code and "RETURN".

F. CLEAR THE SCREEN

This screen will appear:

CLEAR THE SCREEN

This sequence Clears the Full Screen.

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,48,1b,4a
Enter the NEW sequence here:

Enter appropriate code and press "RETURN".

G. ERASE LINE FROM CURSOR TO END

This screen will appear:

ERASE LINE FROM CURSOR TO END

This sequence Erases From the Cursor(includes cursor)
To End Of The Line

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,4b
Enter the NEW sequence here:

Enter code and press "RETURN".

H. SCROLL SCREEN UP

This screen will appear:

SCROLL SCREEN UP

This sequence Causes The Screen To Scroll Up One Line.

CORRECT press (CR)
INCORRECT enter NEW

The CURRENT sequence is: 1b,59,37,20,0a
Enter the NEW sequence here:

Enter code and press "RETURN".

I. SCROLL SCREEN DOWN

This screen will appear:

SCROLL SCREEN DOWN

This sequence Causes The Screen To Scroll Down One Line.

CORRECT press: (CR)
INCORRECT enter NEW

The CURRENT sequence is: 1b,48,1b,49
Enter the NEW sequence here:

Enter code and press "RETURN".

J. INITIALIZE TERMINAL

This screen will appear:

INITIALIZE TERMINAL

This sequence Initializes The Screen.

CORRECT press: (CR)
INCORRECT enter NEW

The CURRENT sequence is: 1b,78,34,1b,07
Enter the NEW sequence here:

Enter code and press "RETURN".

K. RESET THE TERMINAL

This screen will appear:

RESET THE TERMINAL

This sequence Resets The Terminal

CORRECT press: (CR)
INCORRECT enter NEW

The CURRENT sequence is: 1b,7a
Enter the NEW sequence here:

Enter code and press "RETURN".

L. INSERT MODE/CHAR MOD OFF

This screen will appear:

INSERT MODE CHAR MOD OFF

This sequence Turns Insert Mode and Mod Characters Off.

CORRECT press: (CR)
INCORRECT enter NEW

The CURRENT sequence is: 1b,71
Enter the NEW sequence here:

Enter code and press "RETURN".

M. INSERT MODE CHAR MOD ON

This screen will appear:

INSERT MODE CHAR MOD ON

This sequence is Used To Indicate Insert Mode And Mod Chars.

CORRECT press: (CR)
INCORRECT enter NEW

The CURRENT sequence is: 1b,70
Enter the NEW sequence here:

Enter code and press "RETURN".

N. INSERT LINE
O. INSERT CHARACTER 1
P. INSERT CHARACTER 2
Q. DELETE LINE

These functions are currently set at 00 which means that they are non-functional.

In order for a function to be performed a code or value of some sort must be entered.

If your particular terminal does not perform certain functions you must enter 00 as its sequence code.

SAVE AND RETURN

When you have finished matching all of the sequence codes to those in your terminal manual, simply press return to continue on. The screen will display the following question.

Save New Changes (Y*/N) ?

Answer "Y" to this question and continue on. Refer to the previous section called "Terminal Definition" for further instructions.

2. SYSTEM MAP

The System Map is simply an outline of what terminals are currently on the system. The /T defines the device name and the next number defines the new terminal you have just configured or one which you have chosen from the list of preconfigured terminals.

From the main menu listed below, choose option #2.

```
----STYLOGRAPH Configuration Program----
 1. Configure terminal.
 2. Configure System Map
 3. Configure printer.
 4. Toggle(on/off) proportional table load at startup.
 5. Set maximum pages.
 6. List memory boundaries.
 7. Set default STY directory pathname.
 8. Set default data buffer size(work area)
 9. Configure Keyboard
10. Return to OS-9.
Choice?
```

The following screen will be displayed.

DEVICE CONFIGURATION

```
 0- HAZELTINE ESPRIT        1- SOROC IQ-120           2- SOROC IQ-140
 3- SOROC IQ-130/135        4- TVI 912/920; ADM -31   5- HAZELTINE 1500/1420
 6- HAZELTINE 1400          7- ADM -3A                8- ADM -42
 9- MIME -2A               10- ACT -5A                11- INTERTUBE II
12- ADDS VIEWPOINT /60     13- SWTPC CT-8209/12       14- DEC VT-52
15- ADDS REGENT 25         16- HEATH/ZENITH H19/Z10   17- TEC 510,610
18- BEEHIVE MICRO B2       19- BEEHIVE B100           20- VOLKER-CRAIG VC-404
21- H.P. 2621 A/P          22- ADDS VIEWPOINT         23- MOTOROLA EXORTERM
24- VISUAL 300             25- TEC 70                 26- TANDBER TVD 2220
27-                        28- VOLKER-CRAIG VC4404    29- CYBERNEX XL 87
30- PERKIN-ELMER 550       31- ADM-5                  32-
33-                        34-                        35-
```

SYSTEM MAP (0-19)

```
Device Nam = Term #  Device Nam = Term #  Device Nam = Term #  Device Nam - #
  /TERM = 0            /T1 =   0            /T2 =  32            /T3 =   0
  /T4   =  0           /T5 =   0            /T6 =   0            /T7 =   0
  /T8   =  8           /T9 =   9            /T10 = 10            /T11 = 11
  /T12 = 12            /T13 = 13            /T14 = 14            /T15 = 15
  /T16 = 16            /T17 = 17            /T18 = 18            /T19 = 19

Enter Device name to change (0=/TERM;1=/T1;etc.; E - Exit) ?
```

There are two parts to this screen display, the top part is a summary of the terminals that are currently defined. Use this list to fill in the bottom part of your screen.

The second part of the screen is called the System Map. As you can see there are already numbers existing in some of the slots. These can be changed at any time and currently you are allowed up to 19 different terminal possibilities. Hopefully, that should satisfy most systems!

To enter in changes type the number corresponding to the /T descriptor.

For example, 0 would change /TERM, 1 would change /T1, 2 would change /T2, etc.

If you only have one terminal in your system then enter it's number in the first port.

For example, if your terminal is listed as #32 on the terminal list enter:

0 <cr>

The bottom of the screen will display your choice and allow you to change it accordingly.

/TERM = 0

If you use more than one terminal in your system then you need to assign the correct terminals to all of the ports which are being used.

For example, if you were to use a Heath H19, a DEC VT-52 and a Hazeltine Esprit all in one system you could list the ports as follows:

/TERM = 5 - this would be the main system terminal or system manager.
/T1 = 13
/T2 = 32

When calling up Stylograph the program will know what terminal you are using and automatically use the correct terminal driver.

After each entry you make, the screen will update itself. This allows you to view what assignments you have made before exiting.

To exit, hit <cr> and you will be prompted to save the new changes (Y*/N).

3. PRINTER CONFIGURATION

The Printer Configuration option is used to customize your printer to be used with Stylograph. This program allows you to either choose a predefined printer definition or build one based upon your printer requirements.

After entering option "3" a list of printer numbers and descriptions will appear on the screen.

DEVICE CONFIGURATION

0- P0 - version 2	1- EPSON MX-80	2-
3- BROTHER HR-15	4-	5-
6-	7-	8-
9-	10- P30 - version 2	11- P40 - version 2

If your device is listed above type the correct number. If your device is not listed above choose a device that may serve as an example while building your own. Choice ?
Can your printer do porprotional spacing(Y*/N) ?
How many micro increments(dots)
per horizontal inch does the printer need?
This value must be non-zero.
Horizontal Micro Increments(Return If/When Correct) ?

Some of the more common printers in use today have already been defined for your convenience. Some of the device descriptors (P0,P30,P40) are ones used in previous Stylograph versions. The classifications will work with a variety of printers to allow basic functions to be performed. Refer to Appendix C for futher explanation.

Currently, the printer configuration program is set up to allow a user to define up to 11 different printer devices. Stylograph however, only allows you to load one printer at a time into the system.

The default is always going to be slot 0. To load other printer devices you will need to type it into the command line when you load Stylograph.

For example, if you want to use the Epson MX-80 which is located in slot #1, you would type the following command sequence when calling up Stylograph.

Stylo <filename> +P1

This command would load Stylo, a file and the **+P1** would specify that you want to use the Printer description located in slot #1 (Epson MX-80).

STYLOGRAPH III
PRINTER CONFIGURATION WORK SHEET

** Screen One **	Epson MX-80	Brother HR-15	Define Your Own Printer
Proportional Spacing (y/n)	N	Y	
Horizontal Micro Increments	00	120	
A. Vertical Spacing Sequence	00	1b,1f	
Vertical Micro Increments	00	48	
Vertical Sapcing Offset	00	1	
B. Character Spacing Pitch Seq.	00	1b,1f	
Horizontal Spacing Offset	00	1	
C. Reverse Line Feed Sequence	00	1b,0a	
D. Normal Line Feed Sequence	00	0a	
E. Form Feed Sequence	0c	0c	
F. Start Subscript Sequence	1b,53,01	1b,55	
G. Stop Subscript Sequence	1b,48	1b,44	
H. Start Superscript Sequence	1b,53,00	1b,44	
I. Stop Superscript Sequence	1b,48	1b,55	
Can Your Printer Backspace? (Y/N)/	Y	Y	
J. Start Underline Sequence	1b,2d,01	1b,45	
K. Stop Underline Sequence	1b,2d,00	1b,52	
L. Start Overline Sequence	00	00	
M. Stop Overline Sequence	00	00	
N. Start Boldface Sequence	1b,47	1b,57	
O. Stop Boldface Sequence	1b,48	1b,26	
P. Reset All Printer Modes Sequence	1b,40	1b,0d,50	
**** Screen Two ****			
A. # of characters/inch in Compressed Print Compressed Print Sequence	0f	1b,1f,10	
B. # of characters/inch in Normal Print Normal Print Sequence	12,14	1b,1e,00	
C. # of characters/inch in expanded Print Expanded Print Sequence	0e	1b,1f,0b	
D. # of lines/in.- Compressed Vertical Spacing Compressed Vertical Spacing Sequence	00	1b,1e,09	
E. # of lines/in.- Normal Vertical Spacing Normal Spacing Sequence	6	6	
F. # of lines/in.- Expanded Vertical Spacing Expanded Vertical Spacing Sequence	00	1b,1e,05	
G. Optional Extra Sequence	0	0	
H. Optional Extra Sequence	0	0	
I. Optional Extra Sequence	0	0	
J. Optional Extra Sequence	0	0	

If you have only one printer or one printer which is used most of the time, there is one thing you could do. Simply assign the printer you are using most, to slot 0. In this way, the default will always be to the printer you use the most. When you want to use another printer just designate it on the command line when you call up Stylo.

If your printer is listed on the screen, then the work is done! You can exit by pressing RETURN. However, it is important to remember what number your printer device is located in unless you have assigned it to slot 0.

In the event your printer is not listed on the screen, it would be to your advantage to choose an existing one which closely resembles yours. In this way you can use it to build with and assign it a different number slot when you are done.

Upon choosing a printer to build on, the next step is to answer the questions immediately following. If your printer does do proportional spacing the prompt will continue on down the questions. Otherwise you will continue on to the actual Printer Configuration Menu.

PRINTER CONFIGURATION MENU

The following menu will appear on the screen after you have answered all of the previous questions and pressed "RETURN".

SEQUENCE CONFIGURATION

Description	Choice	Sequence (Hex)
SET VERTICAL SPACING	A	1b,1e
SET CHARACTER SPACING - PITCH	B	1b,1f
REVERSE LINE FEED	C	1b,44,1b,44
NORMAL LINE FEED	D	0a
FORM FEED	E	0c
START SUBSCRIPT	F	1b,55
STOP SUBSCRIPT	G	1b,44
START SUPERSCRIPT	H	1b,44
STOP SUPERSCRIPT	I	1b,55
START UNDERLINE	J	00
STOP UNDERLINE	K	00
START OVERLINE	L	00
STOP OVERLINE	M	00
START BOLDFACE	N	00
STOP BOLDFACE	O	00
RESET ALL PRINTER MODES	P	1b,1a,49

Enter (Choice A-P) ; X-Next Menu; <cr> to exit

Listed above are a number of various functions performed by printers.

The following steps outline what is required of you.

1. Have your printer manual in hand
2. Find the pages which define your particular printer codes
3. Compare what is in your manual with what is listed on the screen
4. Modify the codes to reflect what is presented in your manual.
5. A Printer Configuration Work Sheet is included at the end of this section and should be filled in and kept as a reference sheet.

To make a change, simply choose the alphabet letter which corresponds to the description needed to be modified. Enter in the correct code sequence and you are done. Notice that all of the new values that you have entered are now listed on the screen.

Note that the code numbers are represented in hexidecimal form and must be entered that way too.

All printer manuals should contain references to the above information. If not, please contact the printer manufacturer.

You will notice at the bottom of the screen the prompt line. By hitting an **X** you will bring up screen two, hit **X** again and you will be back to screen one. This is a toggle key which allows you to move and view either screen until all codes are correct.

Screen two is shown below.

SEQUENCE CONFIGURATION

Description	Choice	Sequence(Hex)
COMPRESSED CHARACTER WIDTH MODE	A	00
NORMAL CHARACTER WIDTH MODE	B	00
EXPANDED CHARACTER WIDTH MODE	C	00
COMPRESSED VERTICAL SPACE MODE	D	00
NORMAL VERTICAL SPACE MODE	E	00
EXPANDED VERTICAL SPACE MODE	F	00
EXTRA CONTROL SEQUENCE W	G	00
EXTRA CONTROL SEQUENCE X	H	00
EXTRA CONTROL SEQUENCE Y	I	00
EXTRA CONTROL SEQUENCE Z	J	00

Enter (Choice A-J); X-Next Menu; <cr> to exit

As you can see, screen two is just a continuation of screen one. Any changes that need to be made are done in the same fashion as described previously.

Further explanation on each of the printer functions can be found at the end of this section.

The final step in this printer configuration program is to save what we have just done. To accomplish this task enter a RETURN and the following prompt will appear:

Save New Changes (Y*/N) ?

Answer "Y" to this question and one final screen will appear.

PRINTER CONFIGURATION

printer #- description	printer #- description	printer #- description
0- P0	1- EPSON MX-80	2-
3- BROTHER HR-15	4-	5-
6-	7-	8-
9-	10- P30	11- P40

Enter the PRINTER NUMBER (0-11) to SAVE this printer.
NOTE: This will destroy the printer at that number!!!
Enter number (Return when correct): 1
THE PRINTER DESCRIPTION (20 chars. max)
Enter description (RETURN when correct): **EPSON MX-80**

This screen lists the current slot assignments of printers that are in the system. When you reach this screen you probably have just finished entering in all the new printer codes for your particular printer. You now have the option to choose an empty slot number and enter in a description name.

For example, I own an Okidata 92A dot matrix printer. I want to enter it into the system. To do so I choose #1 (EPSON MX-80), to modify to my specifications. After entering in the correct printer codes I arrive at the screen above. I will choose slot number 2 which is empty and name it Okidata 92A. I can now use this printer when I call up Stylograph by using the **+2** option.

Upon properly entering in the correct information, you will return to the main menu to continue on with the Styfix Program.

PRINTER CONFIGURATION CODE DESCRIPTIONS

***** SCREEN 1 *****

A. VERTICAL SPACING

Vertical spacing deals with how many lines are contained in one vertical inch. Normally, the standard is 6 lines to an inch.

The following information appears on the screen.

SET VERTICAL SPACING

This sequence is used in setting vertical spacing ',vs' command.

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,1e
Enter the NEW sequence here:
How many micro increments per vertical inch
does the printer need?
Vertical Micro Increments(Return when correct) ?
Some printers require an offset to be added to the vertical spacing value.
Enter decimal offset(Return when correct):

If the vertical spacing sequence code does not match the code listed in your printer manual enter the new sequence code in the appropriate place.

Answer the next few questions pressing "RETURN" after each response.

B. CHARACTER SPACING - PITCH

Printers normally can print various widths, 10 and 12 characters per inch is standard.

The following information appears on the screen.

SET CHARACTER SPACING-PITCH

This sequence is used in setting
character spacing(pitch) ',cs' command

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,1f
Enter the NEW sequence here:
Some printers require an offset to be added
to the horizontal spacing value.
Enter decimal offset(Default: 0 Return when correct):

Some printers require an offset to be added to the horizontal spacing value.

If your printer does, enter the appropriate offset and press "RETURN".

C. REVERSE LINE FEED

This causes the printer to perform a line feed up.

REVERSE LINE FEED

This sequence is used for overline(the effect is a one LF up).

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,44,1b,44
Enter the NEW sequence here:

D. NORMAL LINE FEED

This causes the printer to perform a line feed down.

NORMAL LINE FEED

This sequence is used for underline(the effect is a one LF down).

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 0a
Enter the NEW sequence here:

E. FORM FEED

This causes the printer to page forward to the the next perforation or designated page.

FORM FEED

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 0c
Enter the NEW sequence here:

F. START SUBSCRIPT

This causes the printer to perform a half line feed down. This is a useful function when doing footnotes or references in text.

START SUBSCRIPT

This sequence starts subscripting(the effect is one half LF down)
In a START-STOP sequence pair BOTH sequences must be present!!!

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,55
Enter the NEW sequence here:

G. STOP SUBSCRIPT

STOP SUBSCRIPT

This sequence stops subscripting(the effect is one half LF up)
In a START-STOP sequence pair BOTH sequences must be present!!

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,44
Enter the NEW sequence here:

H. START SUPERSCRIPT

This causes the printer to perform a half line feed up. This function is also useful when doing footnotes and references in text.

START SUPERSCRIPT

This sequence starts superscripting(the effect is a half LF up).
In a START-STOP sequence pair BOTH sequences must be present!!

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,44
Enter the NEW sequence here:

I. STOP SUPERSCRIPT

STOP SUPERSCRIPT

This sequence stops superscripting(the effect is a half LF down).
In a START-STOP sequence pair BOTH sequences must be present!!

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 1b,55
Enter the NEW sequence here:

J. START UNDERLINE

This causes the printer to underline text.

START UNDERLINE

This sequence starts underline(the effect is underline ($5f),BS).
In a START-STOP sequence pair BOTH sequences must be present!!

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 00
Enter the NEW sequence here:
If this sequence is NOT present Underline will be simulated
if the printer can underline and backspace.
Can the printer backspace (Y/N) ?

K. STOP UNDERLINE

STOP UNDERLINE

This sequence stops underline(used if underline is on/off toggle)
In a START-STOP sequence pair BOTH sequences must be present!!

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 00
Enter the NEW sequence here:
If this sequence is NOT present Underline will be simulated
if the printer can underline and backspace.
Can the printer backspace (Y/N) ?

L. START OVERLINE

This causes the printer to place a line immediately above the text line.

START OVERLINE

This sequence starts overline
In a START-STOP sequence pair BOTH sequences must be present!!

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 00
Enter the NEW sequence here:

If this sequence is not present Overline will be simulated
if the printer can backspace, underline, line feed and
reverse line feed.
Can the printer backspace(Y/N) ?

M. STOP OVERLINE

STOP OVERLINE

This sequence stops overline(used if overline is on/off toggle).
In a START-STOP sequence pair BOTH sequences must be present!!

If CORRECT press: (CR)
If INCORRECT enter NEW

The CURRENT sequence is: 00
Enter the NEW sequence here:
If this sequence is not present Overline will be simulated
if the printer can backspace, underline, line feed and
reverse line feed.
Can the printer backspace(Y/N) ?

N. START BOLDFACE

This causes the printer to double strike each character to produce a distinct print type.

START BOLDFACE

This sequence starts boldface(the effect is strike,offset,
BS, repetition).
In a START-STOP sequence pair BOTH sequences must be present!!

The CURRENT sequence is: 00
Enter the NEW sequence here:
If this sequence is not present Boldface will be simulated
if the printer can backspace.
Can the printer backspace(Y/N) ?

O. STOP BOLDFACE

STOP BOLDFACE

This sequence stops boldface(used if boldface is on/off toggle).
In a START-STOP sequence pair BOTH sequences must be present!!

```
The CURRENT sequence is:        00
Enter the NEW sequence here:
If this sequence is not present Boldface will be simulated
if the printer can backspace.
Can the printer backspace(Y/N)  ?
```

The previous six functions have a sequence code of "00" which means that they are non-functional in this system.

In order for a function to be performed it must have a sequence code or value.

Backspacing is very important to these particular functions and you must answer whether your printer performs backspacing so that a simulation can occur if necessary.

P. RESET ALL PRINTER MODES

This causes the printer to go back to all the original default values.

RESET ALL PRINTER MODES

This sequence resets all printer modes.

```
The CURRENT sequence is:        1b,1a,49
Enter the NEW sequence here:
```

***** SCREEN 2 *****

A. COMPRESSED CHARACTER WIDTH MODE

This causes the printer to compress the print and allows more characters per inch. Normally, this ranges anywhere between 15 to 18 character per inch.

COMPRESSED CHARACTER WIDTH MODE

This sequence is used when the '.cs c' command is encountered.

How many chars/inch in compressed mode?
The CURRENT sequence is: 00
Enter the NEW sequence here:

B. NORMAL CHARACTER WIDTH MODE

This causes the printer to return to the normal mode of printing which is 10 or 12 characters per inch.

NORMAL CHARACTER WIDTH MODE

This sequence is used when the '.cs n' command is encountered.

How many chars/inch in normal mode?
The CURRENT sequence is: 00
Enter the NEW sequence here:

C. EXPANDED CHARACTER WIDTH MODE

This causes the printer to print in wide character mode. Depending upon your printer it can range from 4 to 8 characters per inch.

EXPANDED CHARACTER WIDTH MODE

This sequence is used when the '.cs e' command is encountered.

How many chars/inch in expanded mode?
The CURRENT sequence is: 00
Enter the NEW sequence here:

D. COMPRESSED VERTICAL SPACE MODE

This causes the printer to compress the horizontal lines of text into a smaller space. Instead of 6 lines per inch, there would be 8 lines per inch.

COMPRESSED VERTICAL SPACE MODE

This sequence is used when the ',vs c' command is encountered.

How many lines/inch in compressed mode?
The CURRENT sequence is: 00
Enter the NEW sequence here:

E. NORMAL VERTICAL SPACE MODE

This causes the printer to return to the normal vertical spacing mode.

NORMAL VERTICAL SPACE MODE

This sequence is used when the ',vs n' command is encountered.

How many lines/inch in normal mode?
The CURRENT sequence is: 00
Enter the NEW sequence here:

F. EXPANDED VERTICAL SPACE MODE

This causes the printer to widen the space between lines of text. Instead of 6 lines per inch, there would be 4 lines per inch.

EXPANDED VERTICAL SPACE MODE

This sequence us used when the ',vs e' command is encountered.

How many lines/inch in expanded mode?
The CURRENT sequence is: 00
Enter the NEW sequence here:

EXTRA PRINTER CONTROL SEQUENCES

Options **G,H,I,J** are designated as extra options that allow you to define any special printer function not already defined. Many of the dot matrix printers have a variety of special capabilities which can be implemented using these extra options. The way that they are used however, is through the use of the **.pc** command in Stylograph. This is provided as a convenience, and alleviates the problem of always having to look up the special printer codes. For more detailed information on the use of the .pc command refer to the chapter on Format Commands.

G. EXTRA CONTROL SEQUENCE W

This causes the printer to perform the function assigned to the letter **"W"**. Anytime a **"W"** is encountered in text in conjunction with the .pc command, the printer will perform the assigned function.

EXTRA CONTROL SEQUENCE W

This sequence is used when the embedded printer sequence 'W' is encountered.

This sequence can be used for any special sequences desired.
It will be executed when invoked as follows: ",PC ±"
This is an embedded printer sequence ±W±for special sequence 'W'.

This will execute the special control sequence 'W'.

The CURRENT sequence is: 00
Enter the NEW sequence here:

H. EXTRA CONTROL SEQUENCE X

This causes the printer to perform the function assigned to the letter **"X"**. Anytime a **"X"** is encountered in text in conjunction with the .pc command, the printer will perform the assigned function.

EXTRA CONTROL SEQUENCE X

This sequence is used when the embedded printer sequence 'X' is encountered.

This sequence can be used for any special sequences desired.
It will be executed when invoked as follows: ",PC±"
This is an embedded printer sequence±W±for special sequence 'W'.

This will execute the special control sequence 'W'.

The CURRENT sequence is: 00
Enter the NEW sequence here:

I. EXTRA CONTROL SEQUENCE Y

This causes the printer to perform the function assigned to the letter **"Y"**. Anytime a **"Y"** is encountered in text in conjunction with the .pc command, the printer will perform the assigned function.

EXTRA CONTROL SEQUENCE Y

This sequence is used when the embedded printer sequence 'Y' is encountered.

This sequence can be used for any special sequences desired.
It will be executed when invoked as follows: ",PC ±"
This is an embedded printer sequence±W±for special sequence 'W'.

This will execute the special control sequence 'W'.

The CURRENT sequence is: 00
Enter the NEW sequence here:

J. EXTRA CONTROL SEQUENCE Z

This causes the printer to perform the function assigned to the letter "Z". Anytime a "Z" is encountered in text in conjunction with the .pc command, the printer will perform the assigned function.

EXTRA CONTROL SEQUENCE Z

This sequence is used when the embedded printer sequence 'Z' is encountered.

This sequence can be used for any special sequences desired.
It will be executed when invoked as follows: ".PC ±"
This is an embedded printer sequence±W±for special sequence 'W'.

This will execute the special control sequence 'W'.

The CURRENT sequence is: 00
Enter the NEW sequence here:

After you have waded through putting in all the correct printer codes and finding out all there is to know about your printer. You are then ready to test it out using Stylograph.

4. PROPORTIONAL SPACING TABLE

Option #4 is a toggle switch. Answering "Y" will load a proportional spacing table (Styps) everytime you call up Stylo. Answering "N" tells Stylo not to load a proportional spacing table when it is loaded.

If you have a proportional spacing printer you will want to keep the toggle ON so you can activate proportional spacing with the ".ps" command.

For those of you who have a printer with proportional spacing capability, you will also need to create a translation table which defines the specific micro increments used in each letter. We have supplied a few predefined table already for you on the disk. You can modify one of these tables for your particular printer if necessary. Refer to the section in the manual on Proportional Spacing for further information.

5. SET MAXIMUM PAGES

Option #5 allows you to change the number of pages that STYLO can edit or print at any one time.

This screen will appear:

> This is the maximum number of pages that STYLO can edit or print at a given time. The number of characters or lines on each page is not critical. Typically 10 to 40 pages. Numbers higher than necessary may waste data space. The maximum number of pages is 255.
>
> The current value is: 20 pages
> Maximum pages that Stylograph can edit?

Answer the last question on the screen to change the amount of pages that STYLO can handle at one time.

6. LIST MEMORY BOUNDARIES

Option #6 lists the memory boundaries for certain areas found within Stylograph. These areas are only listed for reference and most users will not ever need to use this table at all.

Primarily they are references needed by programmers who need to modify specific object code modules or append special files to these specific areas in the Program.

LABEL	FUNCTION	ADDRESS
TXTBEG	Beginning of text area ----------	$04a7
TXTEND	End of text area ----------	$1467
BINEND	End of Stylograph binary code ------	$5488
TRMBEG	Beginning of terminal driver -------	$1512
TRMSEQ	Beginning of terminal sequence -----	$0000
TRMEND	End of terminal driver ----------	$1944

Press CARRIAGE RETURN (CR) to continue.

7. SET STY DIRECTORY PATHNAME

Option #7 allows you to place the STY directory at any location in your system. The STY directory contains certain files which Stylograph references frequently. Such information like the help files, error files and the Styps files are located in the STY directory. Therefore, Stylo needs to know where the STY directory can be found in the system.

This screen will appear:

```
The current value is "                /D1/STY"

Pathname examples
> (/d1/STY/SUPP,/d1/STY/DICT,/do/sty,/p,/p1,etc.)?
                                  < 30 chars max.>
>
```

There is a maximum of 30 characters allowed in the pathname.

8. SET DATA STORAGE (WORK AREA)

Option #8 allows you to change the memory buffer size when Stylo is loaded. This refers to the amount of available work space you allocate in memory.

Example #1, if you allocate a minimum amount of memory (8000 bytes = approx. 8K) you will have room to do short letters and documents (1-3 pages). A configuration of this nature would allow additional tasks to be carried on because you have used very little memory space.

Example #2, if you allocate a large amount of memory (50,000 bytes = approx. 49K) you will have taken up a large amount of memory space and it may be difficult to run background tasks or have other users doing simultaneous tasks.

You will notice that is why we have set the default to 32,000 bytes, it is a good middle number. The following information will appear on the screen:

> This size is the default module permanent storage requirement. It has the same effect as the command line:
>
> **STYLO MYFILENAME #nk**
>
> where n=number of kilobytes, etc. This size can be increased from the command line but not decreased except from STYFIX.
>
> The current value is: 32000 bytes
> Minimum data buffer size in bytes?
> (Min = 6144 bytes Max = 65535 bytes)

9. CONFIGURE KEYBOARD

Stylograph is designed around the concept of the home row keys on a normal typewriter keyboard. This makes Stylo easy to learn and use. To maintain the symmetry of the keyboard functions, the new key which moves the cursor to the right word by word seems to vary among keyboard layouts. Therefore, we have permitted a simple way to configure this cursor movement to suit your own keyboard.

The following information will appear on the screen.

> CURSOR WORD RIGHT
>
> This character is used to move the cursor to the right, word by word.
>
> What Key would you like to use for word right?]
> The current character is 91
> Enter the ASCII (decimal) value of the character:

10. RETURN TO OS-9

After you are sure you have made all the modifications necessary you will want to exit and save all the new changes.

```
----STYLO configuration program----
 1. Configure terminal.
 2. Configure System Map
 3. Configure printer.
 4. Toggle(on/off) proportional table load at startup.
 5. Set maximum pages.
 6. List memory boundaries.
 7. Set default STY directory pathname.
 8. Set default data buffer size(work area)
 9. Configure Keyboard
10. Return to OS-9.
Choice?
```

Option #10 does just exactly as it states, almost! Upon exiting the Styfix program all changes you have made must be saved to the various locations within the Stylograph program. After choosing option #10 there will be a variety of messages displayed on the screen. This simply confirms that something is happening.

NEW FORMAT COMMANDS

RULER COMMAND

.ru X,X,X,. . .X

The Ruler command sets the line length, the indent, and all of the tab stops for the text with one command.

The first value (X) is the line length and is similar to the ".ll" command. By changing this value the length of the line on the screen is changed.

If this value is set too high the lines of the text will extend off to the right side of the screen and the display will show right facing arrows ">" to let you know that the line is longer than the screen can display.

To view all of the text the screen will have to be scrolled right and left.

The second value (X) is the indent value and is similar to the ".in" and ".lm" commands.

The indent value causes all of the following lines to be spaced to the right "X" spaces and reduces the line length accordingly.

The remaining values (X,. . .,X) beginning at the third position are the tab stops. This enables you to set tab stops quick and easily across the screen page.

You can specify up to 22 tabs but each tab stop value must be greater than the previous tab stop.

Any one tab stop must <u>not</u> be greater than the line length.

Example #1 of the Ruler command:

.ru 70,0,5,10,15,20,25,50

With this command the line length is set to 70 characters across the screen with an indent of 0 spaces from the left margin.

It also sets up 6 tab stops starting with the first tab at 5 and the sixth tab at 50.

Example #2 of the Ruler command:

.ru 65,10,8,24,40,50,57

This command sets the line length at 65 characters across the screen and indents 10 spaces from the left margin, reducing the line length to 55.

The first tab stop will be at 8 and the fifth tab stop will be at 57.
Example #3 of the Ruler command:

.ru 50,5

This command sets the line length to 50 characters and the indent to 5 lines from the left margin making the line length 45 characters.

No tab stops are specified so the error "NO MORE TABS SET" results. It's not really an error just a reminder that no tabs are set.

ALTERNATING LEFT MARGIN

.lm X,X

The alternating left margin allows you to print on both sides of a page and maintain a consistent left margin. This function is most useful when text is being placed on both sides of a piece of paper, this process is often referred to as "duplexing".

The left margin can be set to any value as long as the line length and the left margin do not exceed the width of the printed page.

The left margin can be set with just one value in which the left margin stays the same throughout the entire document or it can be set to alternate the left margin on every other page.

For instance, the command

.lm 10

causes the left margin on the printed document to be set at 10 and remain at 10 for the entire document.

While, the command

.lm 15,10

sets up the left margin at 15 for all of the odd numbered pages and the left margin at 10 for all of the even numbered pages.

With this command the margin does not appear on the screen but only appears on the printout.

CURSOR WORD JUMP

Two new key functions have been added to allow the the operator to move the cursor forward and backward, word by word. This speeds up moving the cursor around when editing text.

You will notice the two new functions on the keyboard summary sheet. They were placed on the right side of the keyboard to keep the unique symmetry created by Stylograph.
While you are in the ESC mode the "Y" and "]" keys will move the cursor to the left and right, word by word. This layout seemed to satisfy the majority of terminal keyboard layouts.

This particular key can be changed to suit your keyboard using the Styfix Configuration Program.

TAB KEY

The TAB key function has now been moved to satisfy the majority of keyboards. It is now located on the actual TAB key located on the keyboard. Previously, a Control T would generate a Tab. The tabbing function can be used while in any mode within Stylograph except the Supervisor mode.

NEW MODE FEATURES

OVERWRITE MODE

The OVERWRITE mode allows you to correct typographical errors.

It is very similar to the INSERT mode when entering text.

The OVERWRITE mode allows you to write in a continuous manner over any existing characters and replaces the previous OVERWRITE command of the STYLO II program which only allowed one character replacement at a time.

To start the OVERWRITE mode, move the cursor to the point in the text you would like to write over.

Note that the OVERWRITE mode can only be entered through the ESCAPE mode.

If you are not already in the ESCAPE mode press the 'ESC' key and then press the numeric '1' key once **to enter** the OVERWRITE mode and exit the ESCAPE mode.

Once you are in the OVERWRITE mode any key typed will write over the character under the cursor.

If a mistake is made simply backspace over your error and continue typing.

To exit the OVERWRITE mode press the 'ESC' key once.

This will return you to the ESCAPE mode where you can continue editing text.

CHARACTER MODS

All of the character mod functions available in the INSERT mode are also available in the OVERWRITE mode.

This would include such things as underline, boldface, overline, superscript and subscript.

A unique feature of the OVERWRITE mode allows you to write over normal characters with normal or mod characters and also write over mod characters with mod or normal characters.

While you are overwriting text you may use the character modifications in the same manner that they are used in the INSERT mode.

For example, if you want to change:

Clark Kent

into:

SUPERMAN

Simply enter the ESCAPE MODE, move the cursor over "C", press the 'I' key to enter the OVERWRITE mode, press 'CNTRL'+'B' for BOLDFACE, press 'CNTRL'+'?' for UPPER CASE LOCK and enter the Super Hero. It's a lot easier than using a phone booth.

PROGRAMMER MODE

We decided to name this added feature in honor of our dedicated programmer's. This little item was added as a convenience when a person in entering programming code. Although there are a variety of other very useful purposes as well.

The programmer mode allows you to RETURN to the last TAB used. For example, if you had three tab stops of 10,20 and 30 you could do the following illustration:

I am demonstrating how the Programmer Mode works.

Upon hitting RETURN I pressed the TAB key.
All I did was hit RETURN and I came back to the first TAB stop.

Again, I hit RETURN and then I tabbed to tab stop 20. Everytime I hit RETURN I will return to tab 20. Also any text that I am typing will automatically wrap around to the last tab stop also.

I just moved to the last TAB stop I had set. Upon hitting a RETURN I will go to tab stop 30.

To return back to the left side of the screen, all you do is hit the RETURN key **two** times in a row, like this.

I have now returned to the starting position on the left side of the page.

To enter into the programmer mode you can be in either the INSERT or OVERWRITE mode. Just press a "Control E" and you are in. To exit just press "Control E" once again. The Control E key works just like an ON/OFF toggle switch.

The Programmer Mode is quite useful when a person is doing structured statements where the code is nested down the page, similar to the example above.

Undoubtly, there are many other uses this feature can be used for. Many have used this mode when doing outlines, table of contents, indexes,etc.

Appendix A
Summary of STYLOGRAPH features

ESCAPE COMMANDS

J cursor left
L cursor right
I cursor up
K cursor left then right
U scroll up one line
M scroll down one line
O scroll up one screen
. scroll down one screen
7 scroll left 25 characters
8 scroll far left
9 scroll right 25 characters
; insert text
/ go to supervisor
S save text from cursor to marker
W withdraw saved text
D duplicate (without withdrawing) saved text
Z zap (delete) text from cursor to marker
}} set marker (two required)
P move to page N
F find character string
  responses: space - go to next
             return - stop
R replace first character string with second
  responses: Y - replace string
             N - don't replace string
             A -replace all occurences (no prompt)
             space - go on to next
             return - stop

CONTROL COMMANDS

P page status
N name the last error
^ upper case lock
W delete word
S delete single character
X delete line (bracketed by returns)
F display/non-display format commands
R set a tab
T move to tab
Y clear a tab
G insert gost hyphen
V view/hide character mods
U underline
O overline
I superscript
K subscript
B boldface
<RUB OUT> ($7f) turn-off/delete character mods

FORMATTING COMMANDS [default values]

Vertical formatting commands

,PL N	Page length N lines/page [66]
,PG	New page
,PN N	Page number
,TF	Top of form (printer command)
,HD	Define header
,FT	Define footer
,,	End header or footer definition
,SP N	Space N lines (print parameter)
,SS N	Set spacing N spaces per line (print parameter) [1]
,VT N	Vertical tab to Nth line (print parameter)
,VS N	Vertical spacing, lines/inch (print parameter)
,NL N	Need N lines on same page

Horizontal formatting commands

,CE N	Center N lines
,RJ N	Right justify N lines
,JU	justify
,NJ	no justify
,LL N	line length of N [screen width -1]
,IN N	indent N spaces
,SI N	indent one line N spaces
,LM N	set left margin N spaces (print parameter) [0]
,CS N	character spacing, N characters/inch (print parameter) [12]
,PS	start proportional spacing
,NPS	non-proportional, normal spacing

Misc. formatting commands

,PP	Paragraph
,PPNL N	Paragraph need N lines on same page
,PPSP N	Paragraph space N lines
,PPSI N	Paragraph single indent
,BFS N	Boldface strike N times at printout
,PADC C	Pad character C for non-paddable spaces on printout
,MMC C	Mail Merge character C
,PC C	Print character C for delimiting print strings
,*	Comment line

Appendix B
Character mods

	Command	As seen in Viewing mode
Underline	CTRL-U	_____
Overline	CTRL-O	555555555
Boldface	CTRL-B	333333333
Superscript	CTRL-I	AAAAAAAAA
Subscript	CTRL-K	aaaaaaaaa

Displayed mod characters

_	Underline
3	Boldface
4	Underline, Boldface
5	Overline
6	Underline, Overline
7	Boldface, Overline
8	Underline, Boldface, Overline
A	Superscript
B	Superscript, Underline
C	Superscript, Boldface
D	Superscript, Underline, Boldface
E	Superscript, Overline
F	Superscript, Underline, Overline
G	Superscript, Boldface, Overline
H	Superscript, Underline, Boldface, Overline
a	Subscript
b	Subscript, Underline
c	Subscript, Boldface
d	Subscript, Underline, Boldface
e	Subscript, Overline
f	Subscript, Underline, Overline
g	Subscript, Boldface, Overline
h	Subscript, Underline, Boldface, Overline

PRINTER AND TERMINAL NUMBERS

T1 SOROC IQ-120
T2 SOROC IQ-140
T3 SOROC IQ-130/135
T4 Televideo TVI 912/920 and Lear-Siegler ADM-31
T5 Hazeltine 1500/1420
T6 Hazeltine 1400
T7 Lear Siegler ADM-3A
T8 Lear Siegler ADM-42
T9 Microterm MIME-2A
T10 Microterm ACT-5A
T11 Intertec INTERTUBE II
T12 ADDS VIEWPOINT/60; in Flex, SWTPC CT-82
T13 SWTPC CT-8209/12
T14 DEC VT-52
T15 ADDS REGENT 25
T16 Heath H-19, Zenith Z-10
T17 TEC 510,610
T18 Beehive MICRO B2
T19 Beehive B100
T20 Volker-Craig VC-404
T21 Hewlett Packard 2621 A/P
T22 ADDS Viewpoint
T23 Motorola Exorterm
T24 Visual Technology Inc. VISUAL 300
T25 TEC70
T26 Tandberg TVD2220
T27 GIMIX 24x80 Video (os-9)
T28 Volker-Craig VC4404
T29 CYBERNEX XL 87; in FLEX, TANO-TERMINAL
T30 Perkin-Elmer 550 CRT
T31 Lear-Siegler ADM-5
T32 Hazeltine ESPRIT: DYS-10: 1,6-10 "ON"; 2-5 "OFF"
DYS-8: 1-3 "ON"; 4-8 "OFF"
T33 INTERTEC INTERTUBE TERM.
T34 SWTPC CT-82
T35 CIFER 2605 VDU

P0 DIABLO TYPE: use °STYPS-D' Proportional Spacing Table (PST).
All DIABLO, All C.ITOH
NEC 3515/25,5515/25,7715/25
QUME SPRINT 5/xx or 9/xx
P10 NEC 3510/20,5510/20,7710/20: use °STYPS-N' PST.
P20 CENTRONICS 737/739: use °STYPS-7' PST.
P30 TTY printer with backspace function
P40 TTY printer without backspace function

NOTES
1. P0, P10, and P20 type printers will support: Underline,Overline, Boldface, Superscript, and Subscript Character modifications in addition to proportional spacing.
2. P30 type printers will support: Underline, Overline, and Boldface character modifications but no proportional spacing.
3. P40 type printers support no character modifications and no proportional spacing.

APPENDIX D
MODIFYING STYLOGRAPH FOR NON-SUPPORTED SERIAL TERMINAL

If you have a serial terminal which is not listed in appendix C, then you should return your STYLOGRAPH disk to GREAT PLAINS COMPUTER COMPANY INC. for modification. When you return your disk, also include a copy of the portion of the manual which includes the control codes that it uses, or preferably, you may send a copy of the manual. Terminal updates will be done for a $50.00 charge.

If you wish, and are capable of assembly code work, you may do the modifications yourself. The terminal driver consists of two different parts: a stack of pointers located $20 bytes above TRMBEG, and a stack of ASCII control sequences located at TRMSEQ. The source code for three different terminal drivers are included on your disk. They may be used as models for constructing your own terminal driver. The easiest course of action is to edit one of these files to create your own file.

The first byte of the stack of pointers consists of the sum of some constants indicating the characteristics of the terminal. Those constants are listed in the source code. They specify the following characteristics:

1. The dimensions of the screen. These are the "D" constants. If your terminal scrolls up whenever a character is put in the bottom right hand corner of the screen, you must specify the D2479 rather than the D2480 screen size. STYLOGRAPH only supports the screen sizes listed in the constants shown in the source code.

2. Whether the cursor is addressed X (Column) then Y (Row), or, Y then X. If it is Y then X, then you must sum in the CYX constant.

3. Whether $20 must be added to the cursor address. If your terminal requires that the lowest cursor address is a SPACE ($20) rather than a NUL ($00) then you must sum in the "CAD20" constant.

4. Whether your terminal can scroll down. Many terminals can be made to scroll down by putting the cursor at the top of the screen and using the "insert line" function of the terminal. Other terminals have a scroll down function.

Some will scroll down by moving the cursor to the top and bumping the cursor up. If your terminal can scroll down by using one of these sequences, you should sum in the "SSCD" constant.

5. If your terminal has a line erase function, you should sum in the "LERF" constant. The next 13 bytes consist of pointers to the ASCII control sequences that are listed at TRMSEQ. A number "1" points to the first sequence. a number "4" points to the fourth sequence, etc. A zero indicates that the terminal does not have that function. The only functions that STYLOGRAPH absolutely requires are the cursor-move and the clear-screen functions.

The actual sequences that are sent to the terminal are listed starting at TRMSEQ. They are listed in order and the last byte that is sent has the "N" bit set. The "N" bit is set by adding the constant "N" to the last character in the sequence.

Whenever a new terminal driver is made, all other terminal drivers are destroyed. That is, after these modifications are made you may no longer specify the terminal type on the calling line. Also, the terminal number must now be a "1". This is normally set by an FCB in the source code, but can also be set by STYFIX. This FCB is at the beginning of the example terminal drivers.

After this new code has been assembled and a binary file created, it may be appended to STYLOGRAPH.

APPENDIX E
CHANGING TEXT CONSTANTS

The major reason for allowing these constants to be changed is so that STYLOGRAPH can be adapted to foreign languages. All of the English language prompts as well as all of the keys may be changed if you have the proper assembler. It is useful, although not absolutely necessary, to be familiar with the assembler before attempting these adaptations. A file by the name of "Stytext" is included on your master disk from us. This file is the source code for all STYLOGRAPH keyboard and text constants. All of the text and character constants in this file may be rewritten, assembled and then the resulting binary file appended to STYLOGRAPH. After this point STYLOGRAPH will use the new constants. There are a few things to keep in mind when doing these modifications:

1. At the beginning of the "STYTEXT" file appears the following line:

   TXTBEG EQU $hhhh

   where $hhhh represents a binary address, expressed as a hexadecimal. This address must be made identical to the "TXTBEG" address found by using the "STYFIX" command with option #5 (LIST MEMORY BOUNDRIES).
2. Once the new text file has been assembled, it should not assemble beyond the "TXTEND" point. This location can be found by using the STYFIX command. If the text is too long it must be shortened by reducing the length of the strings.

3. Only the FCC and FCB constants can be changed. No lines can be removed. All of the single character constants and the FDB's that point to the strings must assemble in exactly the same place that they assembled before the text was modified.

After the text has been modified and assembled there should be a binary file "STYTEXT" on your disk. Return now to the configuration Chapter for your Operating System.(i.e. Chapter 8,9,10, or 11)

A STYLOGRAPH TUTORIAL

This short set of exercises is designed for the person who is inexperienced with computers and who will be using Stylograph. The commands that are introduced here are only a few of the many commands that are available through the Stylograph word processing system. They are, however, the commands that are most often used, and those that you will need immediately for practical everyday use, like letter or report typing. As you go through the tutorial, sit down at the computer terminal and follow the directions. This will let you become accustomed to typing on the video terminal and also give you some idea of the way Stylograph operates. When you are done with the tutorial, it is a good idea to go back and read the manual through to get an idea of the other capabilities of the Stylograph system.

A. THE VIDEO TERMINAL

There are a few differences between the typewriter that you have used in the past and the video terminal that you will be using with Stylograph. This section is designed to make you aware of those differences.

First of all, you will notice that the letters on the video terminal are set up exactly the way they are on the typewriter. However, there are some extra keys with special functions that you should notice, because those functions are important to the working of Stylograph:

1. **The "TTY" key:** Sometimes this is also called a "UC" key. This key is somewhat like an upper-shift lock on a typewriter, except that it only locks the upper-case for letters; the numbers and punctuation on the keyboard are unaffected by it. You usually turn the TTY lock on and off by hitting the key. This is a very useful key when you want to type in capital letters, as it leaves everything else on the lower case level.

2. **Auto-Repeat function.** Many video terminals will repeat the letter, number, or punctuation that you are typing if you hold the key down. Some terminals do not have this feature, but rather, have a REPEAT key which will produce this function if held down at the same time as the key that you want repeated.

3. **Control (CTRL) key.**The control (CRTL) key is something like a shift key on the typewriter, except that it normally produces no real effect on the letters typed on the video terminal. The CTRL key, however, is used extensively in Stylograph, and you should try and locate it on the video terminal you're using. It's usually somewhere on the left side of the keyboard.

4. **Escape (ESC) Key.** The escape (ESC) key does not appear on a typewriter, but is important to the workings of Stylograph. It will be used in Stylograph extensively.

5. **Return Key.** The carriage return is located in the same place as on a typewriter. You will find, however, that you will use it much less than

you have when you typed in the past. This is because Stylograph will automatically move words to the next line for you if they are too long to fit on the current line you're working on.

B. TERMINOLOGY

Before you begin working through the Stylograph tutorial, there are a few words that will be thrown around quite a bit with which you will have to be familiar.

1. **Character:** a "character" is any of the letters, numbers, or symbols available on the keyboard. Since the computer codes all characters in numerical form, it has no real idea that letters are totally different kind of symbols than punctuation marks, so in computer lingo, it's easier to refer to all of them as "characters".

2. **String:** a "string" refers to one or more characters together. The computer does not know English (or any other human language, for that matter), and so the string of characters "v7iu3e;d,q" makes as much sense to the computer as the string "automobile". Naturally, only the second string of characters is intelligible to us, but the computer doesn't know that. So, it is easier to think of a paragraph, sentence, word, or any part thereof, as a string. Usually, the term will be used when you are trying to perform some operation on it, such as "moving a string", or "duplicating a string".

3. **Edit:** "editing" something on a computer is no different than editing a typewritten piece of material, except that it's much easier. When you type something, and it gets edited, you usually have to retype it. Not so with computer word-systems, like Stylograph. Here, you see the information as it will be printed out so that you can catch any typos, misspellings, etc. Your first print-out is usually error-free, but even if it isn't, it's no problem to go back and re-edit it, and get another printout in a matter of minutes.

4. **Text:** the word "text", as used in word processing, isn't much different from the word's normal English usage in sentences like "The text of the letter was long". It simply refers to written information that you can work on, or edit. If you are into thinking like a computer, you can envision "text" as a lot of "strings" put together.

5. **Mode:** a "mode" is a certain way of doing things, a kind of "system". Stylograph has three separate "modes", or systems, each of which is used to perform different types of tasks on the text you wish to edit. These are the SUPERVISOR, ESCAPE, and INSERT modes, and they will be discussed in more detail below.

6. **Disk:** a "disk" is a piece of flattened magnetic tape, much like cassette tape, on which the computer can permanently store information and retrieve it at a later time. Disks are needed because the information that is stored directly in the computer will disappear when you turn the computer off. Therefore, you must "save" your text to the disk before turning the computer off.

7. **File:** a "file" is how information is stored on a disk. It is much like a file in a filing cabinet, in that it is stored in an organized way for later retrieval. But the disk system of the computer can do many things with a file: it can be listed, printed out, processed, copied to other disks, etc., in only a fraction of the time it would take for a secretary to do it. The only real difference is that a disk file tends to contain less information than a "file" in the real office-life sense. For example, one disk file may contain only one letter, or only one report.

8. **Cursor:** A "cursor" is a little marker which tells you where you are in the text. On typewriters, the platen moves from right to left to tell you where you are on a line. On a computer, the cursor moves from left to right to tell you "where you are" on the screen. On some video terminals, the cursor is a solid block, while on others it can be a blinking block or a simple line underneath the letters. You will need to identify the cursor on your video terminal and move it around to use Stylograph.

C. STARTING THE SYSTEM.

Now that you're somewhat familiar with the terminology and equipment that will be used with Stylograph, we'll get you started on your first lesson.

When you turn your computer system on, it will usually be in something called the "Disk Operating System", or DOS. If that DOS is the Flex system, it will respond with three plus signs:

+++

This means that it is waiting for you to give it a command. To start the Stylograph system, all you have to do is to type in ("enter") the Stylograph file name (usually STYLO), and the name of the file that you will be working on. To get you going, enter

STYLO LESSON1

What this will do is first, load in the Stylograph word processor, and second, tell Stylograph that the name of the text file you will be working on will be called "LESSON1". At this point, you will be in one of the three "modes" of Stylograph, the SUPERVISOR mode.

D. THE SUPERVISOR MODE

If everything is working correctly, you should now see a list of tasks, or "options" in front of you on the screen. The tasks should have names like "EDIT", "PRINT", "SAVE AND RETURN", and so forth. Don't be worried about how long the list is; you'll only be using these three commands in this short tutorial. This list is called a "menu". It is like a restaurant menu becuase you tell it what you want, and it brings it to you. Now, all you have to do is tell it what you want to do. Notice that to the left of the list is a pointer-like symbol; you need to move the pointer to the task you want Stylograph to do, and then hit the carriage return. You can move the pointer down by hitting the comma (",") key, and

you can move it up by hitting the "I" key. (We know that this makes no sense at all right now, but bear with us. It soon will.) Move the pointer around a little to get used to it. What you want to do now is to EDIT some text, so move the pointer to EDIT, and hit return.

At this point, you should see something like this on your screen:

```
----------PAGE 1----------
                          |
```

You are now in another "mode" of Stylograph, the ESCAPE mode. The ESCAPE mode is designed to display the text that you're working on and to allow you to do some things to the text. However, because there is no text to work on yet, the screen will be pretty empty. In order to enter some text, you still have to go to the third mode of Stylograph, the INSERT mode. We will return to the ESCAPE mode a little later. To get into the INSERT mode, you only have to hit the semicolon key (";").

E. THE INSERT MODE

Now the screen should look like this:

```
----------PAGE 1 ----------
-------------------------------------------------------|
```

All you need to do now in order to "enter" text is simply type it in, as if you were typing normally. Before you start typing, however, you should know two things about entering text into Stylograph:

1. You don't have to hit the carriage return to move to the next line. In fact, Stylograph keeps track of how many spaces are left on the line, and will automatically put the word you are typing on the next line if it doesn't fit. The number of light dashes on the line you are typing let you know how many spaces are left on the line.

2. If you make any mistakes as you are typing, you can simply backspace over the error and retype it. All video terminals have backspace keys, like typewriters.

Now, to show you some of the features of Stylograph, type in this sample bit of text:

```
----------PAGE 1----------
Type in this sample text to demonstrate what kinds of
things Stylograph can do.  Typing is made much easier
because Stylograph allows you to type in material as
you go along and automatically puts words on the next
line if they are too long.--------------------------|
```

You may be wondering what you do use the carriage return for. You use it if you want to start typing in text on a new line. This is for new paragraphs, skipping lines, or any other time that you don't need to finish a line. For example, if you now hit a carriage return and type another

line in the sample text, it will look like this:

```
------------------------PAGE 1-------------------------
Type in this sample text to demonstrate what kinds of
things Stylograph can do.  Typing is made much easier
because Stylograph allows you to type in material as
you go along and automatically puts words on the next
line if they are too long.                            |
   This text should start on the next line because you
have hit a carriage RETURN.-----------------------------|
```

You will notice that when you hit a carriage RETURN, Stylograph signifies it with a little vertical mark on the right hand margin.

Now that you can enter text into Stylograph using the INSERT mode, there are some other things that you can do in the INSERT mode which will make your typed work come out formatted perfectly. When you type on a typewriter, you can set margins. The same thing is true of Stylograph; you can set margins using a set of format commands that are entered in the INSERT mode like regular text, but do not appear on the final printed copy.

All of the format commands require a line all for themselves. You will have to hit another carriage return to enter the commands. Right and left margins are set separately. You can set the left margins by entering a:

```
.lm 12
```

on the line. What this will do is set the start of the left margin at 12 spaces in from the left boundary of the paper. Of course you don't have to use 12, the left margin can be set at 10, 8, or any other number you please. Usually, 10 or 12 are the standards, however. This command will not appear on the print-out of the text, as long as you follow two restrictions: First, the command starts in the first column of the line, and second, that the command is preceded by a comma.

Right margins are set a little differently, but use the same restrictions as for the left margin command. The right margins are set by allowing a certain line length for each line. If you only allow a certain number of spaces per line, this will naturally set the right margin. To enter set the right margin, hit another return, and enter

```
.ll 75
```

Your text should now look something like this:

```
------------------------PAGE 1-------------------------
Type in this sample text to demonstrate what kinds of
things Stylograph can do.  Typing is made much easier
because Stylograph allows you to type in material as
you go along and automatically puts words on the next
line if they are too long.
  This text should start on the next line because you
have hit a carriage RETURN
,lm 12
,ll 75
-----------------------------------------------        |
```

Notice that the line of dashes does not extend all the way to the end of the screen. This is because you have set the right margin with the ,ll command. Naturally, your line length need not be 75; it can be anything, although 65 and 75 are the usual standards.

One of the most frustrating jobs in typing is centering titles on a page. This is easily done with another Stylograph format command, however. The centering command looks like this:

```
,ce
```

Enter the command, hit a carriage return, and type in the following line:

```
Presto! This line is centered.-------------------------  |
```

Now hit the carriage return, and presto! the line is centered. The ,ce command may be followed by any number, and Stylograph will automatically center that next number of lines. For example, the command

```
,ce 5
```

will center the next five lines of text. Again, remember that you need to follow the restrictions of the margin commands that the command start in the first space of the line, and that the command be preceded by a comma.

Along with centering, you often have to put things on the right margin. Examples of this (it's called "right justification") are the return addresses and dates of business letters, and the page numbers of reports. A Stylograph format command will also do this for you automatically. In your sample text, type in:

```
,rj
```

followed by a carriage return, and then:

```
December 19, 1943----------------------------  |
```

followed by another carriage return. This should result in the date being

placed against the far right margin:

```
                                        December 19, 1943   |
```

As with the, .ce command, you can follow the .rj command with any number, and Stylograph will automatically right-justify that many lines of following text. Your entire text should look like this now:

```
------------------------PAGE 1-------------------------
Type in this sample text to demonstrate what kinds of
things Stylograph can do.  Typing is made much easier
because Stylograph allows you to type in material as
you go along and automatically puts words on the next
line if they are too long.                              |
  This text should start on the next line because you
have hit a carriage RETURN
.lm 12                                                  |
.ll 75                                                  |
.ce                                                     |
            Presto! This line is centered               |
.rj
                                        December 19, 1943   |
```

There is one last INSERT mode feature of Stylograph that will be described in this tutorial. The "header" and "footer" features let you set the top and bottom margins for the pages. They are also very useful if your letter or report extends beyond one page long, and if certain things will have to be printed on the top of the bottom of each page.

Stylograph lets you specify what you want printed, or how many lines to skip, on the top or bottom of every page once, and then will automatically do it for you as each page is printed out. Things that are printed at the top of the page are called "headers" and things that are printed at the bottom of the page are called "footers". In combination with the .rj and .ce commands, you can do some very fancy formatting. You can define a "header" with the following commands:

```
.hd
..
```

Anything placed between the .hd and the .. will be repeated at the top of every page of text. So, for example, if you entered the following chain of commands (remember to follow each of them with a carriage RETURN):

```
.hd                                                     |
                                                        |
.rj                                                     |
12/19/43                                                |
                                                        |
..                                                      |
```

It would cause the date "12/19/43" to be printed out on the edge of the right margin at every page of the text printout. To see this work, enter the chain of commands, and then enter the following commands which will skip to another page:

```
.pg
```

After a carriage return, your entire screen should look something like this:

```
-----------------------PAGE 1-----------------------
Type in this sample text to demonstrate what kinds of
things Stylograph can do.  Typing is made much easier
because Stylograph allows you to type in material as
you go along and automatically puts words on the next
line if they are too long.                              |
  This text should start on the next line because you
have hit a carriage RETURN
.lm 12                                                  |
.ll 75                                                  |
.ce                                                     |
            Presto! This line is centered               |
.rj
                              December 19, 1943         |
.hd

.rj
12/19/43                                                |
..                                                      |
.pg                                                     |
--------------------PAGE 2--------------------------------
                                                        -
                                              12/19/41-
                                                        -
---------------------------------------------------     |
```

The three dashes which appear on the right margin edge of the top of page 2 signify that these three lines are indeed, a header. You could now add additional text if you wanted. The "footer" command is essentially the same, except that the command looks like this:

```
.ft
..
```

and that any material entered between the .ft and the .. would be printed out automatically at the bottom of the page. In practicing a footer, we will introduce one more nice feature of Stylograph: the automatic page increment. By using the symbol "#" in any header or footer of a Stylograph text file, the page number will replace the symbol in the final printout. For example, enter the next set of commands (again, following each with a

carriage return):

```
.ft

.ce
Page #

..
```

and following these commands with another .pg command, Page 2 of your text will look like this:

```
----------PAGE 2----------

                    12/19/43-

.ft

.ce
Page #

..
.pg

                Page 2

----------Page 3----------
```

Stylograph will automatically increase the page numbers by one every time you go onto a new page. Note again the dashes in the right margin of the footer, signifying that it is put there by the footer command, and not by you.

One additional comment: you don't need to use the .pg command when you get to the bottom of the page. Stylograph also keeps track of the number of lines on the page and will automatically skip to a new page when you run out of lines. You can see the usefulness of this if you've ever ended up typing on the very bottom of a sheet of paper because you forgot to keep track yourself.

Now that you have practiced a little with the INSERT mode, let's move back to the ESCAPE mode, and see what kinds of tricks can be done there. All you need to do to get back into the ESCAPE mode is to hit the ESC key. This will "erase" the dashed lines that you see in the INSERT mode.

F. THE ESCAPE MODE

The escape mode is designed to display the text you have entered so that you may easily work on it. To "work" on any particular part of the text, you will need to move the cursor to it (remember "cursor"?). The cursor is moved by using four keys on the right side of the keyboard:

```
   I
J     L
   ,
```

Each of these keys will move the cursor in a different direction. You can remember the direction of each key if you just remember the position of the keys: Left and right movement is controlled by the "J" (left) and "L" (right) keys, while up and down movement is controlled by the "I" (up) and "," (down) keys. While this might seem awkward right now, it will become very easy to move in and around your text after only a few hours experience with Stylograph.

Now while you are in the ESCAPE mode, use the cursor movement keys to move back to the top of the text you have entered. You probably need only to use the "I" and "J" keys at this point. You may hear a beep or bell if you have been moving the cursor around and it has run out of room in the direction you were going. You have either come to the "top" (beginning) or "bottom" (ending) of the text, but you haven't done any damage. Practice moving the cursor around to different places in the text you have entered. It's very important that you know how to direct the cursor around to various parts of the text, because cursor position is a crucial feature in executing many commands in the ESCAPE mode.

Once you have mastered this, it's time to show you some of the more useful features of the Stylograph system. One of the most powerful commands in the ESCAPE mode is the "Find" command. Place the cursor at the start of the text, and hit the "F" key. This will cause the following to be printed on the terminal:

```
*** FIND (
```

At this point, if you enter any string (remember "string"?) that is located anywhere in the text you have entered, Stylograph will search for it, find it, and move the cursor to it. For example, enter the string "typ", and hit the carriage return. The cursor should now be placed in front of the word "type" in the second sentence of the text you have entered, and another message should have appeared:

```
*** STOP (RET) OR CONTINUE (SP)?
```

What Stylograph wants to know now is whether you want to keep looking for the string "type", or stop at this string. If you want it to stop here, you can hit the carriage return (RET"). If you want it to keep looking for the string you have specified, hit the space bar ("SP"). If you do hit the space bar, you will find that the cursor has been moved to the next occurrence of the string "typ", the word "typing" in the next sentence, and the stop-or-continue message has reappeared. If you hit the space bar again, it will go to the third occurrence of the "typ" string in the text; namely, the word "typed" in the next sentence. If you hit the space bar again, the error bell/beep will ring, telling you that the string does not occur again anywhere in the text after the word "typed" in the third sentence. Note that Stylograph searches for strings from the position of

the cursor at the time of the command down to the bottom of the text. Any occurrence of the string above the cursor when you give the "FIND" command will not be found.

A powerful variant of the "FIND" command is the "REPLACE" command, which will find any string, and replace it with any other specified string. Place the cursor at the top of the text again. Now, hit the "R" key. A message will appear:

***** REPLACE }**

Now enter a string; for example, let's replace the word "allows" in the text with the word "lets". Simply enter the word "allows" and hit the carriage return. At this point the screen should look like this:

***** REPLACE {allows}**
***** WITH {**

Now enter the word "lets", and again hit the return. At this point, Stylograph will search for the string "allows" and place the cursor at it. You will also be asked whether or not you want to change it:

***** REPLACE (Y-N-A)?**

If you answer "**Y**", then it will replace "allows" with "lets". If you answer "**N**", then it will go on to the next occurrence of "allows" in the text (Since there is no next occurrence here, it will ring the bell) and ask you the same question. If you answer "**A**", it will replace All of the occurrences of "allows" that it finds in the text with the string "lets". You usually should not use the "**A**" option, because Stylograph will not show you all of the changes it makes. Nevertheless, you can see what a nice feature this is if you have ever misspelled a word or name consistently throughout a letter or report; now all you have to do is tell Stylograph to REPLACE it with the correct spelling.

You often have to underline words when you type letters or reports. One more command that you can use from the ESCAPE mode will do this for you automatically when you have a printout made of your text. For example, if you wanted to underline the word "Stylograph" in the text passage you have entered, simply move the cursor to the first letter of the word, either by moving it manually with the "I", "J", ",", and "L" keys, or with the "FIND" function. Now all you need to do is to simultaneously hit the CTRL and U (for Underline) keys for each letter that you want underlined. You will note that this operation changes the color of the letters you have "underlined", to tell you that something has been done to the letters when you look through the text again. Now when you have the text printed out, the word "Stylograph" will be underlined.

There are two other ESCAPE mode commands which come in handy when you are working on a letter or report and you want to make some simple changes. Both of these commands are used to remove unwanted letters or words from the text. To erase single letters or spaces from a text, all you have to

do is position the cursor at the letter, and then simultaneously hit the CTRL and S (for Single delete) keys. This will cause the letter to disappear, and the rest of the text will "move up" to fill in the gap left by the erased letter. Try this on any letter of the text that you have entered. A similar command is used to delete entire words from the text; to do this, simply place the cursor at the word you want erased, and simultaneously hit the CTRL and W (for Word) keys. Again, the word will disappear, and the rest of the text will move up to fill in the gap left by its disappearance. When you use these commands, be careful, because if you hold the keys down for any length of time longer than needed for one letter or word, you may delete more than one.

Now you know all the commands you need to enter text, to format it perfectly, and to edit any typos you have made and missed earlier. It's time to take a look at the printed copy, and to go back to the SUPERVISOR mode. To do this, just hit the left-slash "/" key.

G. THE SUPERVISOR MODE (Again)

The "menu" should have reappeared now. As before, to request any of the tasks on the menu, position the pointer next to it. Let's print out the text you've entered by using the "I" and "," keys to move to the PRINT command. Once you've done that, hit the carriage return. This will cause Stylograph to ask you some questions that you needn't worry about right now:

Different Printer (Y/N*)?
Stop for New Pages (Y/N*)?
Print all Pages (Y*/N)?

For the present time, just hit the carriage RETURN key for each of them, and the text should be printed out on the printer. Once this is done, you should notice that on the printout, the format commands should not be visible, the headers and footers are executed adequately, and that the text appears as it did in the ESCAPE and INSERT modes. If any of these is wrong, go back to the portion of the tutorial where instructions were given for it, and see what went wrong, correct it using either the ESCAPE commands or INSERT mode, and print it out again.

Once the text is printed out, the pointer on the SUPERVISOR menu will again be positioned at the EDIT option. You can return to edit the text further by simply hitting the carriage return as before. If the printout is satisfactory, you can save the text permanently on a disk by positioning the pointer to the SAVE AND RETURN option. At this position, hit the carriage return again, and you will hear the disk run for a short time, and then the video screen will clear. If you are using the Flex DOS, the three plus signs will again appear:

+++

If you look at the contents of the disk, you should find that a file named "LESSON1.TXT" exists on it. This is the text file you have created with Stylograph and this tutorial. In order to work on it further, simply

repeat the command you used to create the file in the first place:

STYLO LESSON1

This will again activate the Stylograph system, load in your text file, and put you in the SUPERVISOR mode, where you may EDIT, PRINT, and SAVE the file again.

We hope that this course has been useful. You should read the entire manual in order to get a good idea of the many other features of Stylograph. You will eventually find word processing a very easy and efficient way to edit and print documents; in fact, after you have mastered it, you will undoubtedly wonder how you ever got along without it.

MAINTENANCE AGREEMENT OFFER

Great Plains Computer Co. offers a one year maintenance program for their full line of software products. This is a very inexpensive way to receive a multitude of benefits, including any program updates for one full year.

This maintenance agreement includes:

1. Updates and corrections in documentation
2. Any updated versions of the software including enhancements
3. Technical support by phone (soon to be a toll free number)
4. Shipping charges paid by Great Plains
5. Quarterly Newsletter

To be eligible for this maintenance agreement, Great Plains Computer Company requires the attached enduser registration card to be sent in promptly.

The extent of maintenance provided shall be strictly at the discretion of Great Plains Computer Co. This agreement does not guarantee that problems will necessarily be resolved immediately. However, every reasonable effort will be made to correct problems as they arise.

Procedure for Software Updates:

1. Notice of updates will be mailed to the customer
2. Customer will return disk to Great Plains for update
3. Great Plains will return updated version to customer at no additional charge.

Maintenance Fee Schedule:

Great Plains Computer Company charges an initial maintenance fee of $100.00 per year for the first program. Any additional programs that you purchase are added on at a nominal fee of $25.00 per program for each year. A customer must carry maintenance on all programs purchased or none at all.

For example: if you purchase Stylograph and Mail Merge the first year, the cost is $100.00 + &25.00 = $125.00 for the first year.
Sometime in the first year you also decide to buy the Spelling Checker Program. Upon renewing the Maintenance Agreement you now will add on another $25.00 for the addition of Spelling Checker to the maintenance agreement. The total cost for the second year is $150.00.

The following is a list of programs currently maintained by Great Plains Computer Company.

Stylograph
Mail Merge
Spelling Checker
Infomag
Gypsy

GPC General Ledger
GPC Accounts Receivable
GPC Accounts Payable
Crossbac
RRMAC

MAINTENANCE AGREEMENT

Person to whom updates should be sent: _____

Business Address: _____

_____

_____

_____

_____

Telephone _____

Shipping Address: _____

_____

_____

_____

_____

Authorized Signature _____

Date: _____

Check which programs this agreement pertains to:

Stylograph ____	Serial # _____	Version _____
Spelling Ck ____	_____	_____
Mail Merge ____	_____	_____
Infomag ____	_____	_____
GPC G/L ____	_____	_____
GPC A/R ____	_____	_____
GPC A/P ____	_____	_____
RRMAC ____	_____	_____
Other ____	_____	_____

Operating System: _____ Disk size _____

Description of Hardware: _____

Office Use Only:

Maintenance Starts: _____ Maintenance Number

Maintenance Ends: _____ _____

Annual Cost _____

GREAT PLAINS COMPUTER CO., INC.
P.O. Box 916
Idaho Falls, ID 83402

SOFTWARE PROBLEM REPORT

Program Name:	Serial #: Version #:
Hardware Configuration:	Operating System (Flex,OS9,etc)
Menu Selection:	
Complete Description of Problem (In detail)	
Error Message(s) displayed and what action taken:	

Reported by:

Name _____ Date _____

Address _____

_____ Phone _____

_____