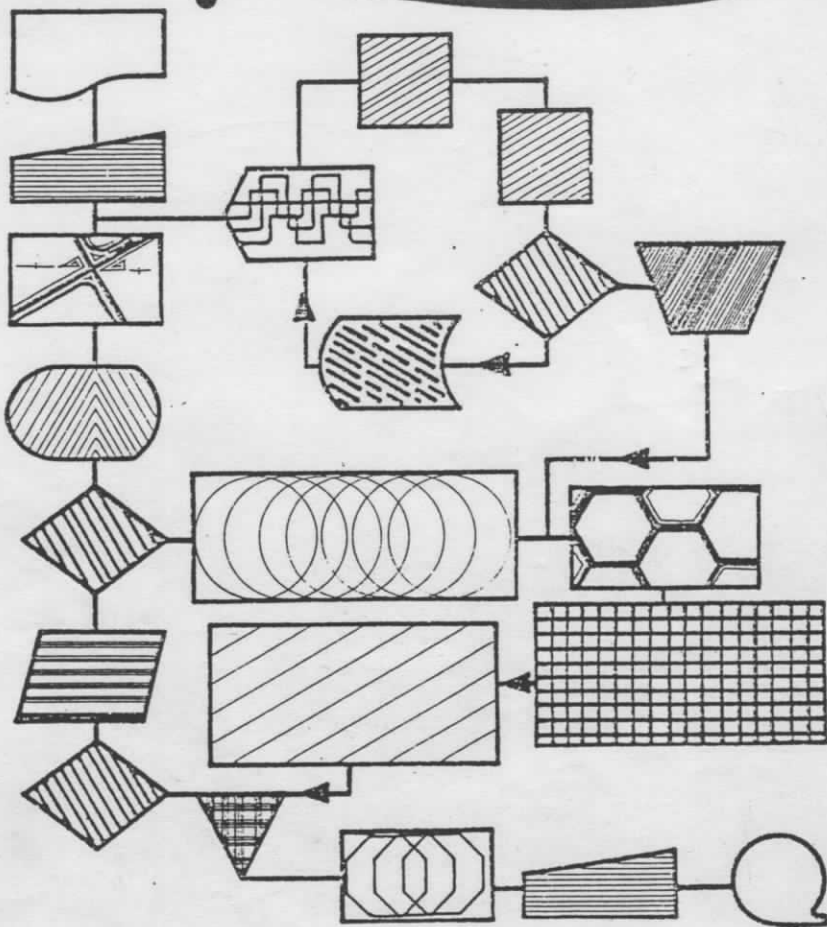


WORD



INTRODUCTION

Columbia is a Word Processing package specifically designed to interface between the Microtan 65 system and peripheral devices such as a printer for hard copy or communications devices.

As a word processing package Columbia allows for comprehensive facilities to enable the processing of text to be carried out easily by simple command structures.

This manual has been produced using Columbia and an Epson MX-82 matrix printer. The format and layout have been achieved using the facilities available from both the software and the printer.

It is assumed that the operator of this package has some rudimentary knowledge of word processor applications and their benefits to the user.

The system operator is advised to study this manual before real applications are applied.

This manual has been divided into two main sections with the first containing the Control Functions of the software whilst the section applies examples of use.

STARTING WITH COLUMBIA

If the package is supplied in the cassette version for loading into Random Access Memory the following should be observed:-

Filename.. "WORD"

Location.. \$0400-\$13FF

Start.....\$0400

Initialise the package at the appropriate starting address:-

INITIALISE "Y/N"

If a new (Cold) start of the program is required answer "Y" yes to question, this reply will instruct the program to clear all text storage area memory and set up the required parameters for operating.

If a new start is not required then answer "N" to the question for a (Warm) start in which case all parameters are unaltered and the text store is saved.

This "Warm" entry allows the operator to leave the main program at any time with the knowledge that the text resident in store will be safe guarded.

Intilising either option will display the program Menu.

NOTE:

If this package is dedicated to a particular task then a Rom version may be installed providing the system parameters are met prior to installation. The dedicated version may then be stored on extention eprom facilities.

THE MENU

Entry to the Menu can be obtained from any mode of operation by pressing the "Esc" key on the keyboard. The Menu will then be displayed for a choice of operations to be made.

```
T(ext) E(dit) P(rint)
M(emory) F(ast) C(uts) D(ump)
S(earch), ** R(eplace), **, **
Enter Command:-
```

By entering the first capital letter of the chosen mode followed by a carriage return (CR), the program will then commence that operation.

COMMAND STRUCTURE

The Command Structures are based upon facilities for both text formatting and printer control functions such as Enlarged, Condensed and Emphasized print modes.

I have used the Epson printer functions during this chapter to indicate the features of the command structures.

The ">" at work.

All Control Commands are preceded by the character ">" (Hex 3E or "Greater Than" symbol) and each control command must be terminated with a "." (Hex 2E or "Full Stop" symbol) i.e. >xxx.

TABULATION:

THE >tx. INSTRUCTION:-

This command activates the Tabulation mode and will indent the following text on that line only those number of spaces determined by the variable "x" to the right of the left hand stop.

This line indents text six spaces to the right i.e. (>t6.).

THE >ix. INSTRUCTION:-

Will indent all the following lines of text x numbers of spaces determined by x to the right of the left hand stop i.e.

This manual was written with >i8. set at the beginning of the chapter to set all text further to the right of the left hand stop and will continue until instructed otherwise with the following:-

Switch to normal mode >i0.

All text now following this instruction will begin at the left hand stop. Using this instruction will create a pseudo margin on the left which must be taken into consideration when further indents to the right are required. The previous example of tabulation was in fact tabulated to fourteen places to achieve a further six places for the example shown.

CONTROL FUNCTIONS:

THE >ox. INSTRUCTION:-

This instruction will output a special printer control character to the printer if those features are available such as double sized print etc. Control functions can be mixed at the beginning of the line with command instructions i.e. >xxx.>t:xx.

SPECIAL COMMANDS:

THE >lx. INSTRUCTION:-

All text now following this command will indent to the right until the right hand side character is at the right hand margin i.e.

This is normal !

Now with the >ll. mode set.

Returned to normal with >lo. mode set.

This mode is very useful for many applications such as columns of figures, addresses and dates etc. Also, with the aid of the Mail-Shot facility this mode offers multiple uses.

NOTES:

To use this mode the number of characters in a line must not exceed the number of characters entered for the printing directives otherwise an "Error" condition will occur when the printer routine interprets the command.

MAIL-SHOT FACILITIES:

THE >ax. INSTRUCTION:-

Columbia offers facilities for a mail-shot within this package.

A file (address) number specified by x in the range of 1-99 can be called and output to screen or printer by the use of this simple command i.e.

Call File 01. (>a01.)

EDITOR MODE

The Editor Mode may be entered via the Menu at any time.

Typing 'E' from the Menu followed by (CR) will activate the Edit mode and will be followed by a prompt for the user to indicate which page is required for editing.

Enter the required page number followed by (CR).

The Editor mode will now manage all text or word corrections in the Ram text store. This store will be incremented or decremented accordingly completely automatically.

The following controls allow complete control over text editing or replacement.

1. CURSOR CONTROL KEYS

Control "U".....Cursor Up.
Control "D".....Cursor Down.
Control "L".....Cursor Left.
Control "R".....Cursor Right.
Control "E".....Erase
character at this point -
and await further commands.

When a character has been erased at this point all text to the right of the Cursor will be moved one place to the left and the text store will be decremented one character. If it is required a character or characters may be entered, in which case all text will be moved to the right as each new character is entered and the text store will be incremented accordingly.

During the editing mode the operator must slow the rate of typing to allow the program to adjust the text store if large amounts of text are to be adjusted.

i.e.

If several pages of text were present when text editing was taking place on a previous page, i.e. 12 pages of text were resident in store and editing was taking place on page 1. It can be seen therefore that 12 pages of text have to be managed within the text store as each character is adjusted.

NOTES:

Page Boundaries:

1. If sufficient numbers of characters or words are erased or added to a page, the following page of text will be adjusted accordingly and text may be decremented from that page onto the existing page. Likewise, if text overflows the page boundary it will appear on the following page which itself will be adjusted and so on throughout those pages resident.

Cont:

PAGE CONTROL KEYS:

During the Edit Mode pages containing text may be scrolled in both directions using the following keyboard controls:

"Line Feed"...Increment to the next page.

"^".....Decrement to the previous page.

"ESC".....Return to main Menu.

NOTES:

1. The page scrolling function will not increase beyond the last page of text.
2. The use of the "ESC" command during the Edit Mode will return the program to the Menu. "ESC" may be used at anytime and from any position within the text.
3. Your systems "Delete" or "Rubout" key may also be used to delete text, likewise the use of the repeat key in conjunction with delete may also be used to erase text.

MARKER CONTROL KEYS:

This mode allows the movement of larger amounts of text whilst in the Edit Mode. Ideal for moving paragraphs etc.

CONTROL I

To manage large amounts of text the desired portion of text to be moved must firstly be marked at the beginning and again at the end of the required portion.

CTRL I - MARKER ON/OFF

Ctrl I marks the beginning of that text area to be moved and the Cursor marks the end of the area.

Nb. The Cursor must be forward of the marker and the enclosed text must be less than 255 characters in length. If greater than 255 chars, the Cursor will reposition itself at the marker position.

Attempts to use a non Ctrl character during this operation will turn the marker off and a return to normal mode.

The "Marker On" status is indicated at the bottom of the screen.

CONTROL "C".....Store marked area.

CONTROL "E".....Erase marked area.

CONTROL "T".....Recover marked area.

NOTES:

CTRL "E" will switch off the marker after execution.

STRING HANDLING

Columbia is capable of string handling in two modes - String Search - String Replacement - This mode is entered from the main menu.

STRING SEARCH:

This searches for a String equal to that specified by the operator i.e.

S,xxx

Where xxx is the string.

If such a string exists anywhere in the text commencing from the beginning of page 1., then the page containing the matching string will be printed and the program will automatically be switched to Edit Mode.

If other strings equal to xxx are sought then typing Ctrl C will continue the search for the next string whilst in this mode. Successive string searches equal to xxx will continue from the last string xxx located.

If no string exists equal to xxx is found then the program will remain in the menu mode.

STRING REPLACEMENT:

This command will replace the existing string in the text with the required replacement i.e.

R,xxx,yyy

Where xxx is the string that will be replaced by yyy.

NOTES:

Care should be taken with these commands as Columbia recognizes both Upper and Lower case characters whilst string handling.

When using the string replacement command the cursor will disappear from the screen during the replacement and only return when the replacement of matching strings is complete. Examination of the altered string can be accomplished with the editing command and page scrolling.

Note also, that ALL strings matching to xxx will be indicated or replaced, and if large amounts of text are present in store then the task of searching for a specific string can be tedious, use the correct spelling only and include both upper and lower case characters where necessary.

The located string will be indicated by a flashing cursor and the first character of that string.

WORD-WRAP

Word-Wrap is a technique that is used to provide even line lengths in text output whether to a printer or to the screen. The variable Word-Wrap provided in this package provides for automatic word-wrapping control in conjunction with option 1. of the output routine.

With the length of the line determined, word wrapping will ensure that lines of text are even and that both the left hand beginning of text characters and the right hand end of text characters are parallel to each other and that the line of text contains an evenly spaced line of text throughout the whole line length. Word-Wrap also ensures that no word is broken up when the end of a line is reached, such words are either accommodated within that line or moved onto the following line of text and incorporate.

Automatic word-wrapping commences from the left most stop as does Tabulation and Indenting. The operator is advised to take into consideration the necessary character counts whilst operating these modes.

Enlarged characters and condensed characters will be subject to different spacing as the setting is treated in the same manner by the word wrapping process and therefore condensed character space will be less than that in normal character mode, likewise, the enlarged character mode will produce the reverse.

Tab and Indent settings must be adjusted accordingly to the number of characters per line when setting the directives in the printer mode.

PRINTER CHARACTERISTICS:-

Some printers may require special control commands before setting special printing modes. This manual was printed in Emphasised character mode. The printer required that the "Escape" mode be set before the special code "Esc E" could be recognised as a command.

.>027.....Set up Escape mode.
>069.....Instruct printer to set Emphasised character mode.

These two instructions can be included in the first line of page 1. together if required, i.e. >027.>069.

Dual commands are permitted in some cases i.e. >014.>t7. will set Enlarged characters commencing 7 places to the right of the left hand left most stop, >t7. in this instance it is 7 Enlarged places to the right.

Individual printer manuals will contain details of these special commands and their effect on text displays.

Operators of this software should be acquainted with text formation and layout, it is suggested therefore that some experimentation must be made before important text formation is undertaken.

TEXT HANDLING

Entry into Text mode via the Menu will set the following:-

The text store management routine will be initialised - Page 1. will be selected - and the flashing Cursor will be positioned at the top left hand corner of the screen awaiting text input from the operator.

The Command structure will then operate as describe in this manual and all input will be transferred to the text storage area commencing at memory location \$1402.

Text may be entered by way of the keyboard in the normal manner or by way of the special text handling commands.

Entries of text whether lines, paragraphs or commands may be terminated by a carriage return (CR), this CR will be indicated on the screen by a special symbol, this symbol is applicable to screen displays only and is not included in any printer reproductions, likewise the special text handling commands are only for screen monitoring purposes.

On completion of a screen of text, the automatic page increment will take place without interruption, the operator may continue without the need to monitor screen and page activity.

THE CARRIAGE RETURN:

Abbreviated to CR the use of CR's can greatly increase the flexibility for the operator in that text layout can be obtained by the input of CR's in specific places within the text as the program recognizes the CR as an end of line terminator and therefore text layout and spacing can be achieved by simply inputting CR's in the appropriate places. With the input of a CR a new line is activated and the cursor returns to the left hand margin. This facility is very useful when in the Edit mode.

The program recognizes all standard Ascii characters with the exception of the CR symbol, if this was not so, all text output to the printer would in fact show a CR at the end of text entries, which is not desirable. Likewise, the special text handling commands are ignored on printer output unless the code is part of a text statement, such as shown.....>t20.

The following will demonstrate the use of commands under real conditions, it is required that your printer have the same facilities as those available when writing this manual.

For those interested:- Using a 75 char output per line to printer this page on Text Handling consumes 7 pages of text on the Microtan system at 32 chars per line on the screen. As the demonstration overleaf continues please disregard the "." (Full stop) preceding the special text handling commands as this is done to incorporate these commands within the text.

Examples of text handling:-

This is the left most stop on the printer without Tabulator or Indent settings.

There was a CR between these two lines of text and the Indent set to >i8 for a more central position on the page from now on.

To Tab a further 4 places to the right the Tabulation was set to >t12., note that only the first line of sentence was printed to the extra 4 places and not the rest.

A CR was input between this and the above to space the text and this line was tabulated to 20 places to the right.

Another CR between for space and this time the Indent was set to (>i40.), If we carry on like this we will run out of room because the characters per line setting in the print mode was for only 75 churs.

The Indent was set back to normal with (>i8.) on this line. Which did not contain 75 characters including spaces such as this line and it was also terminated with a carriage return so therefore it was not subject to the 75 character Word-Wrap which these lines are of course, text now back to normal.

This now shows the (>l1.) mode set for the right hand margin Indent. Which will continue if we don't switch it off with a (>l0.) command. Very good isn't it.

With the R/H/Margin Indent now switched off we can resume normal text operations such as inputting a special control code like this (>o14.) into the printer to give us text such

As this enlarged type.

Or this one which turns on the condensed character mode. Which can be very useful for condensing pages of text and notice how the Word-Wrap automatically takes care of the 75 characters now assigned to it from the printing directives. This is a word processor at work!

Returning to normal this page of text was rearranged a little in the Edit mode and a few errors were corrected, a title was allocated to the page and a few extra CR's were included to space the text out a little more.

MAILING FACILITIES

There are powerful facilities for Mail Shots and Mail Merging built into his program, these facilities are variable and therefore require that system parameters be set up for individual requirements and applications.

You will require the following information to use these facilities:-

A Secondary Ram storage area outside the main text storage area must be designated by the operator, this secondary store will contain the text/addresses that will be called by the program on command.

A Pointer Table is used to indicate the start of the memory locations of the text/addresses within this secondary store, this P.T. contains facilities for ninety nine such pointers and is located within the main program commencing at location \$133A and ending at location \$1FFF, each pointer to the secondary store requires two bytes of data i.e.

\$133A.....Low Byte of addr
\$133B.....High Byte of addr

With this data selected the P.T. would now point towards the start of text/address locations in the secondary store.

THE SECONDARY STORE

The data contained in this store can be a selection of or dedicated to either general text such as paragraphs etc or addresses, in either case the following must be observed. The P.T. must contain the start address of that data and that data in the secondary store must be terminated with a CR and followed by a '0', this will be interpreted by the main program that the data is complete and to input a CR on completion. The '0' is a terminator.

Any further data can follow the last immediately with its start address again following in the P.T.

The data in the secondary store may contain 'CR's as a matter of text formation, in which case, these commands will be observed by the main program on output.

To call the text/addresses from the secondary store simply use the following command during normal text formation....>a1.

This will now call the file number 1. whatever its length or content, .>a2. will call file 2. and so forth, it can be seen therefore that the multiple use of such commands will mix normal text with prestored text and/or addresses at will by the use of simple commands, or if required for dedicated applications, the secondary store can be in fact the main storage area which may be loaded from disc or tape together with the preprogrammed P.T. along with the main program, to take this facility further, once the secondary store contains the required data, whole letters or documents can be output without the need to compile text at all, simply call the data from the secondary store with the appropriate commands.

SECONDARY TEXT STORE

The secondary text store can be loaded with the text/addresses in the following manner:-

The previous page of text under Mailing Facilities was formatted using normal programming techniques with Columbia, on completion the use of the M(emory) command located the end of text address in the main text storage area including the terminator '0', the entire memory contents commencing from memory address \$1402 to the indicated end of text storage address as above, was transferred to a designated area of ram i.e. \$2000. using the normal Copy command of the monitor Tanbug.

All commands including special commands were transferred along with the text into the secondary store area with this method, the pointer table at \$133A & \$133B was programmed with the start address \$2000.

After reentry into Columbia in the normal manner the entire page of text was called by the one simple command of >a1. no other commands were needed as the entire text format.ion of that page included its own commands when it was transferred to the secondary store, that included all the special commands referred to earlier in this manual such as printer control commands.

\$133A = \$00

\$133B = \$20

This pointed to the secondary store address \$2000 which contained the beginning of the data and which was terminated at it end by '0', the entire contents were then called by the command >a1.

\$133C & \$133D would contain the memory address of >a2. and so forth with the last address pointer for >a99. being at \$1FFE & \$1FFF.

To illustrate the use of these facilities an address/text has been included within the 4K bytes of this program at the end, the pointer table has been preprogrammed with the start address of this data and the operator need only call this data with the command >a1. to effect output of the data. This data can be observed if the Printer routine was engaged to the point of screen display only.

NOTE:

When using the special "a" command the text will not be displayed on the screen during normal text formation, this would defeat the use of the special "a" commands entirely.

PRINTER SUPPORT

Printer support is provided by this package and is Centronics parallel compatible similar to that used in the Microtan Tanbug monitor V2.3.

The printer connections will be the same as for V2.3.

For those operators wishing to incorporate their own routines, the following information may be useful:-

\$1252 : Start of printer initialise routine.

\$1279 : Start of character output routine.

PRINTER OPTIONS

The printer routine is entered via the main menu. After executing the "P" command several options will be open to the operator.

1. The number of characters required for each line of output within the range of 30 - 99 inclusive.
2. The number of lines per page to be output.
3. An option to "Wait" between pages of output.
4. An option to print page numbers and titles.
5. Printer ON or OFF option.

NOTES:

1. After printing or in the event of an error the program will return to the main program and await a (CR) command and then return to the main menu.
2. On entry of the requested number of characters per line, the automatic Word-Wrap routine will function.
3. If a continued output is requested the program will jump to option 5.
4. Replying "Y" to option 4. will request the "Title" of the output to be entered. This title will be output to all pages, likewise all pages will contain a page number commencing from "01". When entering the page title, a space is preferred preceding the title i.e. (SPACE)"TITLE". The operator must note that the

number of lines requested for output per page must be equal to the length of form available in the printer if the printer has an automatic Skip Over Perforation functioning, otherwise page numbers and titles will break the pattern of text. It is advisable before entering into options 2,3,4. to experiment with form lengths and printer options.

5. The option to "Wait" between pages is ideally used for Screen output rather than for printer operation. In conjunction with the other options and depending upon the number of characters per screen width, this option has been provided to allow the operator to view the text as it would appear on paper and therefore the "Wait" state has only been provided as a aid to enable controlled screen scrolling. Further, if the operator inputs 31 characters to option 1., then text may be read in Word-Wrap format on the screen.

6. Answering "N" to option 5 will output all text to the screen only and should be used with the "Wait" command.

7. This manual has been written using 75 characters per line with the printer set in automatic skip over perforation mode. Depending upon your particular printer/paper format, carriage returns may achieve the skip over perforation sequence for you.

A continuous output of lines was input to the question in option 2.

8. Depending upon your specific printer characteristics "Mode" commands may be generated from this software with the aid of the command structures i.e. >??.

CASSETTE FILE HANDLING

The cassette file handling routines are entered via the main menu, the required Cuts or Fast speed being set by the input of the capital letter appropriate. To dump data to tape simply input "D" and CR, the program will respond with the start and finish address of the file automatically and await from the operator the required filename, on completion input a CR and the dump to cassette will commence.

On completion of the file dump reenter the main program via the "Warm" start if required.