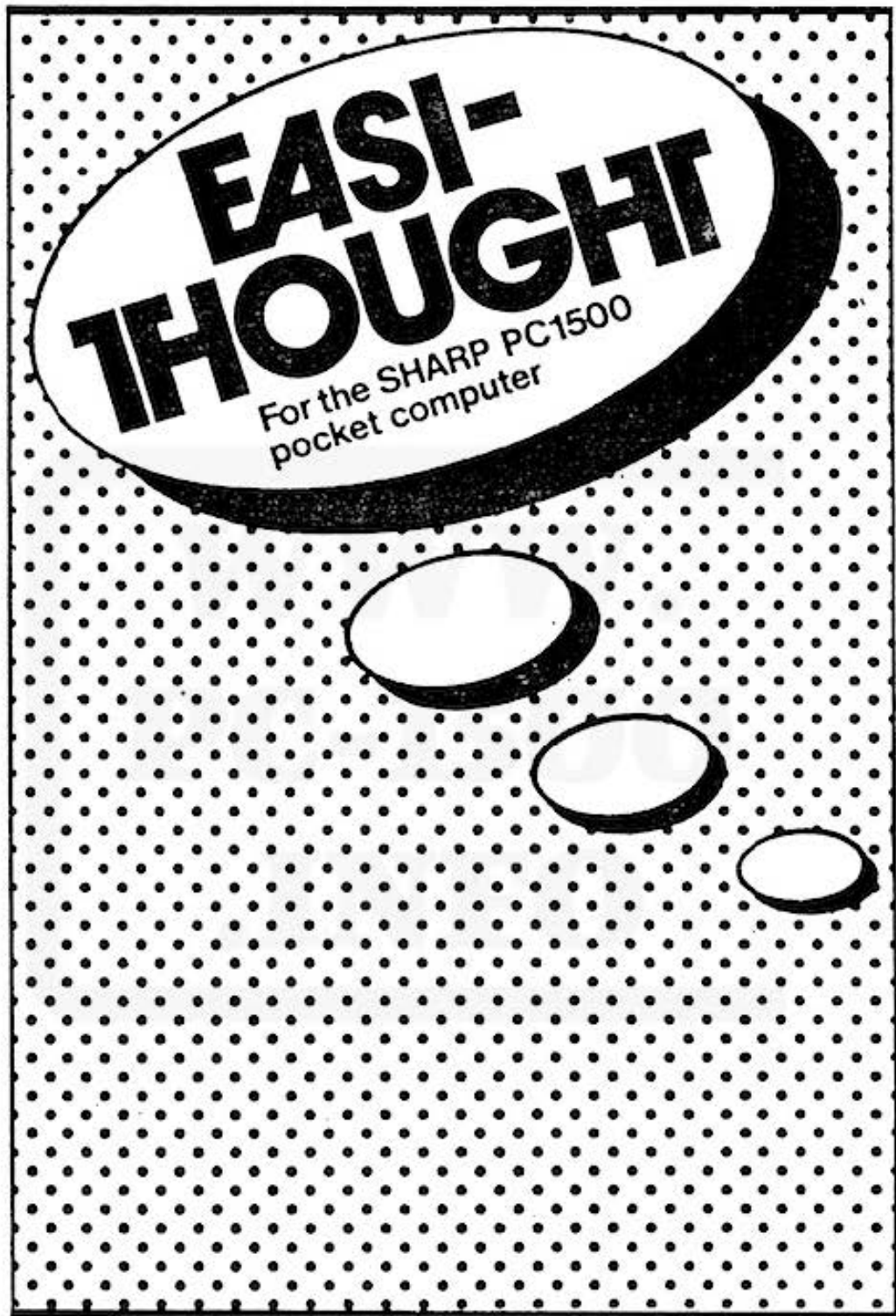


EASY- THOUGHT

For the SHARP PC1500
pocket computer

WWW.
PC-1500
.INFO

WWW.
PC-1500
.INFO



**WWW.
PC-1500
.INFO**

EASI-THOUGHT

For the SHARP PC1500
pocket computer

Contents

Introduction.....	1
What is a thought processor?.....	1
All users should read this section carefully.....	2
Getting started.....	3
Loading the program.....	3
Making a back-up copy.....	4
Running EASI-THOUGHT.....	4
Beeps.....	4
Creating and editing text.....	5
File initiation procedure.....	5
The display indicators.....	6
Exiting to Main Menu.....	6
Adding text.....	6
Moving the cursor.....	6
Deleting text.....	7
Pause for reflection.....	7
Mode setting - the WORD, SENTENCE, PARAGRAPH and SECTION keys.....	8
Cutting and pasting with EASI-THOUGHT.....	9
Helpful command keys for text editing.....	10
Creating and editing text on different levels.....	11
Creating a new section at a different level.....	12
Accessing text on different levels.....	13
Deleting a section marker.....	13
Promoting and demoting text.....	13
ADVANCE, BACKUP and DELETE modes revisited.....	14
Level-dependent and level-independent commands.....	14
Memory overflow.....	15
The last stages of the HOLIDAY file.....	15
The Main Menu.....	16
Saving and loading files to and from cassette tape.....	17
Saving a file.....	17
Loading a file.....	17
Printing a file.....	18
Printing a file with the CE 150.....	18
Printing a file with an external printer.....	19
Samples of printed output from EASI-THOUGHT.....	20
Specifications and some reminders.....	22
Always remember.....	23
Summary of EASI-THOUGHT commands and functions.....	24

COPYRIGHT NOTICE

The EASI-THOUGHT program is copyrighted, and all rights are reserved by Frank C. Odds. The distribution and sale of the product are intended for the final purchaser only. Lawful users of this product are hereby licensed only to read the program from its distribution medium into the memory of a computer for the purpose of executing the program, and to make further copies of the tape for their exclusive use for back-up purposes. It is a condition of the sale of this product that sale of the program to a third party must include all copies made of the program tape.

This EASI-THOUGHT manual is copyrighted, and all rights are reserved. This manual may not, in whole or in part, be copied, reproduced, translated or reduced to any electronic medium or machine-readable form without prior consent in writing from Frank C. Odds.

© 1985 Frank C. Odds

While every attempt has been made to ensure this program is accurate and error-free, no responsibility can be accepted by the author or distributors of this program for any damage or loss incurred as a result of using the program or the results generated by the program.

Manufactured and marketed by
MINIMICRO SOFTWARE
15 Anthea Drive, Huntington, York YO3 9DB, England

- 1 -

SECTION ONE

INTRODUCTION

Welcome to EASI-THOUGHT - the powerful thought-processor program that lets you create and edit text on up to 20 different levels. Among the features of EASI-THOUGHT are:

- one- and two-keystroke commands for flexible text editing, e.g. cursor movements, deletions, cut-and-paste operations
- facilities for multi-level text creation - EASI-THOUGHT is an electronic scratchpad/word processor that can be used to create multiple documents simultaneously or to separate text headings on different levels
- facilities for storing and retrieving text files to and from cassette tape
- three print options - two for the pocket computer mini- printer and one for external printers via the pocket computer optional interface, with automatic word-wrapping on two of the options and automatic level indentation on all three.

What is a thought processor?

A thought processor is an extension of the idea of a word processor. With a thought processor you can create and edit your text on different levels (20 different levels with EASI-THOUGHT), but the display only reveals text on one selected level at any one time. This is a process known as "information hiding", and it offers considerable flexibility over a conventional, single-level word processor. You can write a document in much the same way as you would prepare one with pen and paper: first you jot down the main headings of items to be included in the text, then you start to fill out under each main heading with sub-headings, or text as you please. With pen and paper, if you change your mind about the status or position of a heading or a piece of text you have to resort to messy crossings-out and half-legible insertions. With a thought processor you can move around chunks of text in any way you choose, and you can promote or demote the level on which the text was first created. When the text is printed, lines are indented according to their level.

- 2 -

All users should read this section carefully

EASI-THOUGHT has been designed to be as simple to use as possible, but to get the best out of the program we suggest you read this manual carefully.

Hardware needs. To load the program you will need a Sharp PC 1500, PC 1500A or Tandy PC-2 computer with a RAM memory extension of at least 4k, and a CE-150 printer/cassette interface (or the Tandy equivalent). Once the program is loaded you can create and edit text with the computer alone (though of course you cannot save files to tape or print them). It is possible to print text out to an external printer. To do this you will need a Sharp CE 158 interface (or the Tandy equivalent) coupled correctly to the printer. It is the user's responsibility to ensure that the interface parameters have been correctly set up after switch-on: the program outputs text as lines of ASCII code separated by line-feeds.

Special cautions. About one-half of the EASI-THOUGHT program is written in machine code. The use of machine code allows EASI-THOUGHT to offer a very large number of user options and commands and a remarkably high speed of operation. However, you must remember that when you are creating and editing text with EASI-THOUGHT you are using the EASI-THOUGHT operating system, not the normal computer operating system. The only command that will return you to normal operation (it returns you to the EASI-THOUGHT main menu) is DEF SPACE. You cannot interrupt operation with the ON/BREAK key - only the ALL RESET device on the back of the computer will overcome the EASI-THOUGHT system if you get into major difficulties.

The portion of EASI-THOUGHT written in BASIC interacts with the machine-code operating system in all aspects of use of EASI-THOUGHT. Therefore you should never attempt to alter or interfere with the EASI-THOUGHT program.

- 3 -

SECTION TWO

GETTING STARTED

Loading the program

Please note; it is not possible to MERGE EASI-THOUGHT with an existing program, but it is possible to MERGE other programs once EASI-THOUGHT has been loaded from tape. EASI-THOUGHT is loaded into the computer in two stages. It is advisable to reset the computer with the NEW 0 command in PRO mode before you load EASI-THOUGHT (NEW 256 if you have a 16k memory extension), and it is essential to do this when you wish to load another program after you have used EASI-THOUGHT, since loading EASI-THOUGHT alters the system pointers of your computer.

Ensure that your tape recorder is connected up correctly to the interface, that the EASI-THOUGHT tape is fully rewound on one side or the other (there's a copy of the program on each side), and that the REMOTE switch on the interface is set to ON. Press the PLAY switch on your recorder.

Then type CLOAD M, and press ENTER. Make sure you include the 'M'. The words EASI-THOUGHT M/C should appear on the display. It takes just over 2 minutes for this portion of the program to load. If loading is successful, the message ERROR 1 will appear on the display. This is not a fault. Press CL before proceeding. (ERROR 44 indicates unsuccessful loading as usual.)

Now type CLOAD and press ENTER (with the PLAY switch on the recorder /still/ pressed down). The display should read **EASI-THOUGHT** until the second part of the EASI-THOUGHT program has loaded successfully (about 3.5 minutes).

If you appear to be unsuccessful in loading EASI-THOUGHT you will need to rewind the tape and try again. All copies of the tape are checked for successful loading before they are despatched. You may need to experiment with the volume control of your tape recorder. Check that the tape heads are clean and demagnetized and make sure all connecting leads are plugged in properly. If you are still not successful, try using another recorder if you possess one: the azimuth adjustment of tape heads can sometimes vary and cause loading problems - but adjusting the tape head may make it impossible to load your other software.

- 4 -

Making a back-up copy

If you wish to make a back-up copy of EASI-THOUGHT, it is essential that you do so just after you have loaded the program and before you run it. If you attempt to save the machine code portion of the program after you have run the program you are certain to save a corrupted program that will crash if you reload it.

The steps involved in saving EASI-THOUGHT to tape are as follows. Set your tape recorder in record mode. Type `CSAVE M "EASI-THOUGHT M/C";&4000,&47FF,&47DA` <ENTER> to save the machine code system, then `CSAVE "**EASI-THOUGHT**"` to save the BASIC portion.

Running EASI-THOUGHT

You can initiate EASI-THOUGHT with the RUN command or with the command `DEF` `SPACE` (the latter is the shortest method). The display will now read:

```
MENU:New Edt Tpe Prt End
```

You have entered the Main Menu, and can select one of several menu options or get information from one of the main menu commands. These will all be described in detail in the following sections. A summarised directory of the EASI-THOUGHT commands is given on page 24.

To exit from the EASI-THOUGHT Main Menu simply press the function key (&) beneath the word End on the display. At all other times the command `DEF` `SPACE` will return you to the Main Menu.

Beeps

Two audible prompts are used by EASI-THOUGHT. The first is the customary BEEP sound; it is used only to draw your attention to a message or a prompt on the display. The second is a two-tone sound - press the key `A` in the main menu and you will hear it - and it is used to tell you you have pressed a key in error or requested a function that cannot be performed. For one type of command - level promotion and demotion (see page 13) - the two-tone beep sounds twice to let you know the function has been performed successfully.

- 5 -

SECTION THREE

CREATING AND EDITING TEXT

EASI-THOUGHT allows you to type, edit, record and print a document. Throughout these instructions, your text document will be referred to as the file. On pages 20-21 you will see samples of the printed output available from EASI-THOUGHT. In the present section you will be introduced to the file-handling functions of EASI-THOUGHT and the file shown on pages 20-21 will be used as a working example. Although the notes of someone preparing things to do in connection with going on holiday are fictitious, they serve to illustrate the nature of potential applications of EASI-THOUGHT for more serious purposes.

To edit an existing file you need only to press the function key (#) beneath the word Edt in the Main Menu display and EASI-THOUGHT will immediately set your text cursor at the start of the file. However, when you use EASI-THOUGHT for the very first time, or when you wish to create a new file, you need to press the function key (") beneath the word New in the Main Menu, and respond to certain prompts before you can type your file.

File initiation procedure

If you select the New option from the Main Menu, the display will read:

DELETE PRESENT FILE? (Y/N)

This is a precaution to protect you in case you have forgotten to save a previous file to tape or to have it printed out, since creation of a new file will automatically erase the old one. If you press any key but ☒ Y in response to this prompt, the display will return to the Main Menu.

Assuming you have pressed ☒ Y, the display will now read:

NAME OF NEW FILE?

You should now key in a title for your file. The title can be anything up to 16 letters long, and it may not include quotation marks (the title is stored in the computer in the fixed variable A\$). For the purposes of our example, the

- 6 -

file title is HOLIDAY. Press **ENTER** when you have typed the title. The display will now look like this:

}**Q**~

and you are ready to start typing your file.

The display indicators

The three characters you see on the display will soon become familiar to you. **}** marks the start of a section - to be explained more fully later. At the moment it also marks the start (top) of the file. **Q** is the cursor - it always indicates the current typing position in the text. **~** marks the end (bottom) of the file.

Exiting to Main Menu

Remember, the command **DEF SPACE** is now the only way you can now return to the Main Menu and thus stop operation of EASI-THOUGHT.

Adding text

EASI-THOUGHT stores text in the form of a continuous character string. There is no need for you to worry about line lengths or word breaks - EASI-THOUGHT takes care of these automatically. Wherever the cursor is positioned in the text, any alphanumeric keys you press will be inserted into the file one place to the left of the cursor. Let's start typing in some main ideas for our HOLIDAY file. Type Front room bureau. Car. Bathroom. (use the **SML** key to type in the lower case letters if you wish). The full stops merely define the ends of sentences. The usefulness of being able to determine sentence ends will be shown later.

Moving the cursor

If you compare what you have typed with the printed file on pages 20-21 you will see that we have forgotten to include the heading Mrs. Rutherford, in the list - just the sort of thing we all do when we try to think of everything at first. This is no problem. The two cursor movement keys are **◀** and **▶**. Just press **◀** and hold the key down: the cursor will speed leftwards till you let go or until it reaches the top of the file. If you overshoot the space between Front room bureau. and Car., just use **▶** to move the cursor forwards.

- 7 -

Should you wish to jump quickly to the top or the bottom of the file (it often becomes necessary to do so when the file gets long!) you can save a lot of key holding by using the command **DEF T** (move to top of file) or **DEF B** (move to bottom of file).

Once you have developed a feel for the auto-repeat of the **◀** and **▶** keys it will become second nature to use these keys to move the cursor precisely to a chosen point in the file. In the case of our example, you need to type Mrs. Rutherford. in the appropriate place.

Deleting text

By now, there is a good chance you have made a typing mistake. Errors are very easy to correct with EASI-THOUGHT. Pressing the **CL** key causes the character immediately preceding the cursor to disappear from the file. Use it to correct any mistakes you have made.

Pause for reflection

Consider the operations you have just performed and you will realize your computer is behaving in a quite different way from usual. There has been no need to type in individual lines (character strings) with the **ENTER** key. All that is ever necessary is to place the cursor where you want it in the text and to start typing. A single keystroke will delete errors, and a few keystrokes let you move the cursor at will. You may also have been surprised at the speed with which the computer responds to commands like **DEF T** or **DEF B**; yet so far you have only scratched the surface of the power of EASI-THOUGHT!

One facility you have not yet had a chance to appreciate is that with EASI-THOUGHT you may type in all the double quotes "" you please (remember to use the **SHIFT** key) - they will not cause errors as they do with string inputs in the conventional computer operating system.

If you choose to press the **ENTER** key when you are creating text, you will be inserting a paragraph marker which will force a line feed in the printout. Every press of the **ENTER** key puts a **|** into the file to indicate the position of paragraph markers. In other words, every time **ENTER** is pressed and this symbol appears on the display, the text that follows will be printed out on the following line. If you want to leave a paragraph gap between lines, press **ENTER** more than once. Of course, the **|** symbol will not actually appear in the printout.

- 8 -

Mode setting - the WORD, SENTENCE, PARAGRAPH and SECTION keys

At this point, press **DEF** **H** (for help). Your text will disappear, to be replaced by:

Sel Cut Pst Wrd Sen Par

These are prompts to remind you of the purpose of the six grey function keys. Here, we will deal with the use of the right-hand three - Wrd, Sen, Par. Press any key to return to your text display.

Whenever you press the **◀**, **▶** or **CL** key you not only move the cursor or delete a character, you also set EASI-THOUGHT in BACKUP, ADVANCE or DELETE mode (respectively). This means that if your next key press is one of the three right-hand function keys or the **OFF** key, EASI-THOUGHT will continue to move the cursor or delete text, but it will do so in units of one word, one sentence, one paragraph or one section, according to which function key you press. (Any other key press after **◀**, **▶** or **CL** will cancel the mode setting.) The arrangement of the function keys is as follows:

the \$ key = WORD
the I key = SENTENCE
the & key = PARAGRAPH
the OFF key = SECTION

It is often much easier to discover the action of a command by trying it than it is to have it explained in words. Move the cursor to the top of your file then press **▶** Wrd. The cursor will move forward to the start of the next word. Press Wrd again to move forward one more word. Now try pressing Sen - the cursor moves to the start of the word after the next full stop. If you now press Par the cursor will move to the end of the file, but you can always test out its proper function by adding some !!! markers to your file. Use of the SECTION (**OFF**) key is slightly different from the other function keys in ADVANCE and BACKUP modes, so an explanation of its use will be left until later.

When you have experimented with the Wrd, Sen and Par function keys in ADVANCE and BACKUP modes, try them in the DELETE mode, i.e. after you have once pressed **CL**. You can use the SECTION (**OFF**) key in the same way as the other

- 9 -

three in DELETE mode, but after you press it you will get a self-explanatory screen prompt to protect you against accidental deletion of a large chunk of your file. By the time you have finished experimenting with the DELETE mode you will probably have erased your entire file, but it can soon be typed back in. The important thing is that you now know how to manipulate your text by moving the cursor forwards and backwards through the file one character at a time, one word at a time, one sentence at a time, one paragraph at a time and (ultimately) one section at a time, and you can delete portions of your text in a similar manner.

Cutting and pasting text with EASI-THOUGHT

In the course of typing a file you may decide you need to move a portion of text from its present location to a new one, or you may wish it were possible to type in an often-used expression with a single keystroke instead of having to type it in full every time. Either of these desirable features can be realized in EASI-THOUGHT with the Select-Cut-Paste facility, which uses the first three special function keys (labelled Sel Cut Pst when you key **DEF** **H**).

The use of these three keys is simplicity itself. First locate the cursor at the start of the text you wish to move or to reserve for one-key insertion, and press the Sel (!) key. A **█** will appear on the display to indicate the start point. It can be deleted with the **CL** key at any time if you wish to change your mind. Now move the cursor on to the end of the chosen portion of text and press the Cut (") key. The selected portion of text will vanish - it has been moved to the paste buffer. You can now insert your paste buffer anywhere in the text you choose and as often as you choose: merely locate the cursor at the chosen insertion point and press the Pst (#) key.

There are limits to what you can do with the cut and paste facility. The maximum capacity of the paste buffer is 255 characters, so attempts to cut out a piece of text longer than 255 characters will merely be greeted with a beep. The 'cut' point must come after the 'select' point - you can't operate the keys the other way round. You can only have one 'select' point - once you have pressed Sel you can't insert another 'select' marker until you have made a cut or deleted the original marker. You can't make a 'cut' unless you have first made a 'select', and you can't make a 'paste' until you have selected and cut.

- 10 -

Please note: each new 'select and cut' operation supersedes the previous one and replaces the former paste buffer with a new one. It is possible to exit from a text-editing session after you have put in a 'select' marker but before you have made a 'cut'. To do this will leave the 'select' marker uselessly in the text; all paste buffers are destroyed as soon as you return to the Main Menu. It is strongly advised that you do not leave redundant 'select' markers in the text in this way. If they are subsequently deleted this action may erase a newly created paste buffer. Always complete a 'cut-and-paste' operation before you return to the Main Menu.

The HOLIDAY file. As an example of the cut and paste operation, let us restart the HOLIDAY file as we did to begin with. Restart with a New selection from the Main Menu and type in Front room bureau. Car. Bathroom. This time, instead of moving the cursor back to insert Mrs. Rutherford., type Mrs. Rutherford. after Bathroom. Now move the cursor back to the start of Mrs. Rutherford. and press the Sel key. Next key **DEF B** to position the cursor at the bottom of the file, and press the Cut key. Finally move the cursor back to the space between Front room bureau. and Car. and press the Pst key. The operation is now complete.

Helpful command keys for text editing

You have already used four commands of the general type **DEF** followed by an alphanumeric key: **DEF SPACE**, **DEF T**, **DEF B** and **DEF H**. There are several others that can be used while you are creating or editing text, and the operation of some of these will be described now.

- DEF M** displays the number of character spaces remaining in the computer's memory. Press any key to return from this display.
- DEF U** displays the number of character spaces you have used in the memory. Press any key to return from this display.
- DEF F** reminds you of the name of the file. Press any key to return from this display.

- 11 -

DEF S initiates a search for a particular string of characters. The display will briefly remind you to INPUT SEARCH STRING then leave only a ? on the display as a prompt. You should now type in the text you wish to search for. You can type in up to 16 characters, followed by the **ENTER** key. (If you type in a full 16 characters you won't need to press **ENTER**; EASI-THOUGHT will initiate the search automatically!) You may type in double quotation marks as part of your search string, but there is no facility for correcting your search string - if you make a mistake, key **ENTER** then **DEF S** and start again.

EASI-THOUGHT searches forward through the file from the current cursor position until it locates the string of characters you typed in. If it fails to find such a string the cursor will remain where it was when you keyed **DEF S**. Please note that the search is case-sensitive - you must ensure you use the correct combination of upper and lower case characters in your search string. If you want to search the whole file, make sure you go to the top of the file (using **DEF T**).

DEF C Continues to search forward from the current cursor position for the search string you last entered in a **DEF S** operation. The cursor stays where it is if a new repetition of the search string is not found.

Example. Let us use the search facility with the HOLIDAY file. Set the cursor at the top of the file (**DEF T**) then key **DEF S**. Type in room **ENTER** (remember to set the **SHL** key first so the letters keyed in are lower case). The cursor will be seen to have moved to the start of the word 'room' in the phrase 'Front room bureau.'. Now key **DEF C**: the cursor moves into the word 'Bathroom' between the 'h' and the 'r'. You will appreciate that this facility is invaluable for finding a particular place in a long document.

Creating and editing text on different levels

Up to now, all the functions and commands you have learned have been much the same as you would expect to find on a straightforward word processor. But EASI-THOUGHT is not a straightforward word processor - it lets you manipulate text on different levels, as we explained in the introduction.

- 12 -

Look again at the samples of printout on pages 20-21. You will see that, under the main headings we have already typed there are pieces of indented text. These have been added to the file on different levels. Of course, if indentation is all that is needed, you can indent very flexibly with the `SPACE` key. But the way in which the indented pieces of text on pages 20-21 were created is more subtle than mere indentation: let us see how it was done.

When you first start a New file with EASI-THOUGHT, your cursor is automatically placed at the top of the file, and the level is automatically set at level 1. There is a simple command that allows you to find the current level at any time:

`DEF L` displays your present level. Press any key to return to the previous display.

Try keying `DEF L` to check out this function.

Creating a new section at a different level

Now, position the cursor after the word Car. Press the `RCL` key. The display now looks like this:

```
)C)
```

Key `DEF L`; you will discover that you are now on level 2. What you have done is to create space for a new section of text one level lower than before. The `)` symbol marks the start or the finish of a section. There is no visual distinction between the marker for the start of the file and the start of a section, but you can always find the top of the file directly with the command `DEF T`. The key to press to create text one level higher than before is `↑` but we will come to that later. For now, type in the following line: Buy spare tube of screenwash. (include the full stop).

Now key `DEF T`. You are about to discover the big difference between a thought processor and a word processor. Use the `▶` key to move forwards through the file. When you get to Car, you will see the section marker indicating there is a section after car on a different level. Continue pressing `▶` - the cursor skips past the section on level 2 into which you just typed Buy spare tube of screenwash. You now see the point of the thought processor. You can create sections of text on 20 different levels, but EASI-THOUGHT will display only the text on one level at a time, showing section markers to indicate the points at which text on another level or levels is hidden.

- 13 -

Accessing text on different levels

To locate sections of text on a different level from the one presently displayed, you use the level cursor keys - **[↓]** and **[↑]**. **[↓]** moves the cursor to the start of the next section at a level below that of the present section and **[↑]** moves the cursor to the start of the next section at a level higher than the present section. If there is no lower or higher section after the current cursor position the cursor doesn't move and a beep sounds.

Try out the **[↓]** and **[↑]** keys with our sample HOLIDAY file. Use **[DEF][T]** to return the cursor to the start then press **[↑]**. All you get is a beep - the first section of the file is on level 1 so there is no higher level. Now press **[↓]**. The cursor moves to the section that reads Buy spare tube of screenwash. Try **[↓]** again then **[↑]**.

Deleting a section marker

It is very easy to create new sections of text on different levels, and it is just as easy to erase a section marker (section markers actually take up 3 characters of text, but only one shows on the display). The command is **[SHIFT][CL]**. Your cursor must be positioned to the right of the section marker, or the command will have no effect.

Try out the **[SHIFT][CL]** command on your sample file. Use **[DEF][B]** to position the cursor at the bottom of the file then move it back to the section marker (type **[4][Par]**). Now type **[SHIFT][CL]**. Check the current level with **[DEF][L]**, and you will find you have added the final portion of text to the text on level 2. Move the cursor back to the next section marker and press **[SHIFT][CL]** again. You have now set everything to level 1.

Promoting and demoting text

Our sample HOLIDAY file is now in a mess. It contains only a string of disjointed phrases on a single level. Let's first restore the phrase Buy spare tube of screenwash. to level 2. It is easy to demote (or promote) a piece of text. The format of the command is **[DEF][D]** (demote) or **[DEF][P]** (promote) followed by one of the function keys - **[Wrd]**, **[Sen]**, **[Par]** or **[Section]** (**[OFF]**) - according to the size of the piece of text you wish to move to another level.

- 14 -

Move the cursor anywhere in the phrase Buy spare tube of screenwash. Because the phrase is separated by full stops, we can treat it as a sentence, so key **DEF D** Sen (**Z** key). You will hear a double beep, indicating a successful promote/demote operation, section markers will have appeared around our phrase (new markers are only added in cases like the one in our example where they weren't there before), the cursor will be set at the start of the newly demoted section, and a check with **DEF L** will reveal the phrase is now back on level 2.

Please note that if you promote a portion of text to a level the same as that of an adjacent section or sections, the section markers will not be removed automatically; you must remove them with the **SHIFT CL** command. However, the **◀** and **▶** keys will scroll the cursor through all the sections on the same level, even though the section markers remain.

The **DEF D** and **DEF P** commands will not allow you to promote or demote a piece of text outside the limits of levels 1-20.

ADVANCE, BACKUP and DELETE modes revisited




In the previous description of the ADVANCE and BACKUP modes we delayed description of the operation of the functions **◀** or **▶** followed by Section (**OFF**). This is because this operation will only set the cursor to the start of the next section at the same level (in ADVANCE mode) or the start of the previous section at the same level (in BACKUP mode). This operation therefore differs from that of the Wrd, Sen and Par keys, which can be used to locate the end of a section as well as the start of the next one.

In DELETE mode, the keys will operate only within a single section. You cannot therefore accidentally delete your way back into a previous section unless you move back there deliberately with the cursor movement keys.

Level-dependent and level-independent commands

The text handling commands of EASI-THOUGHT vary in one important respect: some of them are level-dependent, some of them are level-independent. For example, **DEF S** and **DEF C** will search for a string of characters regardless of the level on which they are typed, and the system will automatically change levels after a **DEF S** or **DEF C** command is this is necessary. By contrast, **◀** and **▶** are level-dependent - they handle text only on a single level at any given time.



- 15 -

In practice, only the mode-setting commands, ,  and , and their associated function keys, Wrd Sen Par and Section, are level-dependent: all the other facilities either involve level changes or are level independent. Please note that this means the cut-and-paste option is also level-independent. You can cut and paste a section that contains hidden text on other levels (so long as the total character length doesn't exceed the limit of 255), but it is strongly advised that you do not create multi-level paste buffers in this way since they can cause enormous confusion unless you know absolutely what your intentions are.

Memory overflow

Many text handling operations - typing in text, pasting in text, starting new sections, etc. increase the length of a file. Because memory space for a file is obviously limited, EASI-THOUGHT always internally checks the memory available before it performs an operation that will increase the file length. If there is insufficient memory available for the function requested or for the next letter of text, the function is automatically aborted, and a warning message is displayed. Any key press at this stage will return you to the Main Menu. It is then up to you to decide how to proceed. Remember that a memory overflow abort resulting from an attempt to paste a portion of text may well still leave a few characters of memory unoccupied, but such an abort resulting from typing in alphanumeric characters always means the memory is absolutely full.

The last stages of the HOLIDAY file

You have now learned all the text-handling functions provided by EASI-THOUGHT. There are many commands to learn and new uses for the non-alphanumeric keys, but the large variety of facilities makes EASI-THOUGHT an extremely powerful and flexible package. A summary of the EASI-THOUGHT commands and functions is given on page 24. Only the  and  keys have no function assigned to them in EASI-THOUGHT.

By now it should be fairly self-evident how the rest of the file printed on pages 20-21 was created, but to complete this tutorial section on creating and editing text we will describe briefly the steps involved. You can use your knowledge of EASI-THOUGHT to work out what is happening at each stage.

- 16 -

Use **DEF T** to return to the top of the file. Move the cursor to the point just after Front room bureau. Press **RCL**. Type tickets then press **RCL**. Type pick up insurance note then press **↑** twice. Notice that in doing so the cursor passes through an empty section - this was created when we pressed **RCL** for the second time to create a level 3 section, in case there was level 2 material surrounding the level 3 section. You can erase empty sections with the **SHIFT CL** facility, or ignore them. They will be skipped over when the file is printed.

Move the cursor just after Mrs. Rutherford. Press **RCL** and type in take round key; take round goldfish. Press **RCL** and type two packets of food - remind her not to overfeed the fish like last time. Press **↑** twice and **↓** once. Type check oil, water, brake fluid; fill screen washer then press **DEF D** Sen. Move cursor to end of section and press **↓**. Type check spare tyre then press **↑**. Move cursor to bottom of file, press **RCL** and type in the pieces of text that appear at the end of the file printed on pages 20-21.

SECTION FOUR

THE MAIN MENU

The Main Menu offers several choices that can be accessed by pressing the appropriate function key as already described. It is also possible to access the information commands described in section 3 - **DEF F**, **DEF M**, **DEF U** and **DEF H**. Please note that **DEF M** and **DEF U** operate only when a file has been created or loaded from tape. They return 0 CHARACTERS when EASI-THOUGHT is first loaded and run.

There is one further command, available from the Main Menu only. It is **DEF N**, which allows you to alter the name of your EASI-THOUGHT file. Type out the new name, then **ENTER**. If you type no new name and just press **ENTER**, the existing file name remains unaltered.

Pressing the function key beneath End in the Main Menu is the way to finish EASI-THOUGHT operation and return the computer to its normal state. The only functions that haven't yet been described are those selected by pressing the function keys under Tpe (the cassette tape option) and Prt (the print option). The operation of these options will be described in the next two sections of the instructions.

- 17 -

SECTION FIVE

SAVING AND LOADING FILES TO AND FROM CASSETTE TAPE

If you wish to save a file to tape or to load a file from tape, press Tpe in the Main Menu. The display will now read:

TAPE MENU: Load? Save?

If at this stage you press any key other than the function keys under the words Load? and Save? you will return to the Main Menu.

Saving a file

You should connect your cassette recorder, set the remote switch to ON and switch it to record mode before you press the key under Save?. As soon as you select this option your EASI-THOUGHT file will be output to the recorder in a CSAVE M format. Please note that, with EASI-THOUGHT, only the characters you have typed will be saved to tape, so the length of the recording will depend entirely on the length of your file.

Loading a file

If you select the Load? option, again, make sure that your recorder is connected up, the remote is switched to ON and the recorder's PLAY button is pressed. You will be asked to key in the name of the file you wish to load from tape. Don't worry if you have forgotten precisely what the file name was. Type in anything you like as a file name. Names of the files on tape will appear on the display, and you can interrupt the loading operation at any stage with the **ON** key then restart the loading operation.

- 18 -

SECTION SIX

PRINTING A FILE

You should decide the point in your file at which you want printing to start before you select PRT from the Main Menu. Simply move the cursor through your file to the desired point then key DEF SPACE to return to the Main Menu. Regardless of the print starting position, the name of the file will always be printed at the head of the output, centred on the page. To print the whole file, move the cursor to the top of the file (DEF T) then go to the Main Menu (DEF SPACE). To stop printing in mid-file, simply press the ON key to interrupt, then DEF SPACE to recall the Main Menu.

When you select the PRT option from the Main Menu, the display will read:

PRINT MENU: CE150 Other

Pressing any key but the function keys under CE150 or Other at this stage will return you to the Main Menu.

Printing a file with the CE150

If you choose to print your file with the computer's own mini-printer you can choose one of two formats from a sub-menu - examples of the formats are given below. Press the function key below the ■ symbol for printout across the narrow width of the paper or the key below the ■ symbol for printout down the paper (i.e. at right angles to the normal mode). If you opt for output in narrow column print across the printer paper you will be prompted to input the print size. You are restricted to CSIZES 1 and 2 - other inputs will be ignored. Type 1 or 2 and press ENTER.

A choice of CSIZE 1 means your output will be printed with indentations proportional to text levels, but text will be printed to fill the available width of the paper without automatic word wrapping. The same applies if you choose CSIZE 2 for your output, but here the text is indented according to level only down to level 4: text on levels 5 to 20 will be printed with a constant 5-space indentation.

- 19 -

If you choose the horizontal format, with text displayed along the paper, no further action is necessary. The text will be printed in 10-line strips of CSIZE 2 characters with dotted-line markers to indicate A4 page widths. You should ensure that the printer is loaded with sufficient paper, and the paper should be tightly wound to accomodate the unusually large reverse movement of the paper.

In horizontal format, lines are indented according to the level of text, and words are automatically wrapped (if a convenient break point cannot be found by EASI-THOUGHT a hyphen will be inserted in the last word on a line). Line length is 68 characters in this format.

Printing a file with an external printer

If you choose the Other option from the print menu you will be asked

IS INTERFACE SET UP? (Y/N)

If you press any key but **Y** at this point, operation of EASI-THOUGHT will cease and you will see the usual cursor (**>**) on the display. This is to allow you to set up the computer interface module according to the requirements of your external printer. Please note that line feeds are supplied automatically by the EASI-THOUGHT output system, so you will not need to include them in CONSOLE statements even if you normally do so when listing programs, etc.

To restart the output, type **DEF Z**. Please note that this command has an effect only after you have interrupted an external printer selection as described above. At any other stage **DEF Z** will be regarded by EASI-THOUGHT as an invalid input.

You need to input the line length appropriate to your printer when prompted to do so. Line lengths of less than 35 characters or more than 250 characters are unacceptable for EASI-THOUGHT.

Output will appear indented according to text level and with words wrapped automatically as far as possible (a hyphen is inserted in the last word of a line when wrapping is not possible).

- 20 -

Samples of printed output from EASI-THOUGHT

Printed on CE 150 across paper -

CSIZE 1

CSIZE 2

HOLIDAY
Front room bureau.
tickets
pick up insurance note
passports
Mrs. Rutherford.
take round key
take round goldfish
two packets of food - remind her n
ot to overfeed the fish this time
Car.
check oil, water, brake fluid
fill screen washer
buy spare tube of screenwash
check spare tyre
Bathroom.
sponge bag, toothbrushes, plastic -
cup for dentures

HOLIDAY
Front room bureau.
tickets
pick up insurance
note
passports
Mrs. Rutherford.
take round key
take round goldfi
sh
two packets of f
ood - remind her
not to overfeed
the fish this t
ime
Car.
check oil, water,
brake fluid
fill screen washe
r
buy spare tube o
f screenwash
check spare tyre
Bathroom.
sponge bag, tooth
brushes, plastic
cup for dentures

Printed on CE 150 along paper -

HOLIDAY

Front room bureau.
tickets
pick up insurance note
passports
Mrs. Rutherford.
take round key
take round goldfish
two packets of food - remind her not to overfeed the fish this
time
Car.
check oil, water, brake fluid
fill screen washer
buy spare tube of screenwash
check spare tyre
Bathroom.
sponge bag, toothbrushes, plastic cup for dentures

- 21 -

Printed on external printer (Epson FX80) with line length
set to 55 characters -

HOLIDAY

Front room bureau.

tickets

pick up insurance note

passports

Mrs. Rutherford.

take round key

take round goldfish

two packets of food - remind her not to overfeed the
fish this time

Car.

check oil, water, brake fluid

fill screen washer

buy spare tube of screenwash

check spare tyre

Bathroom.

sponge bag, toothbrushes, plastic cup for dentures

- 22 -

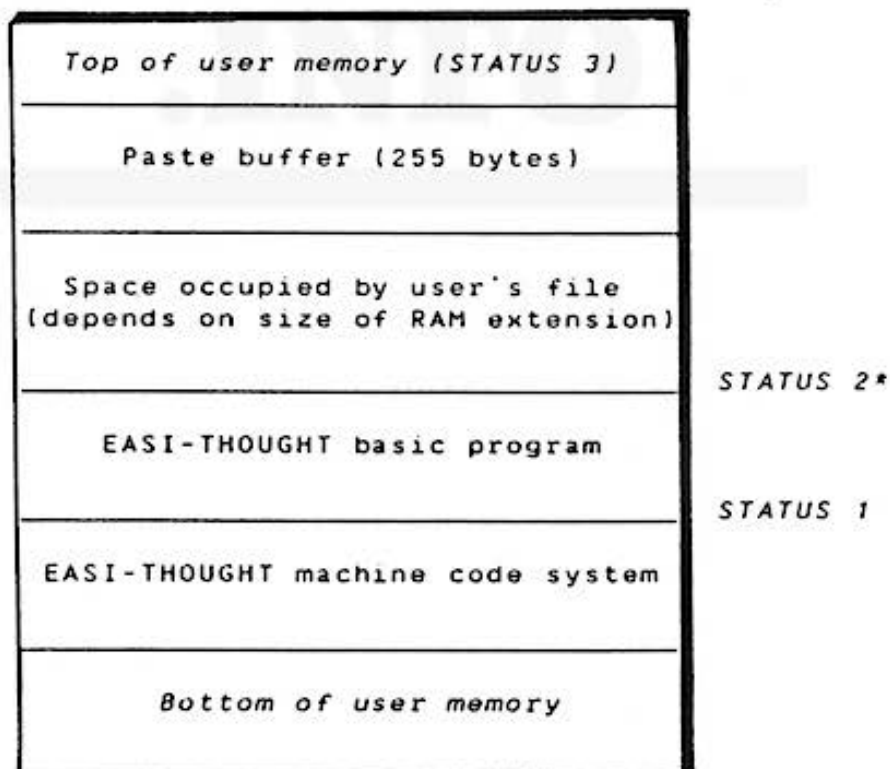
SECTION SEVEN

SPECIFICATIONS AND SOME REMINDERS

The EASI-THOUGHT package occupies about 4.5 kbytes of RAM. This means that it leaves considerable space for text files. A lot of effort was made to keep the program as concise as possible, and some of its more obvious limitations were designed the way they are to avoid consuming large quantities of program memory just to save users one or two extra keystrokes.

Speed of operation. With very small files, the response of most EASI-THOUGHT features is virtually instantaneous. However, even though the EASI-THOUGHT file handling system is written almost entirely in machine code, the operating speed of the computer is still so slow that its effects are soon felt as files grow. Responses remain virtually instantaneous for all operations performed within about 500 characters of the bottom of the file, but responses can be particularly slow when you edit at the top of a large file.

Memory map. The structure of the computer memory with EASI-THOUGHT loaded looks like this (not drawn to scale):-



* for technical reasons, the user's file may start a few bytes higher in the memory than STATUS 2

- 23 -

Always remember

a) When you finish using EASI-THOUGHT, set NEW 0 (or NEW *n*, where *n* is your preferred starting address for BASIC programs) before you load another program.

b) You can MERGE additional programs on top of EASI-THOUGHT, but you cannot MERGE EASI-THOUGHT above other programs. Space occupied by programs loaded above EASI-THOUGHT will reduce the space available for your EASI-THOUGHT text file, and you may badly corrupt an existing text file if you MERGE a program into the space above EASI-THOUGHT.

WWW.
PC-1500
.INFO

SUMMARY OF EASI-THOUGHT COMMANDS AND FUNCTIONS

Command or function	Operation	Available in	
		text mode	menu
DEF B	moves cursor to <u>B</u> ottom of file	yes	no
DEF C	<u>C</u> ontinues search operation	yes	no
DEF D	- followed by Wr <u>d</u> , Sen, Par or Section, <u>D</u> emotes chosen text	yes	no
DEF F	displays <u>F</u> ile name	yes	yes
DEF H	<u>H</u> elp - displays assignments of function keys	yes	yes
DEF L	displays current <u>L</u> evel no.	yes	no
DEF M	displays <u>M</u> emory remaining	yes	yes*
DEF N	allows alteration of file <u>N</u> ame	no	yes
DEF P	- followed by Wr <u>d</u> , Sen, Par or Section, <u>P</u> romotes chosen text	yes	no
DEF S	initiates <u>S</u> earch operation	yes	no
DEF T	moves cursor to <u>T</u> op of file	yes	no
DEF U	displays memory <u>U</u> sed	yes	yes*
DEF Z	restarts external printing	no	yes†
DEF SPACE	returns to Main Menu	yes	yes
Sel	<u>S</u> ELECTs start of text string	yes	no
Cut	<u>C</u> UTs text for paste buffer	yes	no
Pst	<u>P</u> ASTEs text from paste buffer into file	yes	no
CL	Deletes previous character, or, if followed by Wr <u>d</u> , Sen, Par or Section, deletes chosen portion of text	yes	no
SHIFT CL	Deletes section marker	yes	no
▶	Advances cursor one place, or, if followed by Wr <u>d</u> , Sen, Par or Section, advances by chosen portion of text	yes	no
◀	Backs up cursor one place, or, if followed by Wr <u>d</u> , Sen, Par or Section, backs up by chosen portion of text	yes	no
↓	Moves cursor to start of next section at a lower level	yes	no
↑	Moves cursor to start of next section at a higher level	yes	no
RCL	Creates new section one level lower, at current cursor position	yes	no
▲	Creates new section one level higher, at current cursor position	yes	no
New	Starts file initiation procedure	no	yes
Edt	Initiates file for editing	no	yes
Typ	Selects tape menu for cassette operations	no	yes
Prt	Selects print menu for print operations	no	yes
End	Stops operation of EASI-THOUGHT	no	yes

* operates only when a file has been started
† available from Print Menu only

**WWW.
PC-1500
.INFO**

WWW.
PC-1500
.INFO