AMSWORD

(TASWORD 464)

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1984

SOFT 164

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Learning to use AMSWORD

Amsword is designed to be easy to use. We suggest that you learn to use Amsword by the following steps:

(1) Reading 'How Amsword Works' on pages 5 to 8 of this manual;

(2) Load Amsword as described on page 9;

(3) Type in a few lines of text paying attention to the features described in the 'How Amsword Works' section of this manual. Experiment with some of the command keys - they are all described on pages 12 to 26;

(4) Load the Amsword Tutor text file following the procedure described on page 11;

(5) Take your time working through Amsword Tutor and experiment as much as you like. Refer to the control key descriptions in the manual (pages 12 to 26) as you work through Amsword Tutor;

(6) You will now be sufficiently familiar with Amsword to use it to produce your own text files. As you continue to use Amsword you will discover which of the facilities are most useful to you and you will find that you remember the relevant control keys. Don't forget that the help page is always there;

(7) Save Amsword, following the instructions on page 9, and use this tape/disc as your working copy. Keep the original as your back-up copy.

The △ and ▼ signs

The △ and ▼ signs occur frequently both in this manual and in the Amsword help pages. The △ sign represents the **CONTROL** key (marked **CTRL** on the keyboard) and the ▼ sign represents a **SHIFT** key.

△ = **CONTROL**
▼ = **SHIFT**

These keys are always used in conjunction with some other key by holding either **SHIFT** or **CONTROL** down and pressing the other key while still holding the **SHIFT** or **CONTROL** key down. For example:

△**W** means hold **CONTROL** down and press the **W** key
▼→ means hold a **SHIFT** key down and press the → key

How AMSWORD Works

The Text File

Amsword operates on a text file which contains whatever you type in from the keyboard. This text file can be up to about thirteen thousand characters long. The length of a line in the text file is normally 80 characters. This is the number of characters that the monitor can display on one line. The length of a line can be changed by resetting the margin positions. The maximum line length is 128 characters.

The Window

The monitor is a 'window' which shows either 16 or 23 lines of the text file. Certain 'Control Keys move the window up or down the text file. Moving the window is called 'scrolling'. The window can also move sideways and will do this when the margins have been set to give more than eighty characters per line.

The Cursor

The cursor is a flashing square or bar that indicates your current position in the text file. The cursor can be moved using the arrow keys on the keyboard and by certain other command key actions.

The Keyboard

Each time you press one of the letter keys the character corresponding to that key appears on the screen at the cursor position. To type a capital letter hold one of the **SHIFT** keys down and press the required letter key. Numbers may be typed by using the numeric keypad on the right hand side of the keyboard or by pressing the keys on the top row of the main keyboard. Some keys are marked with two characters. The lower character on the key is typed when the key is pressed. To type the upper character on the key hold one of the **SHIFT** keys down and press the key.

Auto Repeat

If pressure is kept on any key then after a slight delay the key action is repeated. This applies to both character key and most command keys.

The Command Keys

An Amsword command key is a key which does not type a letter when pressed but instead manipulates the text file in some way. For example the arrow keys move the cursor. Another useful command key is the Escape key **[ESC]** which displays the help page on the screen. The help page gives a brief description of each command key action and is reproduced below.

THE HELP PAGE

FORMATTING	DELETE/INSERT	CURSOR MOVEMENT
△Q move text left	DEL delete char	△↑start of text ▼↑fast scroll up
△W centre line	▼DEL delete word	△↓end of text ▼↓fast scroll dn
△E move text right	△DEL delete line	△←start of line ▼→word right
△J rejustify para (△U)	△CLR clear text	△→end of line ▼← word left
△K rejust line (un-△L)	△I insert line/char	△< scroll up △> scroll down

MARGINS	TAB COMMANDS	BLOCK COMMANDS
△A set left margin	TAB cursor to tab	△B mark block beginning
△S clear margins	▼TAB set tab	△V mark block end
△D set right margin	△TAB clear tab	△M move marked block to cursor
SEARCH	△X reset tabs	△N copy marked block to cursor
△R replace or find text	△Z clear tabs	△C delete marked block

SWITCHES	PRINTER	TEXT FILE COMMANDS
△F Right Justify on/off	U form feed	△ENTER save/load/merge/print text
△G Word Wrap on/off	△6 put header	SPECIAL CHARACTERS
△H Insert mode on/off	△T get header	△SPACE printer control character
△P Page display on/off	△7 put footer	△\ 2nd character set
△1 Help on △2 Help off	△Y get footer	△* Cap. to lower △+ lower to Cap

PRINTER CONTROL CHARS (caps for on, lower case for off)   TASPRINT OPTION

A	emphasised	F	form feed	K	condensed-enlarged	V	lectura light
B	proportional	G	superscript	L	enlarged	W	median
C	condensed	H	subscript	M	1/6 line spacing	X	compacta
D	double strike	I	italics	N	1/8 line spacing	Y	data run
E	elite	J	underline	O	7/72 line spacing	Z	palace script

©Tasman Software Ltd 1984   AMSWORD   press ENTER to return to text

Many of the command key actions are obtained by holding the Control **[CTRL]** key down and pressing the relevant key. These commands are prefixed by the upwards pointing triangles (△) on the help page.

Some of the cursor command key actions similarly require the Shift key to be held down while the relevant key is pressed. These commands are prefixed by the downwards pointing triangles (▼) on the help page.

A full description of the action of each of the above command keys is given on pages 12 to 26.

When the help page is showing press **ENTER** to go back to where you were in the text file.

Word Wrapping

Unless overridden by the △ **G** command key (see page 16) Amsword word-wraps automatically at the end of each line. This means that if your last word on a line does not fit onto the line then the whole word is transferred to the beginning of the next line. The only time you will normally use the **ENTER** key when typing in text is when you want to start a new paragraph. You will soon find that when you are typing in text you will only occasionally look at the screen - Amsword keeps the text neat and leaves you free to concentrate on the keyboard.

Justification

As well as word-wrapping when a word overflows the end of a line Amsword automatically justifies the line that has just been finished. The words in the line are spaced out by inserting spaces between them so that the text spreads across the screen. This gives the text a neat appearance with no jagged margin on the right hand side.

The automatic justification can be turned off using the △ **F** command key (page 16). This results in the typed text having a 'ragged right' appearance that may be, according to personal preference, more appropriate for the task in hand.

It is straightforward to change text that has already been typed from right justified to ragged-right or vice versa. Simply use the △ **F** command key to turn right justification on or off and then use the △ **J** command key (page 15) to rejustify the desired paragraphs.

Tall Cursor

When you type the last character in a line Amsword moves the cursor to the beginning of the next line. The cursor becomes taller. If you type a character when the cursor is tall Amsword will assume that the character is part of the last word on the previous line and word-wrap. If the word on the previous line is finished you must type a space - as you would have done anyway if you had not looked at the screen - before typing the next word.

If the last character on a line is a punctuation mark Amsword will not word-wrap when you begin the next line even if you type a character when the cursor is tall. It will ignore the first two spaces that you type so that you do not indent a line accidentally.

Good Typing Practice

Help Amsword help you by following the two simple rules of good typing practice:

(1) Always type at least one space after the full stop at the end of a sentence or after any other punctuation mark;

(2) Always begin a new paragraph by indenting (typing spaces at the beginning of), the first line or by leaving a blank line between paragraphs, or by doing both.

The Reference Sections

The remainder of this manual is for reference. You do not have to read it all before you can begin to use the program. The most commonly utilised facilities in the program are readily used by refering to the help page and using on-screen prompts at various points.

Four main parts follow. The first is concerned with loading and running the program and saving and loading the text files you create to and from tape/disc. The second part describes all the command key actions, grouped by type. Printing, and the format of printed text files, is described in the third part. The fourth part describes how you can customise the program to suit your own applications and personal preferences. Two appendices cover certain points concerning printers. A final appendix describes the use of the user definable keys.

Loading and Running Amsword

To load Amsword follow the instructions on the label of either on the cassette or the disc supplied with this package.

Amsword is ready for use when loaded. You will see the cursor flashing at the beginning of an empty text file and the line number and other information at the bottom of the screen. You can now type in text or load a previously created text file from either tape or disc (see page 10).

To load Amsword Tutor follow the instructions on page 11.

If you have gone into Basic then to continue running Amsword type **RUN** and press **ENTER/RETURN.**

Saving Amsword

PLEASE NOTE: The facility to save Amsword has been included to allow you, the purchaser, to make back-up copies and to save your customised version of Amsword. Passing copies of Amsword to a third party is a breach of copyright.

To make a back-up or customised copy of the Amsword program press $\triangle$ **ENTER** command key while Amsword is running. A list of options will appear on the screen as shown on page 26. Press **A** to save the Amsword program and **ENTER** to confirm your choice. Put a blank cassette in to the Datacorder and depress the **REC** and **PLAY** buttons and press any key on the keyboard to begin the save. If you are using the disc version of this program you can simply copy the disc using the DISCCOPY or COPYDISC routines under CP/M.

When the save is complete the program will return to the main menu shown on page 26. You may, if you wish, check the recording on the tape or disc by pressing **B** to enter basic. Type CAT and press **ENTER** followed by the on-screen instructions. As soon as

<div align="center">AMSWORD block 7 & OK or</div>

AMSWORD	.BAS	11K	DISC	.BAS	1K
AMSWORD	.BIN	14K	TUTOR		12K
CLOAD	.COM	2K			

appears on the screen the recording has been checked. Press **ESC** to stop the catalogue process and type **RUN** and press **ENTER** to go back into Amsword.

Saving and Loading Text Files

Saving

You can save the text you have typed onto a tape or disc as a 'text file'. Press the Δ **ENTER** command key while Amsword is running and the list of options shown on page 26 will appear on the screen. Choose the 'Save text file' option by pressing the **S** key and then **ENTER** to confirm your choice. Amsword will ask you to type in a name for the text file. Type in a name of your choice (any characters beyond sixteen will be ignored) and press **ENTER.**

In the case of using the disc version of Amsword, the text file will now be saved onto the disc. If you are using the tape version of this product, you will then be asked whether the recording speed is to be normal or fast. Press **N or F** as appropriate or just press **ENTER** to choose the default setting shown in brackets. Then follow the instructions shown on the screen by depressing the **REC** and **PLAY** buttons and pressing any key.

When the save is complete the main menu shown on page 26 will reappear on the screen. Press **R** if you wish to return to the text file. If you wish to check that the recording is readable the press **B** to enter basic and catalogue the tape or disc (as described above), the name of the file you have saved will then appear on the screen. You can now type **ESC** to escape and type **RUN** and press **ENTER** to continue running Amsword. In the case of the tape version of Amsword, if any 'read error' messages appear then there may be a fault on your tape: go back into Amsword **(ESC, RUN, ENTER)** and try saving again onto a different tape.

Loading

LOADING A TEXT FILE WILL CLEAR ALL THE TEXT THAT IS CURRENTLY IN THE AMSWORD TEXT FILE.

To load a text file from tape or disc use the Δ **ENTER** command key to obtain the main menu as shown on page 26. Then press the **L** key to select the 'Load text file' option. Amsword will ask you to type the name of the text file on the tape or disc which you wish to load. In the case of the tape version of Amsword, if you do not type a name, Amsword will load the first text file it finds on the tape. Type a name and press **ENTER,** or just press **ENTER**, and follow the instructions shown on the screen. If you are using the disc version, you will need to give the name of the text file you wish to load before Amsword can find it.

Merging

Merging is loading a text file from cassette or disc and putting it in the Amsword text file after any text that is already there. To do this use the Δ **ENTER** control key and then press the **M** key to select the '**Merge text file**' option. Amsword will then prompt you to follow the same procedure as described in 'loading' on page 10.

AMSWORD Tutor

Amsword Tutor is recorded on the Tape version of Amsword immediately after the program and is also on the disc. Load Amsword as described on page 9. Leave the cassette in the Datacorder or the disc in the disc drive, and in the case of the tape, do not rewind it after it has finished loading. You will see the flashing square, the cursor, near the top of a mainly empty screen. Hold down the control key **[CTRL]** and press **ENTER.** This is Δ **ENTER.** The list of options shown on page 26 will appear on the screen (this is the main menu). Follow the normal procedure for loading a text file:

(1) Select the 'Load text file' option by pressing the **L** key;

(2) Press **ENTER** as prompted by Amsword to confirm your choice;

(3) Amsword will ask you for the text file name, if you are using the tape version, just press **ENTER** to inform Amsword that you want the first text file it finds on the tape, or if you are using the disc, type the word **TUTOR** to indicate to Amsword the name of the file you want.

(4) In the case of the tape version only press the datacorder **PLAY** key if it is not still depressed and any keyboard key to start the text file load.

Amsword tutor will appear on the screen as soon as it has loaded.

The Command Keys

The △ sign indicates that the Control **[CTRL]** key must be held down while the relevant key is pressed. The ▼ symbol means that the **[SHIFT]** key must be held down. These symbols are also used on the help page.

Help Commands

ESC show help page
The help page is displayed when the Escape key **[ESC]** is pressed. When the help page is on the screen press **ENTER** to return to the text file.

△1 help on
When △**1** is pressed part of the help page is shown on the top seven lines of the screen.

△2 help off
The △**2** command key removes the segment of the help page from the top part of the screen and the monitor shows 23 lines of the text file.

△[scroll up help
If help is on then this command key replaces the segment of the help page shown on the screen with the segment immediately above it in the full help page.

△] scroll down help
When help is on this command key replaces the segment of the help page shown on the screen with the segment immediately below it in the full help page. By scrolling down beyond the final segment of the full help page the second character set can be viewed.

△3 get help
This command key is normally inhibited but can be enabled through the 'Customise program' option described on pages 35-41. When △**3** is enabled and pressed the printer control characters and second character set part of the help page are copied into the first 12 lines of the text file (overwriting any text that is there).

△4 put help
This command key is also enabled via the 'Customise program' option. It puts the top twelve lines of the text file into the printer control character and second character set area of the help page. △**4** disables both △**3** and △**4** in order to prevent accidental overwriting of text and/or the help page. See page 41 for a further description of the △**3** and △**4** commands.

△=CONTROL ▼=SHIFT   AMSWORD

Cursor Movement

Enter

This key moves the cursor to the left margin at the beginning of the next line. If insert mode is On (see page 18) a new line is also inserted.

Arrows - move cursor

The arrow keys on the top right hand part of the keyboard are used to move the cursor to any required position on the screen. Keeping an arrow key depressed causes auto-repeat to be implemented and this is a useful way of moving the cursor quickly towards some desired position on the screen.

The left arrow key may be used to move the cursor to the left of the left margin if the left margin is set to some other position than column one. The right arrow can move the cursor to the right of the right margin if the latter is set to less than column 128.

△ ↑ start of text file

This command key is used to jump back to the beginning of the text file.

△ ↓ end of text

When this key is pressed Amsword finds and displays the end of the text file.

△ ← start of line

This command key moves the cursor to the start of the current line. This is the left margin setting.

△ → end of line

This key moves the cursor to the end of the current line. This is taken to be the right margin setting.

This command, and the △ ← command described above, are particularly useful when reviewing text that has been typed with more than eighty characters per line.

CURSOR MOVEMENT (continued)

△> scroll down

The △> command scrolls the display down one line of the text file.

△< scroll up

This command scrolls the display up one line of the text file.

▼ ↓ fast scroll down

The Shift ↓ command forces Amsword to scroll down one screenful of lines. This is a scroll of either 16 or 23 lines depending on whether help is on or off. This is a useful way of scrolling quickly through your text.

▼ ↑ fast scroll up

Amsword scrolls up a screenful of lines (16 or 23) when this key is pressed.

▼→ word right

This key moves the cursor to the beginning of the next word to the right. If there is no word to the right of the cursor then it moves to the beginning of the next line.

▼← word left

Shift left arrow moves the cursor to the end of the next word to the left of the cursor.

△Q move text left

This moves the text under and left of the cursor left one character position. There is no affect if there is already a character at the left margin. Text within margins is not affected by this command and if the cursor is inside a margin no text is moved.

△W centre line

This key centres the text on the line containing the cursor between the margins. It is useful for headings. Text inside margins is not moved and there is no action if the cursor is inside a margin.

△E move text right

This key moves the text under and to the right of the cursor right one character position. There is no action if there is a character on the right margin. Text inside margins is not moved and there is no action if the cursor is inside a margin.

△J rejustify paragraph

This key reforms the text from the line containing the cursor to the end of the paragraph. The end of the paragraph is detected by the occurrence of a blank or an indented line. The △J key is very useful for tidying up text in which you have made insertions and deletions.

Only the text within the margins is reformed and the reforming is to the current margin positions. To reform a paragraph to new margin positions use the hard rejustify command △U.

The △J command will right justify the text if Right Justify is on and will leave the text 'ragged right' if Right Justify is off. The △J command can therefore be used to change the format of a paragraph from right justified to ragged right and vice versa.

△K justify line

The line that the cursor is on is right justified by this key.

△L unjustify line

The line that the cursor is on is unjustified by deleting any surplus spaces between words.

Formatting Commands (Continued)

△U hard rejustify

The hard rejustify command reforms the entire paragraph containing the cursor to the current margin positions. The hard rejustify command is useful for reforming paragraphs after the margin settings have been changed. The paragraph is forced to lie within the new margin positions.

During hard rejustification all text both inside the new and old margin settings is considered to be part of the current paragraph. Annotations within margins will be incorporated into the new paragraph and therefore should be deleted before hard rejustification.

Hard rejustification only detects the start and end of the current paragraph by the occurrence of blank lines. Ensure that there is a blank line at both the start and the end of a paragraph before executing the hard rejustify command.

△F Right Justify On/Off

This command key turns the automatic right justification Off or On. The 'R / J' message at the bottom of the screen tells you the current status. Justification is described on page 7. When justification is On the text typed will be reformed at the end of each line to the right margin (as in most of this manual). When right justification is Off the text has the 'ragged right' appearance of this paragraph.

△G Word Wrap On/Off

This command is used to turn the automatic word-wrap Off or On. The 'W / W' message at the bottom of the screen indicates whether the word-wrap is On or Off. Word-wrapping is described on page 7.

DEL delete character to left of cursor

The **DEL** key deletes the character to the left of the cursor and moves the remainder of the line left one character position. Note that characters which are mis-typed can be typed over once the cursor has been moved to the correct position and you do not have to use the **DEL** key to do this. The delete key is useful for correcting mistakes as they are made and for removing unwanted characters.

CLR delete character under cursor

This command is similar to the **DEL** command described above except that it is the character under the cursor that is deleted.

▼ DEL delete word

The **SHIFT DEL** key deletes the entire word over which the cursor is positioned. The remainder of the line is moved left to fill the gap created by the deletion of the word.

△ DEL delete line

This key deletes the line that the cursor is on. All subsequent lines are moved up.

△ CLR clear text file

All text is removed from the text file when this key is pressed. The header and the footer (see p. 24) are also cleared. To prevent accidental erasure Amsword asks for confirmation when this key is pressed.

△ C delete block

This command deletes a marked block of text. The block commands are described on page 21.

Insertion commands

△I insert line or character

This key is used to insert new lines, words, and characters into the text file.

To insert a blank line position the cursor at the beginning of the line following the line to be inserted. Press △I to insert the new line. (New lines are inserted automatically when insert mode is turned on - see △H below.)

To insert additional words between existing words position the cursor on the space between the words. Pressing △I then throws the words to the right of the cursor onto a new line. The additional text can then be typed in. Use △I again to create additional blank lines to type on as required or turn insert mode on (see below).

To insert a character into the middle of a word position the cursor over the character to the right of the required position. When △I is pressed the line is unjustified (see page 15 for the meaning of this) and a space is created for the new character to be typed. If the line cannot be unjustified then a new line will be created as described in the previous paragraph.

These insertion procedure will usually destroy the justification of the paragraph. The justification can be recovered using the △J key (see page 15).

△H insert mode On/Off

When insert mode is turned On Amsword creates a new blank line for you to type on whenever a line of text is completed or **ENTER** is pressed. Turning insert mode On is useful when you want to type some lines of text in the middle of some existing text. The 'Insert' message at the bottom of the screen shows the current state of the insert mode.

Margin Commands

△A set left margin

When this key is pressed the left margin is set to immediately before the current cursor position. The margin is indicated by a line instead of the dotted bar on the penultimate line of the screen. The use of margins is described below. The left arrow may be used to move the cursor into the left margin either to type text or to reset the margin.

Amsword loads with the left margin set to column 1. This default may be changed by the 'Customise program' option (pages 35-41).

△S clear margins

This key resets the margins to the default positions.

△D set right margin

This key sets the right margin to immediately after the cursor position. The margin position is indicated by a line instead of a dotted bar near the bottom of the screen.

The maximum right margin position is at column 128. Amsword loads with the right margin set at column 80. THis default setting may be changed by the 'Customise Program' option described on pages 35-41.

When margins are set the text that is typed will normally be put only between the two margins. Word-wrap and justification take place as though the margin positions represent the edges of the screen.

Margins are useful for automatically indenting part of your text. Paragraphs can be highlighted by having different margin settings, or a list of paragraphs can be typed and numbering and other annotations can be put within the margins.

The cursor moving arrows can be used to move the cursor into the margin to set new margin positions or to type text within a margin. The △Q, △W, and △E text moving and centering commands do not affect the text inside the margins and do not work at all when the cursor is within a margin. The △I text insertion command does not operate inside margins except when the cursor is in column 1. The △J command rejustifies just the text that is between the left and right margin. The △U hard rejustify command may be used to reform paragraphs to new margin settings.

The find and find and replace commands only search within the margins. The automatic paragraph rejustification that takes place on text replacement may modify the format of text that has been typed with different margin settings and should be used with care if you have typed parts of your text with different margin settings.

The Search Command

△R replace or find text

This facility allows you to find the next occurrence of a given word or to replace all the following occurrences of a given word with another word or group of words. The implementation of this command key is from the current cursor position. (To find or replace from the beginning of the text use the △ ↑ command key first to get to the start of the text.)

When the △R key is pressed Amsword asks you to type the word to be replaced or found. You must type a single word - Amsword will not accept your input if you include spaces.

Press **ENTER** after you have typed the word that is to be replaced or found and Amsword will ask you for the text that the word is to be replaced with. Just press **ENTER** to find the next occurrence of the word you typed. To replace all the following occurrences of the word that you specified type the replacement text and press **ENTER**. The replacement text can include spaces but must be no longer than the smaller of the space between the current margin settings or 80 characters.

Amsword will reform each paragraph in which it replaces text according to whether right justification is on or off and to the current margin settings. Use this command with care if you have used different margin settings for different parts of your text.

You can escape from a find or find and replace operation at any time by pressing the **ESC** key.

Block Commands

△B mark beginning of block

Blocks of text may be moved or copied from one part of the text file to another. The beginning and end of the block of text must be 'marked' before it can be moved or copied. The △B key is used to tell Amsword that the line of text that the cursor is in is the first line of a block. Amsword will mark the beginning of the block by inserting an inverse-open-square-bracket character above the first line of your block.

There is a short delay when this key is used while Amsword checks that there is not already a Beginning of Block Marker in the text file. You cannot have more than one Beginning of Block Marker in the text file at any one time.

To delete a block marker move the cursor to the line containing the marker and use the △DEL command key to delete the line.

△V mark end of block

This key is used to mark the line that the cursor is on as the last line of a block of text. Amsword marks the end of the block by inserting an inverse-close-square - bracket symbol on the line below the line containing the cursor. There is a delay while Amsword checks that there is not already an end of block marker in the text file.

Use the line delete command △DEL to delete a block marker.

△M move block of text

A block of text that has been marked is moved to a new position when the △M key is pressed. The text is moved to new lines that are created above the line containing the cursor when △M is pressed.

△N copy block of text

The action of this command key is identical to the move block △M key described above except that the block of text is copied to a new position rather than moved.

△C delete block of text

A marked block of text is deleted when the △C command key is pressed provided that the cursor is not inside the marked block.

Tab Commands

TAB move cursor to tab stop

This command key moves the cursor right along the line to the next tab stop position. The tab stop positions are marked on the last but one line of the display.

▼TAB set tab

The ▼TAB command creates an additional tab stop at the current cursor position.

△TAB clear tab

The △TAB command key removes the tab stop that is at the current cursor position. There is no effect if there is no tab stop at the current position.

△X reset tabs

This command key resets all the tab stops to their default positions of every tenth column.

△Z clear tabs

The △Z command removes all the tab positions that are currently set.

Printer Commands

△P page break display On/Off

The △P command is used to switch the page break display between On and Off. The current status is shown by the 'Paging' message in the bottom line of the display.

When the page break display is On a dashed line appears across the screen to show the page breaks. This shows where one page will end and the next page will begin when the text file is printed.

See pages 31 to 34 for a description of the formatting of printed output.

Inverse-U force form feed

The inverse **U** (both capital and lower case) is a special printer control character that forces a form feed on printing. See page 33 for a description of printer control characters. These characters are typed via the △**SPACE** command described on page 25.

When the text file is printed the printer will perform a form feed after printing a line containing the inverse **U** character.

If this printer control character is used then subsequent page breaks will not occur at the positions shown by the on-screen page break display. (See page 32).

△6 put top line into header

On printing the text file a header and a footer can optionally be printed at the top and bottom of each page (see pages 27, 28, and 32). A header is created by typing it on line one of the text file and then pressing the △6 command key. Subsequent use of the △6 command key will put whatever is in line one of the text file into the header, overwriting any existing header.

△T get header

The △T command key gets the header from memory and inserts it into line one of the text file. The header may be edited and put back using the △6 command.

Printer Commands (Continued)

△7 put top line into footer

A footer for printing is defined by typing it on line one of the text file and then pressing this command key.

△Y get footer

This command gets a copy of the footer from memory and inserts it into line one of the text file.

Both the header and the footer are saved onto tape whenever a text file is saved. If not being used as such then they are useful for storing any short notes or comments concerning your text.

Special Characters

△SPACE printer control characters

The △**SPACE** command allows you to type the printer control characters whose use is described on page 33. The printer control characters appear on the screen as inverse letters.

When △**SPACE** is pressed the cursor becomes an outline rectangle and a 'PRINTER CTRL' message replaces the 'NORMAL CHARS' message at the bottom right hand corner of the screen. These indicate that the next letter key you press will give a printer control character. If help is on (page 12) then the help display will change to show a list of the printer control characters and their functions. Press the required letter key to obtain a printer control character. Just press **ENTER** if you do not wish to type a printer control character.

△ \ 2nd character set

Amsword contains an additional character set consisting of many additional and foreign language characters. When △ \ is pressed the cursor becomes an outline rectangle and a '2ND CHAR SET' message appears at the bottom righthand corner of the screen. If help is on (page 12) then the help display changes to show the additional character set and the characters that will be obtained by pressing particular keys. Press the required key or just press **ENTER** to return to the normal cursor.

△* Capitals to lower case

If there is a capital letter at the current position then this command replaces it with the equivalent lower case letter. This command, in conjunction with auto-repeat, is useful if a section of text has inadvertently been typed with **CAPS LOCK** (see page 26) set.

△ + lower case to Capitals

This command replaces a lower case letter at the current cursor position with the equivalent capital letter.

Other Command Keys

△ENTER save/load/merge/print text

This command key is usually used to save, load, and print text files. The following list of options is displayed when △ **ENTER** is pressed. (The numbers in brackets refer to the page number in this manual on which each option is described.)

```
Print text file          P     (p.27)
Save text file           S     (p.10)
Load text file           L     (p.10)
Merge text fle           M     (p.11)
Return to text file      R     (p.26)
Customise program        C     (p.35)
Save Amsword             A     (p. 9)
into BASIC               B     (p.26)
```

Pressing **R** will take you back to the text file. Pressing **B** to go into Basic allows you to do other tasks while still holding Amsword in memory. To leave Basic and re-enter Amsword type **RUN** and press **ENTER**.

When the main menu, reproduced above, is displayed on the screen a word count, character count, and line count is also displayed. The free space in the text file, in terms of the number of characters free, is also displayed. The free space count is usually an over estimate as Amsword compacts the text file before showing the main menu in order to create workspace. In practice the end of the text file can be reached when the free character count shows less than about two thousand characters.

Caps Lock

The **CAPS LOCK** key toggles capitals lock on and off. When capitals lock is on pressing a letter types a capital letter. The bottom line of the display changes to capitals to show that capitals lock is on.

COPY repeat

Pressing **COPY** repeats whichever key was last pressed. The repeat applies to both character keys and command keys.

Printing Text

To print part or all of a text file use the △**ENTER** command to obtain the main menu shown on page 26. Select the 'Print text file option' by pressing **P** and confirm your choice by pressing **ENTER**. The print menu will appear on the screen and is reproduced below:

```
start at line ( 1 )
finish at line (last)
number of copies ( 1 )
line spacing ( 1 )
continuous or single sheet (C) C/S
form feed at page breaks (N) Y/N
print header (N) Y/N
print footer (N) Y/N
print page numbers (N) Y/N
  at top or bottom (T) T/B
  at middle or sides (M) M/S
  start numbering at ( 1 )
left margin on printing ( 0 )
form feed after printing (N) Y/N

  press ENTER for default settings
  press CLR to start again
  press COPY at any time to print
```

With this menu showing on the screen just press **COPY** to print your text file.

Amsword has a comprehensive set of print options. The first time user is recommended to by-pass these options by just pressing the **COPY** key to print the text file. A description of the print options is given on pages 28-30.

Many of the above print options depend on a pre-defined page layout. See page 32 for a description of page layouts and pages 35-36 for the instructions for defining your own page layout.

Printer Terminology

A **form feed** is a special code that is sent to the printer. The printer interprets it as an instruction to move the paper to the beginning of the next page.

The **form length** is the number of lines of the text file printed on each page of paper. In this manual the form length does not include the additional lines printed on each page as a result of the printing of page numbers and footers and headers.

The Print Options

The print menu shown on page 27 consists of a number of options. There is a default answer to each option which is shown in brackets. If any option is answered by just pressing **ENTER** then the default answer is selected. If **COPY** is pressed, in order to jump the remaining options and begin printing, then the default answers are selected for the remaining options.

If a non-default answer is given to any of the options after the first two then these answers become the default options for subsequent print commands while Amsword remains in the computer. Furthermore, if Amsword is saved (page 9) then the current default options are saved as the new default print options. In this way you can create a customised copy of Amsword that has as default the print options that you use most often. (See also program customisation on pages 35-41.)

Start at line

Enter the line number of the line in your text file that you wish the printing to start at. The default is line 1.

Finish at Line

Enter the line number that is to be the last line to be printed. The default is the last line of the text file containing text.

Number of copies

Enter the number of copies of the text file that you wish to be printed. If you are printing more than one copy and you want each copy to begin on a separate sheet then either enter **Y** to respond to the 'f o r m f e e d a f t e r p r i n t i n g' question below (page 30) or type the inverse u printer control character (pages 23 and 32) into the last line of your text file.

Line spacing

Enter 2 for double line spacing and three for triple line spacing and so on. If you print out text with a line spacing greater than one and you require form feed at page breaks then you will have to redefine the form length (the number of text lines on the page) as the program counts the number of lines of text printed and not the intervening blank lines.

Continuous or Single Sheet

If you are using continuous (i.e. fan fold) stationary then respond by pressing **C**. Press **S** if you are printing onto single sheets.

If you specify single sheet then the program will perform an automatic form feed at each page break and then halt. A message on the screen invites you to feed the next sheet of paper into the printer and to press a key to continue printing.

Form Feed at Page Breaks

This question is asked if continuous stationary is specified in the above option. If you specify that you do want a form feed at the page breaks after printing out a number of lines equal to the form length (page 27) on each page the program will force the printer to do a form feed so that no printing is performed on or near the perforations between the sheets.

If you specify no form feeds at page breaks then the following questions are still relevant as headers, footers, and page numbers are printed, if selected, as a result of forced form feeds.

Print Header

A header is a line of text that can be printed at the top of every page. To define a header use the △**6** option described on page 23.

Pressing **Y** for yes in response to this option will cause the header to be printed at the top of each page.

Print Footer

A footer is a line of text that can be printed a the bottom of every page. A footer is defined using the △**7** option described on page 24.

Responding **Y** to this option will cause the footer to be printed at the bottom of each page.

Print Page Numbers

Respond **Y** for yes to this option if you require a page number to be printed on each page.

The next three options are only appropriate if you specify that you do require page numbers to be printed.

At Top or Bottom

Use this option to choose whether the page numbes should be printed at the top or the bottom of the printed page. The page numbers are printed above the header or below the footer.

At Middle or Sides

You can choose to have page numbers printed either in the middle of the page or at the sides. 'Middle' and 'sides' in this context refer to the margin positions as set in the text file when the △ **ENTER** command was used to leave the text file.

If you specify that page numbers should be printed at the sides then odd numbers will be printed at the right hand side of the page and even numbers will be printed at the left hand side.

Start Numbering At

Enter the number that you require the page numbering to start at. This is useful with large documents which have to be stored on tape in separate parts.

Left Margin On Printing

This margin is separate and distinct from the left margin in the Amsword text file. A left hand margin on printing is a number of spaces that are sent to the printer at the start of every printed line.

You may, for example, type text that is to be printed on normal width A4 paper. Eighty characters in a normal typeface will fill the width of the paper. In order to obtain a margin at each side of the paper you could set the text file margins at columns 8 and 72 say. This is a perfectly valid approach but a better method, which saves some memory, is to have the left margin at column 1, the right margin at column 64, and to specify a left margin on printing of 8. A disadvantage of this second method is that if you use different sized typefaces then the spaces that are sent to the printer for the left margin may be of differing sizes and the left justification will be lost.

Form Feed After Printing

Answering **Y** for yes to this option gives a final form feed at the end of the printing. The footer and page number are printed at the bottom of the page if selected.

Formatting Output

This section describes how to format your printed output in terms of the layout of each page and the number of lines to be printed on each page. The beginner is recommended to follow the advice given on page 27, and by-pass the print options, until familiar with the other features of the program.

Page Breaks

There are two reasons for utilising page breaks and Amsword has a facility which is appropriate for each:

(1) When printing onto continuous stationary you may prefer that printing does not take place in the region of the perforations. Similarly, when printing onto single sheet, you will not want to print to the very end (and beyond!) of each sheet.

(2) If your text is split into distinct parts you may wish each of the separate parts to begin on a new page. This manual is an example of this type of document.

If your text is a continuous document it may be that (1) above is the main consideration and you can use the automatic page break facility. If, on the other hand, your main requirement is that of (2) above, then you will want to force form feeds by typing a special printer control character into your text at the relevant places.

Each of the two ways of obtaining page breaks is described below. It is unwise to try to use both methods in the same document.

(1) Automatic Page Breaks

The print menu (reproduced on page 27) contains a 'form feed at page breaks' option. If you respond Y for yes to this option, or if you have already specified that you are using single sheet, then every time the printer has printed out a number of lines equal to the form length a form feed will be performed.

For example, if the form length is fifty lines, the printer will perform a form feed after printing every fifty lines of the text file.

If you have specified that the footer should be printed, then this will be done before the form feed. the same applies to page numbers that are to be printed at the bottom of the page.

If the page break display is turned on ($\triangle$P, see page 23), then a dotted line across the text shows where each page break will occur.

(2) Forced Form Feeds

An alternative to relying on the automatic page breaks described in (1) above is to use forced form feeds. A forced form feed is obtained by typing the inverse-U printer control character into your text.

Printer control characters are obtained by pressing △**SPACE** and then pressing the appropriate letter key as described on page 25.

When the text file is printed the printer will perform a form feed after printing any line containing the inverse-**U** character.

Automatic page breaks will still take place at form-length intervals after a forced form feed but these automatic page breaks will not occur at the positions indicated by the on-screen page break display. It is therefore wise, if you are using forced form feeds, not to rely on subsequent automatic page breaks, but instead to continue to use the inverse-**U** character to obtain form feeds at the desired places in your text.

Page Layout

The layout of each page of printed text is as follows:

(1) The page number, if specified, and if specified to be printed at the top of the page, is first printed. The printer moves down two lines after printing the top page number;

(2) The header, if specified is printed. The header is a line of text that is printed at the top of every page. The header is defined using the △**6** command described on page 23. The printer moves down three lines after printing a header;

(3) A number of lines of text is then printed. The number of lines of text that are printed is the form length which is set to fifty lines by default;

(4) If the footer is to be printed the printer moves down three lines and prints the footer;

(5) If page numbers are being printed at the bottom of the page the printer moves down two lines and prints the page number.

The number of lines of text on a page (the form length) and the number of lines moved by the printer in each of the above are all user selectable via the 'Customise program' option described on page 35.

Printer Control Characters

Amsword helps you make effective use of the capabilities of your printer by providing forty user definable printer control characters. The printer control characters are the inverse letters **a-t** and **A-T**. These inverse letters are typed by first pressing the △**SPACE** command key and then pressing the appropriate letter key.

Each printer control character has a sequence of up to five printer control codes associated with it. The appropriate sequence is sent to the printer whenever Amsword comes across a printer control character during printing.

You may, for example, define a printer control character to be the sequence of codes that instructs your printer to print enlarged text (if your printer has this capability). Then you can simply type this printer control character into your text and the text following will be printed in the enlarged form.

Amsword comes with the printer control characters defined as shown on the help page (see page 6) for the Epson FX-80 printer. Some of these codes are valid for other printers.

You can define your own sequences of printer control codes to be associated with the printer control characters by going through the 'Customise program' facility described on page 35.

The part of the help page that lists the printer control characters can be edited (see pages 12 and 41).

The sections of printer manuals that deal with control codes vary in both clarity and terminology. See Appendix 1 (page 42) for an explanation of some of the terminologies used in printer manuals.

Example

The program is provided with the inverse **J** defined to send to the printer the code for a space followed by the Epson sequence of codes that tell the printer to begin underlining. The inverse **j** is similarly defined to be the terminate underlining sequence of codes followed by a space.

Denoting inverse **J** by **J** and inverse **j** by **j** then the following text in the text file:

        this is an █Jexample█jof underlining

will be printed as:

        this is an <u>example</u> of underlining

Printing Normal Characters

The ASCII code associated with each normal character is sent by default when the text file is printed.

The 'Customise program' option (page 35) allows you to define a sequence of up to three codes to be output for any normal character on printing. You may want to do this, for example, in order to print accented characters. You could define the codes associated with a particlar character to be the code for a character, followed by the backspace code, followed by the code for an accent. This assumes that your printer has such codes.

Printing 2nd Character Set Characters

A character from the second character set is normally printed as the corresponding character from the normal character set. The 'Configure program' option allows you to define a sequence of up to three codes to be output for each character from the second set.

Program Customisation

AMSWORD contains a comprehensive set of options that allow the user to create a version of the program suited to personal requirements and preferences. Whenever the program is saved onto tape/disc it is saved in its currently customised form. You can therefore customise the program, save it onto tape or disc, and subsequently load your own customised program. This obviates the need to customise the program whenever you load it. Keep the original tape/disc as your back-up copy.

It is recommended that you refer to the relevant sections in the following part of this manual whenever you go through the program customisation options.

To customise your AMSWORD press the △ **ENTER** command key while Amsword is running to obtain the main menu shown on page 26. Press C to choose the 'Customise program' option and then press **ENTER** to confirm your choice. Amsword then asks the following sequence of questions:

```
define page layout Y/N                        (p.36)

define normal print characters Y/N            (p.37)

define printer control chars Y/N              (p.38)

define 2nd char set print characters Y/N      (p.39)

change program Y/N                            (p.40)
```

If the **Y** key is pressed in response to any of the above questions then the program will go into the relevant customisation sequence, each of which is described on the page whose number is referenced in brackets in the above list.

On return from any of the above customisation sequences the next option in the above list will be presented.

Pressing **N** or any other key in response to any of the above options will cause the next option on the list to be presented.

Define Page Layout

This customisation option allows you to define your own page layout and to specify the codes that your printer uses for carriage return, linefeed, and form feed. The AMSWORD page layout is described on page 32.

When this customisation option is selected the following sequence of questions is asked by the program:

```
no. text line on page (50)

top line no. - header (2)

header - text (3)

text - footer (3)

footer - bot. line no. (2)

carriage return (13)

linefeed (10)

form - feed (12)
```

The numbers in brackets are the current default values held within the program. They are supplied on the tape with the values shown above.

To specify a new value for any of the above parameters type the new value and press **ENTER**. To keep the current default value you can just press **ENTER**. A cursor indicates the question that the program is currently asking.

The first five questions allow you to define your own page layout. The AMSWORD page layout is described on page 32.

The last three questions allow you to define the codes that that printer uses for carriage return, linefeed and form feed. Nearly all printers use the codes that are shown in brackets above. Many printers have an internal switch that, if set, will cause the printer to perform a line feed as well as a carriage return on receipt of a carriage return signal. If your printer produces unexpected double line spacing then you can either reset the switch in your printer or specify the code for linefeed to be zero in the above list of questions.

Define Normal Print Characters

This customisation option allows a sequence of up to three codes to be associated with any of the normal characters. When the character is printed it is this sequence of codes that is sent to the printer.

The program is supplied with a single code associated with each normal character. This code is the ASCII code for that character. You may wish to define some other code or sequence of codes for some character in order to, for example, print accented characters as mentioned on page 34, or to define your printer code for a £ sign (see appendix 2 for the printing of £ signs).

When this option is chosen the program prompts you to 'type the character you wish to define a sequence for'. Type the character or press **ENTER** if you have finished, or do not wish to, define a sequence.

If you type a letter the program will show the sequence of codes currently associated with that letter and invite you to type in a new sequence of codes. Type up to three sets of numbers, pressing **ENTER** after each number. To terminate the sequence with less than three numbers just press **ENTER**.

If you press **ENTER** to terminate the sequence before entering the first code then the character will have a 'null sequence' associated with it and nothing will be printed for that character.

Example

In this example the normal * character will be made to produce a 'plus or minus' ± sign on printing.

Enter the 'define normal print characters' option and type a * in response to the 'type a character you wish to define a sequence for' question. The program will show the 'old' code of sequence of codes associated with the * character and invite you to type in a new sequence of codes.

We wish the printer to print, in place of the *, first a + sign, then to do a backspace (move back a character), and finally to print the underline character_.

The ASCII code for a + sign is 43.
The code for backspace on most printers is 8
The ASCII code for a _ character is 95.

Type 43, then 8, and then 95, pressing **ENTER** after each. The * character will now be printed as a ± sign.

Define Printer Control Characters

This customisation option allows a sequence of up to five codes to be associated with any of the printer control characters. The printer control characters are the inverse letters, both capital and lower case. These characters are typed by pressing △**SPACE** and then pressing the relevant letter key.

The program is supplied with the codes for the printer control characters A – O and a – o defined to be control code sequences for the Epson FX-80 printer that give the effects shown on the help page (see page 6). Some of these control code sequences are valid for some other printer. The printer control characters P – T and p – t are undefined on the program as supplied and may, along with A – O and a – o be defined by the user. The printer control characters U and u always force a form feed (see pages 23 and 32). The **V-Z** and **v-z** printer control characters are reserved for use with AMSPRINT.

To define printer control characters to be particular sets of control codes for your printer press **Y** for yes in response to the 'define printer control chars' option shown on page 35.

A list of the printer control characters together with their currently defined sequences of codes will be shown on the screen. The program will prompt you to press a letter key in order to specify which printer control character you wish to define a sequence for. When you have specified a letter the program will prompt you to input a sequence of codes. Type in up to five codes, pressing **ENTER** after each one. If your sequence is less than five numbers then terminate the sequence by just pressing **ENTER**. Amsword will then redisplay the printer control characters and associated codes. You can redefine another printer control character by pressing the appropriate letter key or press **ENTER** to exit from this customisation option.

The printer control code sequences are entered as decimal numbers. Appendix 1 indicates how these numbers may be determined from the information given in some printer manuals.

A printer control character (inverse letter) occupies a character position in a line of the text file. If the control code sequence does not cause a character to be printed then the justification of the printed text will be lost, as a line containing a single such printer control character will be a character shorter on printing than a line that does not. This effect is avoided by including the code for a space in the sequence of codes. The program is provided with the inverse-**J** and inverse-**j** underline characters including such a space.

Define Second Character Set Print Characters

This customisation option allows a sequence of up to three codes to be associated with any of the 2nd character set characters. When the character is printed it is this sequence of codes that is sent to the printer.

The program is supplied with a single code associated with each 2nd character set character. This code is the ASCII code corresponding to the normal character that is obtained by pressing the same key.

When this option is chosen the program prompts you to define a sequence of codes in exactly the same way as for the 'define normal print characters' option described on page 37.

Change Program

This customisation option allows the user to make various modifications to the program. When this part of the program is entered by responding Y for yes to the 'change program' option (see page 35) the following sequence of questions is asked:

```
pen colour ( 26 )

paper colour ( Ø )

border colour 1 ( Ø )

border colour 2 ( 13 )

cursor shape ( 4 )

cursor type ( Ø )

l. margin ( Ø )

r. margin ( 8Ø )

unlock help Y/N
```

The values shown in brackets are the current program values. Just press **ENTER** to keep the current value.

Pen Colour

This specifies the colour, or brightness on monochrome monitors, of the text in the text file. The program is supplied with this set to 26 which corresponds to brilliant white. Enter some other number for a different brightness or colour.

Paper Colour

This specifies the background colour. The tape is supplied with this set to zero for black. Enter some other number between 0 and 26 for a different brightness or colour.

Border Colour 1

This specifies the normal border colour and is set to zero on the original tape.

Border Colour 2

The border colour changes at the beginning of some command key actions to indicate a delay while the program does some processing. The colour that the border temporarily changes to is the second border colour. This option allows this second border colour to be changed.

Cursor Type

Zero corresponds to an opaque cursor. An opaque cursor obscures the character set at the cursor position when the cursor flashes on. Enter 1 for a transparent cursor.

Unlock Help Y/N

AMSWORD has the facility to edit the printer control characters and 2nd character set parts of the help page via the △3 and △4 command keys as described on page 12. This facility is normally inhibited so that you do not accidentally erase either part of your text or the help page. Responding Y for yes to this option enables the △3 command key. Subsequent use of the △3 command enables the △4 command as well as copying the relevant part of the help page into the top twelve lines of the screen (overwriting any text that is there). The △4 command, if enabled, puts the top twelve lines of the screen into the relevant area of memory and then re-inhibits the △3 and △4 command keys.

You may wish to edit the printer control character part of the help page if, for example, you have redefined some of the printer control characters so that they have different functions from those described on the help page.

A reason for editing the 2nd character set help page may be that you make frequent use of just some of the characters from the second set. You may then wish to erase the remainder of this part of the help page so that it is easier to find the character that you use.

Appendix 1 - Determining Printer Control Codes

The inverse letter typed via the △**SPACE** command are the AMSWORD printer control characters. These characters are placed in the text to control the printer. Each printer control character can be defined to be a list of up to five codes. These codes must be entered in the 'define printer control characters' option (see page 38) as decimal numbers. This can lead to confusion as printer manuals use a number of methods for specifying control code sequences.

Many printer control code sequences begin with **ESC**. The decimal code for **ESC** is 27.

Some printer manuals specify control code sequences in terms of characters. For example, the control code sequence to turn emphasised printing on may be given as:

<p align="center">ESC E</p>

The decimal code for **ESC** is 27. the decimal (ASCII) code for E is 69. Therefore, to enter the above control code sequence as decimal numbers in the 'define printer control characters' option enter the two decimal numbers.

<p align="center">27 69</p>

You can determine the ASCII code for a character by going into Basic and using the **ASC** function. Type, for example:

<p align="center">PRINT ASC ("E")</p>

and the code for **E** will be printed.

Some printer manuals give control code sequences in terms of hexadecimal numbers. The **ESC E** control code sequence used in the above example is specified in a number of ways in hexadecimal, including the following:

<p align="center">ESC 45h</p>

<p align="center">1Bh 45h</p>

The h specifies that the number is in hexadecimal. Not all manuals use this convention. To determine the decimal form of a hexadecimal number go into Basic and use the **&H** function. For example:

<p align="center">PRINT &H1B</p>

will print 27 to show that the hexadecimal number 1B is decimal 27.

Similarly:

PRINT &H45

will print 69, which is the decimal number corresponding to hex 45.

Some printer manuals list control codes in a square table with sets of binary digits to the left and along the top. To find the decimal code corresponding to an entry in the table read up from the entry to find the most significant (first) four digits and then read left from the entry to determine the four least (last) significant digits. Then use the Basic &x function to determine the decimal number corresponding to the eight bit binary number that you have formed. This is demonstrated in the example below in which the decimal code for G is determined from such a table:

Example

```
                         0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1
                         0 0 0 0 1 1 1 1 0 0 0 0 1 1 1 1
                         0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 1
                         0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1
       0 0 0 0            .
       0 0 0 1            .
       0 0 1 0            .
       0 0 1 1            .
       0 1 0 0            .
       0 1 0 1            .
       0 1 1 0            .
       0 1 1 1 ............... G
       1 0 0 0        .
       1 0 0 1
       1 0 1 0
       1 0 1 1
       1 1 0 0
       1 1 0 1
       1 1 1 0
       1 1 1 1
```

Therefore the binary code for G is 01000111. In Basic execute:

PRINT &X01000111

to determine that the decimal code for G is 71.

Appendix 2 - Printing £ Signs

The pound sterling sign is not a standard ASCII symbol. Different printers use a variety of codes for the £ sign. The common ones are 35, 96, and 129.

It is often necessary to alter a switch inside the printer. This normally selects a £ sign instead of a hash sign.

AMSWORD is supplied with the £ sign defined to be sent as a 35 to the printer. You can use the 'define normal print characters' option described on page 37 to change the code sent for a £ sign to, for example, 96.

It is not possible to send codes larger than 127 to the printer. If your printer uses code 129 for the £ sign it is still possible to print this sign provided that the printer has 'MSB' or 'eighth bit' control code sequences. On some printers ESC › is a control code sequence that instructs the printer to regard subsequent codes as having the eighth bit set. This is equivalent to the printer adding 128 to each subsequent code it receives. On such printers ESC= is the control code sequence that resets the eighth bit of subsequent data to zero.

With a printer that uses 129 as the code for the pound sign, and which has the control code sequence described in the above paragraph, the pound sign is printed by sending the following sequence of codes:

<div align="center">

27 62 1 27 61

</div>

This is five codes in all so define one of the printer control characters to be this sequence. Type this control character into your text wherever you require a £ sign to be printed.

Appendix 3 -User Definable Keys

The user definable keys are the number keys on the numeric keypad on the right hand side of the keyboard. Each of these keys may be defined to be a word or a sequence of words. By way of an example the program is provided with △0 defined to produce:

```
AMSOFT
Brentwood  House
169  Kings  Road
Brentwood
Essex


Dear
```

To define your own keys go into Basic (△**ENTER** and **B**) and edit one of lines 20 to 110 of the Basic program. Note in line 20 of the program the use of the character:

```
CHR$(13)
```

which moves the cursor to the beginning of the next line

The total number of characters that can be associated with all the user definable keys must not exceed 120.

Example

Suppose you are typing some text in which there are to be many occurrences of the word 'microcomputer'. Enter BASIC and edit line 30 so that it reads:

```
30 KEY 1,"microcomputer"
```

Then whenever △**1** on the numeric keypad is pressed the word

```
microcomputer
```

will be put onto the screen at the current cursor position.