BrunWord ROM

Brunning  Software

THE

BrunWord ROM Module

OPERATING MANUAL

The BrunWord ROM Module is supplied with a suitable connector to fit ***either*** the Amstrad CPC6128 or the 6128 Plus. It can also be used on the CPC464 or 464 Plus, with certain restrictions, but needs a special adaptor if a disc drive is fitted.

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CONTENTS

Page

0. The BrunWord ROM Module. 3
- Fitting Instructions. 3
- Initial Tests. 4
- It Doesn't Work. 4
- CPC464 or 464 Plus. 4
- Cartridge Games. 4
- Screen Lines. 4

1. BrunWord Introduction. 5

2. Loading BrunWord. 7

3. Editor Functions. 7
- Entering Text. 8
- Cursor Movement. 8
- TAB. 8
- Justify Right Margin. 8
- Centre Line. 9
- Set New Margins. 9
- Temporary Margins. 9
- Delete/Undelete Word. 9
- IBM Box Characters. 10
- Fixed Space. 10
- Page Throw Marker. 10
- Using 40 or 128 Columns. . . . 10

4. ESCAPE Functions. 11
- Using a New Disc. 11
- Format a disc. 11
- LOAD/SAVE (Disc). 12
- ASCII Load or Save. 12
- Security Code. 12
- Erase file from disc. 13
- MEMORY save. 13
- GET from memory. 13
- KILL memory file. 13
- DIRECTORY mem files. 13
- TEAR (copy) to mem. 14
- WEAVE. 14
- QUICK move/copy. 14
- REMOVE. 14
- CLEAR. 14
- FIND or REPLACE. 14

5. Printer Functions. 15
- Set New Margins. 15
- Set No of Lines. 15
- Set Form Length. 16
- Headers and Footers. 16
- Set Start Page No. 16
- Set Pre Print Codes. 17

6. Printer Control Codes. 17

7. Group Print Files. 18

Page

8. BrunSpell. 19
- Instant Lookup. 19
- Automatic Correction. 20
- Save/Load Dictionary. 20
- Reset Pointer. 20
- Delete Words. 20

9. BrunWord Example. 21
- Spell Checking Example. 23
- Editing the Example. 24
- Printing the Example. 26

10. Info-Script Introduction 27
- Loading Info-Script. 28

11. Info-Script Commands. 29
- Editor Functions. 30
- Creating a Record. 30
- Formats for Addresses. 31
- Formats for Sorting. 31
- DIRECTORY of Records 31
- QUICK Save or List. 31
- LOAD/SAVE (Disc). 32
- Erase File from Disc. 32
- VARIATION of Headings 33
- FIND Field or Phrase. 34
- UNRAVEL in Special Order. . . 34
- GET Record. 34
- CLEAR all Records. 34
- KILL Current Record 35
- Record Markers. 35
- PRINT or Set Format. 35
- Relational Records. 36

12. Data Merging. 39
- Multi-Step Data Merge. 40
- One-Step Data Merge. 40
- TRANSFER Data. 40
- Justify ON/OFF 40
- Addressing Labels. 41
- Summary of Markers 41
- Insert Markers. 42
- Overwrite Markers. 42
- Totals. 43
- VAT Totals. 44
- Conditional Marker. 44
- Repeat Marker. 44

13. Info-Script Example. 37
- Data Merge Example. 45
- Relational Example. 47
- Invoice Example. 47

14. Using Disc Drive B. 50
- Using 3.5 inch Disc Drive. . . . 50

Page

15. BrunWord Elite. 51
Getting Started. 51
Introduction. 51

16. INCODE Summary. 52
All Printers. 52
Printers with Reverse. 53
Printers with Justification. . . . 53
24 Pin Printers. 54

17. All Printers. 55
Line Spacing (GAP). 55
Printer Margins. 55
Header & Footers. 56
Direct Printer Codes. 56
Downloading Disc File. 56
Delayed INCODE. 57
Temporary Margins. 57
Absolute TABs. 57
Simple Columns. 58
Line Repeat. 59
Video Dump. 59

18. Printer with Reverse. 60
Reset to. 60
Relative Reverse. 60
Epson Reverse. 60
Box Reverse Control. 60

19. Printer with Justification. 61
Print Against Left Margin 61
Print in Centre. 61
Print Against Right Margin. . . . 62
Full Justification. 62
Reference Width. 63
Size Factor. 63
Page Layout. 64
Absolute TAB Left Margin. . . . 64

20. 24 Pin Printers. 65
Downloading a Font. 65
Fonts for Star Printers. 65
Font Print Examples. 66
Print Box or Line. 66

Page

21. Headline. 67
Loading Headline. 67

22. Limitations. 67
Temporary Left Margin. 68
Absolute TABs. 68
Headers & Footers. 68

23. Headline INCODEs. 68
H-INCODE Structure. 68
H-INCODE Patterns. 69

24. Headline Fonts. 70

25. Print Size. 70

26. Multi-Strike. 71

27. Reverse or Stop. 71

28. Print Box or Line. 71

29. Justification. 72
Print Against Left Margin 72
Print in Centre of Margins . . . 72
Print Against Right Margin . . . 72
Full Justification. 72

30. BrunWord Elite Examples. 73
1 - Simple Columns. 73
2 - IBM Boxes. 73
3 - Columns & IBM Boxes. . . . 74
4 - Reset to. 74
5 - Epson Reverse. 74
6 - 24 Pin Boxes. 74
7 - Epson 24 pin Boxes. 75
8 - HQP40/HQP45 Example. . . 75
9 - LQ550 Example. 75
10 - LQ500 Example. 75
11 - Star LC24 Example. 75
12 - Amstrad LQ3500. 75

31. Headline Examples. 76

32. Picture Examples. 76

33. Reasons for Failure. 76

35. Disc Upgrade Notes. 76

The BrunWord ROM Module

The BrunWord ROM module is supplied in two versions, with or without BrunWord Elite. The operation of both versions is identical except that the ordinary version has a smaller capacity ROM without the fonts and features of BrunWord Elite. This manual covers the operation of both versions but all the pages with 'BrunWord Elite ROM Manual' or 'Headline ROM Manual' at the bottom, do not apply to the ordinary version.

Item 1. BrunWord ROM Module .
Item 2. 8 Bit Printer Status Port (Elite version only).
Item 3. 3 inch disc with example files.
Item 4. BrunWord Elite ROM Module manual.

0.1. Fitting the ROM Module

The BrunWord ROM Module is made as small and light as possible and is designed to be fitted directly onto the computer. Used in this way, it is very very reliable. However, you may wish to connect it through various other units attached to the computer and if you do, you must realise that the reliability can only be as good as the worst connection. One source of bad connections is the Dk'tronics 256K memory, which is only of use, with the ROM Module, if Info-Script files exceed 64K. So beware, and only connect through other units if you are really sure that it *is* necessary.

Switch OFF the computer and the printer. Disconnect the printer lead.

If your computer is a CPC6128 then clean the edge connectors before fitting the modules. To do this rub, both sides of the edge connectors with a tightly folded new piece of computer listing paper, (this has the right surface texture). Then use a cotton bud with surgical spirit to remove any soluble deposits and again rub with paper. Cleaning in this way is particularly important if a Dk'tronics memory has been fitted, or the user is a smoker. If your computer is a 6128 Plus then do not clean the connectors. If you are connecting through other units then apply the same procedure to all the intermediate edge connectors.

Plug the BrunWord ROM Module onto the expansion connector (looking from the front - it's at the back of the computer, second from the left). If you have the Elite version then plug the Printer Status Port onto the rear connector furthest from the internal disc drive. Double check that the top of each module is marked 'TOP'.

Reconnect the printer lead onto the printer port, remembering the convention (CPC6128) is that the lead should go downwards out of the connector.

Switch ON the computer and type |BW <ENTER>. (i.e. Hold <SHIFT> and press the @ key, press B, press W, press <ENTER>). Literally half a second later you will see the main BrunWord menu.

If you are given the error message UNKNOWN COMMAND then it is probably a typing error, try again. If the screen produces any strange effects or it takes considerably longer than half a second, then you have a bad connection and you must go through the cleaning procedure again more carefully.

0.2. Initial Tests

From the main menu, press X to display the spelling checker menu. The information about numbers of words is extracted directly from the 4 data ROMs that hold the dictionary. Press B to return to BrunWord. Press <ESC> D to display the BrunWord files that are available directly from the ROM. Then press <ESC> H. The ordinary version will not respond to this, but the Elite version will scan all the data ROMs and display the Headline menu, showing the names of the fonts found. Press B to return to BrunWord. Press <ESC> to return to the main menu.

0.3. It Doesn't Work!

All our ROM modules undergo several stages of test during manufacture and are finally tested before despatch. If you treat your ROM module with the same care as your computer then it will last at least as long. It follows that if the programme fails to load correctly, it is 99.99% likely to be a bad connection or a typing error.

The ROM module is supplied with a connector to suit either the standard or the Plus version of the computer, although both ROM modules, (without KDS ROMDOS), will work correctly on both variations of 6128 and 464. However, a ROM module which incorporates KDS ROMDOS is specific to either the original or the Plus version.

0.4. CPC464 or 464 Plus

If the ROM module is used on a 464, then Info-Script must not be used unless a Dk'tronics 64K or 256K memory is connected. A disc drive is not essential but if it is used then a special adaptor will be needed. If KDS ROMDOS is supplied on the BrunWord ROM module then it will work correctly with one or two disc drives but cannot be used with NO disc drive.

0.5. Cartridge Games

It will be necessary to remove the BrunWord ROM Module if you wish to use a cartridge game on the 6128 Plus or 464 Plus.

*** Screen Lines ***

Don't be alarmed!

The screen memory is used as temporary storage for several routines, which causes a pattern of lines to appear for a short period. (When the GET routine takes a file from the ROM, including address patterns for Info-Script, Info-Script fast save routine, the disc formatting routine and screen dump operations).

1.1. The First Step

With the BrunWord ROM module fitted (and Printer Status Port if you have the Elite version), switch ON the computer and type |BW <ENTER>. The main menu will be immediately displayed. Insert the examples disc and press L, wait for the disc to be CATalogued, type TUTOR1 <ENTER> and then follow the instructions on the screen. When TUTOR1 is finished, work through the example on page 21.

1.2. Introduction

The BrunWord ROM module incorporates all the features of BrunWord 6128 (disc) except that the 10 part printer codes are used purely for printer control or 'IBM' boxes. The first part of this book is a modified version of the BrunWord 6128 manual.....

BrunWord 6128 is a completely original programme designed to avoid the complications and slow response associated with many word processors. The programme, spelling checker and dictionary are supplied already loaded into the ROM which means no disc delays for any of the routines. This, and being 100% machine code help to give an almost instant response to most routines.

There are three screen modes, 40, 80 and 128 columns which are automatically selected according to the setting of the right margin. Text is normally entered in the 80 column mode and when the last word in the line reaches the right margin the whole word instantly transfers to the next line. If this happens part way through a paragraph then the following words are instantly grouped into full lines. Insert and overwrite modes are available and even touch typists will be unable to beat the programme. The true print format is always displayed.

Both margins can be set for each paragraph and the whole text or just one paragraph can be right justified with one command. BrunWord uses a complex process for justifying that adds spaces after punctuation and then between words alternating left and right towards the centre of the line. This ensures that the printed text looks balanced. When the command to justify the whole text is used, the programme displays the text as it is adjusted and updates the Line/Col/Page display as it progresses. This is a fast routine but there is just enough time to see the result. This is a very useful way to check the general format before printing.

To avoid the problem of accidentally loading a new file on top of the current file, BrunWord only loads a file into the work area when it is clear. If not then the new file is loaded into free memory and may be transferred or merged as required. Any number of files can be stored in this way but the limited memory makes it most useful for cut and paste editing or for storing the current work while trying some changes.

The printer routine works correctly with any Epson compatible printer. Most requirements are catered for with embedded printer commands but a sequence of up to nine codes can be sent to the printer before printing to set the initial conditions. Other printer facilities include - page throw markers, multiple copies, page numbering, odd and even page headers and footers and the ability to print part of the text using page numbers.

The maximum file size is about 11 or 12 pages of text but books or very long articles can be written by saving 8 or 9 pages at a time and using a group file to print all the files together. Group files are simply a list of the file names with '&&&' at the beginning and these can contain any number of files even files on different discs. Each file can be printed on a new page or follow on directly from the last file.

Extensive cursor control is based on the the cursor keys using normal, shift and control keys. <DEL> and <CLR> are single letter delete as used in BASIC. Quick local editing is easy with the word delete/undelete commands while block save, move, copy, merge and delete can be used for cut and paste operations on a larger scale.

Superscript and subscript numbers are fully supported with a true display on the screen. (note^{1} note$_{2}$ Y=ax^{2}+bx^{3}+cx^{4} H_2SO_4).

Single words or short phrases can be found and, if desired, replaced with a new phrase. This is simple and fast to use with upper and lower case treated the same during FIND but treated separately when replacing. The main menu, print menu and spell check menu can all be referred to without losing the current cursor position. The main menu includes a true word count, free memory display and printer status report. The user can set a security code of up to fifteen characters and if this is set the file will be encrypted before saving to disc.

The spelling checker is an integral part of the programme and is supplied with a 30,000 word dictionary already in the ROM. Small top up dictionaries can be created for each separate project and saved to or loaded from disc when appropriate. A spelling check can be performed anytime without disturbing any other data.

It takes just 8 seconds to check a 530 word page and as the words are tested they are flashed onto the base of the screen. When a possible error is found the programme stops and the user can edit, save the word, continue the test or ask for help. The help routine searches the dictionary for the nearest words it can find. NECESAY, NECCESARY, NEZESSARY, NECXSRY will all give a list of words that includes NECESSARY. The error can be automatically corrected by stepping through the help list to the correct word and pressing T for Transfer. A single word can be checked instantly without leaving the editor and then saved or automatically corrected if necessary.

Out of Memory

OUT OF MEM will be displayed if the free memory is less than 336 bytes. There must be 256 bytes free to be able to save the current file to the disc, so a further 80 characters can be typed after first seeing the warning. The free memory is displayed in the main menu.

Warning

Software piracy is a major problem and we have incorporated sophisticated protection within the BrunWord ROM programmes. Copying, as well as being a criminal offence, is also highly unwise.

2. Loading BrunWord

If the computer is already ON, use the switch on the keyboard to switch OFF count to three and switch ON. Type |BW <ENTER> and the main menu will be displayed. Press <ENTER> or <RETURN> to enter the editor. 'Insert' will be displayed at the base of the screen with the cursor data and the file name which will be NONAME until it is set.

3. Editor Functions

	left Arrow	: Cursor back one space.
	Right Arrow	: Cursor forward one space.
	Up Arrow	: Cursor up one line.
	Down Arrow	: Cursor down one line.
<SHIFT>	Left Arrow	: Cursor to beginning of line.
<SHIFT>	Right Arrow	: Cursor to end of line.
<CTRL>	Left Arrow	: Cursor back to start of text.
<CTRL>	Right Arrow	: Cursor forward to end of text.
<SHIFT>	Up Arrow	: Scroll up one line.
<SHIFT>	Down Arrow	: Scroll down one line.
<CTRL>	Up Arrow	: Scroll up two thirds screen.
<CTRL>	Down Arrow	: Scroll down two thirds screen.
<CTRL>	Slash (/)	: Lower to upper case.
<CTRL>	Back Slash	: Upper to lower case.

<CTRL>	<TAB>	: Insert/Overwrite.
<CTRL>	B	: Justify Paragraph.
<CTRL>	W	: Justify Whole Text.
<CTRL>	V	: Unjustify Paragraph.
<CTRL>	Q	: Unjustify Whole Text.
<CTRL>	C	: Centre Line.
<CTRL>	D	: Delete Word.
<CTRL>	U	: Undelete Word.
<CTRL>	L	: Set Left Margin.
<CTRL>	R	: Set Right Margin.
<CTRL>	T	: Set TAB to cursor column.
<CTRL>	X	: Cancel TAB at cursor column.
<CTRL>	A	: Alternate letters
	<TAB>	: Move to next TAB.
	<CLR>	: Delete character at cursor.
	<DEL>	: Delete character before cursor.
	<ESC>	: Press twice to display the main menu.

FUNCTION	'.'	: Next Find.
FUNCTION	1	: Set Left Margin until end of Paragraph.
FUNCTION	2	: Set Right Margin until end of Paragraph.
FUNCTION	3	: Spelling Instant Lookup.
FUNCTION	4	: Fixed Space.
FUNCTION	7	: Display Main Menu.
FUNCTION	8	: Page Throw Marker.
FUNCTION	6	: Mark Text.
FUNCTION	9	: Clear Marked Text.

3.1. Entering Text

When either 'Insert' or 'Overwrite' is displayed at the bottom left of the screen then BrunWord is in the editor and text that is typed in will appear at the cursor position. The end of the text is marked with a diamond shaped marker and the cursor cannot be moved past this point with the cursor keys. Use the space bar or TAB key to move across the page and the <ENTER> key to advance down the page.

For normal typing use the 'Insert' mode and type each paragraph as if it is a continuous line. The programme will move words as necessary to prevent them breaking at the end of the line. The result will be a block of text with an uneven right margin. At the end of the paragraph press <ENTER> or <RETURN>. If a gap of one line or more is required between paragraphs then press <ENTER> once more for each line. The next paragraph can then be typed.

3.2. Cursor Movement

The cursor will normally do as expected (page 7) except that it cannot go outside the margins or between a page throw marker and the end of the page. This means that if the text scrolls with a page throw marker at the top of the screen then the start of the next page will be set to the top of the screen.

3.3. TAB

The programme has one TAB preset at column 51 but a total of 10 TABs can be set by the user by pressing <CTRL> T when the cursor is in the required column. All the TABs are shown in the ruler at the top of the screen with '*' but if the TAB memory is full then no more TABs can be stored and 'TABS FULL' will be displayed. Similarly, the TABs can be cancelled with <CTRL> X when the cursor is in the correct column.

Pressing the <TAB> key will move the cursor to the next TAB position. In 'Insert' spaces will be inserted but in 'Overwrite' the cursor will jump over any text in the line and insert spaces as necessary after the text.

3.4. Justify Right Margin

The text as it is typed in will have an uneven right margin which can be left as it is or justified. In either case it will be printed as it is displayed on the screen.

To justify a single paragraph move the cursor to within the paragraph and press B while holding the <CTRL> key. If the paragraph is required to be indented then the <f4> key in the function key pad must be used to set fixed spaces. Any ordinary spaces in this position will be removed. The example shows how this works. (A single paragraph can be unjustified using <CTRL> V - the key to the immediate left of B).

In a similar way, the whole text can be justified using <CTRL> W and in this case the programme advances through the entire text justifying each paragraph and displaying the new layout as the process continues. (The whole text can be unjustified using <CTRL> Q - the key to the immediate left of W).

3.5. Centre Line

<CTRL> C can be used to centre a single line that ends with a paragraph end marker, or to centre a paragraph, such as this one, that has temporary left and right margins.

3.6. Set New Margins

The user can set the left and right margins that are displayed in the ruler at the top of the screen. These apply for the entire current file. Temporary margins can then be set for each paragraph if necessary, using special markers.

The main margins can be set without leaving the editor, using <CTRL> L or <CTRL> R. A number between 1 and 128 can be entered or if no change is required just press <ENTER>. Numbers that bring the margins closer than 20 will be ignored. On return to the editor the whole text is adjusted for the new margin which takes a few seconds. It must be right justified, if required, before printing.

3.7. Temporary Margins

The <f1> key can be used to set a left margin and the <f2> key, to set a right margin, both of which are reset at the end of the paragraph.

Move the cursor to the start of the paragraph and use the space bar to indent the text to the new left margin position. Press the <f1> key and the left margin will instantly move in.

To set the right margin, move the cursor across the text to the required position. Press the <f2> key and the right margin will instantly move in. Use both procedures together to set both margins and in this case <CTRL> C can be used, if required, to centre the block.

Remember that both temporary margins will be reset at the end of the paragraph. <CTRL> B and <CTRL> W will function normally on these paragraphs but, no change will occur in the first line if the temporary right margin is set.

3.8. Delete/Undelete One Word

<CTRL> D will delete one word to the right of the cursor and put it into a temporary store. <CTRL> U will remove one word from that store and insert it to the right of the cursor, even in the Overwrite mode. In principle, the entire current file could be put into this store and then retrieved but be warned that the memory allocated has low priority and is reset by other procedures that use free memory. (MEMORY save, TEAR, QUICK move/copy, LOAD, SAVE and the expanding work area).

3.9. IBM Box Characters

The number keys at the top of the keyboard produce special characters when used with the <CTRL> key. These have been setup to produce the IBM box characters but a separate programme SETCHAR is supplied on the BrunWord disc which enables the user to redefine these keys and various others. The text file TUTOR2 contains full instructions.

3.10. Fixed Space

When a paragraph is justified, spaces are added in a complex predetermined way to give the best chance of the text looking neat. If spaces are required that the programme must not alter then the <f4> key can be used in place of the space bar. Words with one <f4> between them will be printed with one space but will be treated by the programme as being one long word. This is useful to indent the start of a paragraph or to ensure that two words are always on the same line.

3.11. Page Throw Marker

If the <f8> key is pressed a special marker will be generated and all the following text will be pushed onto the next page. The screen will show the blank lines at the end of the page but the cursor cannot rest in that area.

3.12. Using 40 or 128 Columns

BrunWord has three screen modes that are automatically selected according to the setting of the right margin. The display will be forty columns wide if the right margin is 40 exactly, eighty columns wide if the right margin is 80 or less (except 40), or one hundred and twenty eight columns wide if the right margin is 81 to 128.

The 40 and 80 column displays are identical to the normal BASIC display (in appearance) but the 128 column display is unique to BrunWord and uses a 5 by 8 dot character rather than the usual 8 by 8 dot. The 128 column mode also displays an enlarged section of text in a box towards the bottom of the screen.

All routines are optimised in the eighty column mode, meaning that this will give the fastest and smoothest response. Text should normally be entered with the right margin set between 21 and 39 or 41 and 80, so that the eighty column mode is used.

However, if you have poor eye sight or are suffering fatigue then use <CTRL> R to set the right margin to 40. Once the text has been edited and spell checked, reset the right margin to whatever value is required. Use <CTRL> W to justify all the text and <CTRL> C to centre any lines that are required to be in the middle.

3.13. Main Menu

Press the <ESC> key twice or the <f7> key in the number key pad to display the main menu. This also shows the free memory, a count of the words in the current file and the printer status.

4. ESCAPE Functions

When in the editor (with 'Insert' or 'Overwrite' displayed), press <ESC> and 'BrunWord' will be displayed. Release that key then press the first letter of the key word. Press <ESC> twice to display the main menu. Press <ENTER> to return to the editor.

L - LOAD from Disc.
S - SAVE to Disc.
A - ASCII Load or Save (Not for normal use).
<SHIFT> @ - CAT, DIR, DISC, ERA, TAPE.
Y - FORMAT disc.
M - MEMORY save.
G - GET from memory.
K - KILL file in memory.
D - DIRECTORY of memory files.
T - TEAR (copy) marked block to memory.
W - WEAVE memory file into text.
Q - QUICK MOVE or QUICK COPY marked text to cursor.
R - REMOVE marked text.
C - CLEAR work area or file area.
F - FIND or REPLACE.
P - PRINT.
U - User character set (see TUTOR2).
X - BrunSpell spelling checker.
Z - Set or cancel security code.

H - Display Headline menu & list fonts (Elite version).
V - VIDEO view, compress or uncompress (Elite version).

1 - Set white ink, dark blue paper.
2 - Set white ink, black paper.
3 - Set blue ink, dark blue paper.
4 - Set white ink, dark green paper.
5 - Set orange ink, black paper.
6 - Set dark blue ink, white paper.
7 - Set black ink, white paper.
8 - Set dark blue ink, light blue paper.
9 - Set Dark green ink, white paper.
0 - Set Black ink, orange paper.

<ESC> Y - FORMAT Disc

Before a new disc can be used it must be formatted. This can be done without disturbing BrunWord or Info-Script. Press <ESC> Y. 'Insert Disc to Format' will be displayed. Insert the disc, press <ENTER> and the disc will be CATalogued. 'Format THIS disc?' will be displayed. You must type YES! to continue. Letter Y, letter E, letter S, then the exclamations mark. None of these are displayed. That's our fail safe lock. FORMATTING A DISC WILL COMPLETELY ERASE ALL THE DATA ON THE DISC.

If you have two disc drives then the format routine will assume that drive B is 3.5 inch. YOU MUST NOT FORMAT 3 INCH DISCS USING DRIVE B. For drive B you are given the choice of D/F. Normally you will press D for data. Only press F for Fast if your 3.5 inch disc is for Info-Script data.

4.1. <ESC> L - LOAD from Disc

This routine is used to load files from disc. The disc is automatically CATalogued and then the name of the file to load is requested. The name of any current file in the work area will be displayed on the bottom right of the screen. Type in the file name and press <ENTER>.

Before the file is loaded, the programme tests the size and will display OUT OF MEM if there is not enough free memory. In this case some memory must be cleared (see CLEAR and KILL) before the LOAD is possible. If the work area is clear then the file is loaded directly into the work area but otherwise it will be loaded into the file area.

If the new file goes into the file area then BrunWord displays the DIRECTORY of memory Files when the loading is complete. It is necessary to GET or WEAVE a memory file to load it into the work area.

It is wise to remove the disc from the drive when the loading is complete. Do not to switch ON or OFF with a disc in the drive and keep discs away from magnets.

4.2. <ESC> S - Save to Disc

This routine is used to save files to disc. The disc is CATalogued and then the name of the file to save is requested. The name of the current file in the work area will be displayed on the bottom right of the screen.

Press <ENTER> before any other key to use the current file name or type in a new name followed by <ENTER>. If a new name is typed then the current name will be updated.

'Save?..Work or Files+Work' will now be displayed. Type W or F. In both cases the text in the work area will be saved but only if F is typed will the files in the memory also be saved.

It is wise to remove the disc from the drive when the saving is complete. Do not switch ON or OFF with a disc in the drive and keep discs away from magnets.

4.3. <ESC> A - ASCII Load or Save

This routine must not be used for normal loading or saving to disc as it is very much slower and special data such as printer codes and header/footer data is not saved. It is intended for use with other word processors data and does not necessarily produce data that is fully compatible with BrunWord or the other word processor.

4.4. <ESC> Z - Security Code

A security code of up to fifteen digits can be entered which can consist of any printable keys. Spaces must not be used. The user must VERIFY by typing the same code again. Files will be encrypted using the code word when they are saved to the disc or cassette. Be sure to remember the code as there is no way to retrieve it.

If <ENTER> is pressed before any other key then encryption is turned OFF.

4.5. <ESC> <SHIFT> @ - ¦ Functions

Press <ESC>, <SHIFT> @ and ¦ will be displayed. Press <ENTER> for the disc to be CATalogued

¦CAT	The disc files and file sizes will be displayed.
¦ERA NAME	Type ERA then one space, then the file name. The name will be deleted from the disc.
¦TAPE	All subsequent loading and saving uses cassette.
¦DISC	All subsequent loading and saving uses disc.

Press <ESC> to return to ESCAPE mode.

4.6. <ESC> M - MEMORY Save

This is used to save the whole work area to the file area of the memory. The file name is requested and if <ENTER> is pressed before any other key then the current name will be used. Otherwise type in the name and press <ENTER>.

If the name is already in the directory 'Being Used' will be displayed and another name must be chosen. If there is insufficient memory to complete the save OUT OF MEM will appear. In this case some memory must be cleared before the file can be successfully saved . KILL a file or shorten the length of the text to save (see TEAR).

If neither default occurs then the file will be saved in memory and the DIRECTORY will be displayed. Press <ENTER> to return to the text.

The left margin, right margin, number of lines per page, the printer control codes and the headers/footers are saved with the file.

4.7. <ESC> G - GET from Memory

Enter the name of the file required. BrunWord will search the directory and load the work area with the first file of that name and then return to the editor. If the file name request is answered by pressing <f0> in the function key pad, then <ENTER> - the first file will be loaded to the work area and then KILLed from the directory. This is the only way that a very long file can be transferred to the work area if it is LOADed into the file area from disc or cassette.

The left margin, right margin, number of lines per page and the printer control codes will be reset with the data saved with the file. If the headers/footers were set before the file was saved then these will also be updated. If not then any current headers/footers will be reset.

4.8. <ESC> K - KILL

If a name is entered then the first file with that name will be deleted from the directory. If the name is entered as <f0> <ENTER> then the top file will be deleted.

4.9. <ESC> D - DIRECTORY

This displays the names of all the files in the memory file area. Two files can only have the same name through being loaded from disc.

4.10. <ESC> T - TEAR

Tear is used to copy part of the work area to the file area. Mark the text using the <f6> key then type <ESC>, T, give a file name and press <ENTER>. If the name is BEING USED or there is not enough memory then a warning is given and the file is NOT saved.

The left margin, right margin, number of lines per page, the printer control codes and the headers/footers are saved with the file.

4.11. <ESC> W - WEAVE

This is used to insert a file at the cursor position. Move the cursor to the correct position then type <ESC>, W, give a file name and press <ENTER>. The inserted file will be displayed as marked text. Press <f9>, <ENTER> to reset the marked text.

The left margin, right margin, number of lines per page, the printer control codes and headers/footers will NOT be changed by this command.

4.12. <ESC> Q - QUICK Move/Copy

'Move/Copy Marked Text?' will be displayed. Press M to MOVE or C to COPY the marked text to the cursor position. N or <ESC> will cancel the change. If 'OUT OF MEM' is displayed then the text must be moved or copied in two or more smaller blocks. If QUICK COPY fails through OUT OF MEM then a MOVE/COPY file may be left in the memory file area. This should be deleted with KILL or CLEAR.

4.13. <ESC> R - REMOVE

'REMOVE-Marked Text?' will be displayed. Press Y to delete the marked text. N or <ESC> will cancel the change.

4.14. <ESC> C - CLEAR

'Clear Work or Files' will be displayed. Press W to clear the work area or F to clear the file area. Any other key will cancel the change.

4.15. <ESC> F - FIND or Replace

Type in up to 15 characters after 'Find Phrase?', using just one space between words and ending with <ENTER>. 'New Phrase?' will then be displayed. Type in a New Phrase only if you want to REPLACE the Find Phrase, otherwise press <ENTER>. If a New Phrase is entered 'All or Select?' will be displayed. Press A to replace all the phrases without stopping or S if you wish the programme to stop at each phrase.

BrunWord will search the work area, starting at the beginning, for the Find Phrase treating upper and lower case letters the same and taking all gaps as one space. The REPLACE routine will copy the New Phrase exactly as typed in, except for the first letter which will be made upper case if the first letter of the original phrase is upper case. (Answer 'REPLACE?' with either Y for Yes or N for No or press <ESC>).

A new search or replace can be started from the cursor at any time by pressing <f.> (the dot key in the function key pad).

5. <ESC> P - Printer Functions

When in the editor, press <ESC>, P, to display the 'Print Menu', the current margin settings, number of lines per page, form length and the pre print codes. The headers/footers and start page number will also be displayed if turned on.

P - Print the text in the work area.
L - Set Left Margin.
R - Set Right Margin.
N - Set No of Lines.
F - Set Form Length. (Normaliy zero).
H - Header (Set headers or footers).
B - Set page number to BEGIN printing.
E - Set page number to END printing.
S - Set START Page number.
Z - Set Pre Print.

NOTE:- The printer MUST be switched ON before pressing P from the print menu.

5.1. P...Print Text

Switch the printer ON then press P. The text in the work area will be sent to the printer using the margins, page length and other data as displayed in the Print Menu. Two questions must be answered.

Print Single Pages ? Answer Y for yes to stop at the end of each page to change the paper. Any other key will give continuous printing.

No of Copies ? Enter a number between 1 and 255 followed by <ENTER>.

If only part of the text is to be printed then the 'Begin Page' and 'End Page' can be set by pressing B or E.

5.2 L...Set Left Margin

This is used to set the left margin for the whole file and is the same routine as <CTRL> L from the Editor. A number between 1 and 107 may be entered but numbers that bring the left margin closer than 20 below the right margin are ignored. The text must be rejustified, if required.

5.3. R...Set Right Margin

This is used to set the right margin for the whole file and is the same routine as <CTRL> R from the Editor. A number between 21 and 128 may be entered but numbers that bring the right margin closer than 20 above the left margin are ignored. The text must be rejustified, if required.

5.4. N...Set No of Lines

This sets the number of lines that will be sent to the printer before sending a form feed. Normal fan fold paper has a maximum of about 60 lines but an allowance of two lines must be made if footers are set. Headers are automatically allowed for.

5.5. F...Set Form Length

Normally this is set to zero but for printers that do not use form feeds set the exact length of the page (66 for standard length fan fold paper).

This can also be set to obtain more than one copy of a short piece of text on one page. For two copies on one page using 66 line paper, enter 33 and request at least 2 copies. Providing the text is shorter than half a page exactly two copies will be printed on each page.

5.6. H...Headers and Footers

Press H from the print menu, and 'Head, Foot, Both or None ?' will be displayed. Press H or F to turn on headers or footers. Press B for one of each or N to turn off headers and footers.

If H, F, or B is entered the first current header/footer will be displayed. Press <ENTER> to leave this unchanged or overtype with the new header/footer. Two special characters can be used in the header/footer to format left, middle and right. '+' is used to indicate the start of the middle and '*' the end of the middle. Wherever a '?' is encountered it will be replaced with the current page number.

Example 1: Page ? * Manual

Page 13 Manual

Example 2: Manual+Page ?*Manual

Manual Page 13 Manual

Example 3: + ? centre ? *

13 centre 13

Example 4: *Page ?

Page 13

After the first header/footer is entered the second will be displayed and this must be entered in the same way. This can be exactly the same or changed as required.

5.7. S...Set Start Page

A number up to 999 may be entered. The first page of the file will start with this page number.

When using a group file the starting page number will be the one contained in the group file itself.

5.8. Z...Set Pre Print

Immediately before any text is sent to the printer, nine printer control codes are sent. These are normally zero but can be set for special purposes. Look through the printer manual and work out the codes for the required process. Press Z (from the Print Menu) and enter the codes in decimal numbers. Set all unused codes to zero.

Reset Printer.	27, 64, 0, 0, 0, 0, 0, 0, 0
Double Strike.	27, 71, 0, 0, 0, 0, 0, 0, 0
Double Strike + Emphasised.	27, 71, 27, 69, 0, 0, 0, 0, 0
Ignore Paper end Detector.	27, 8, 0, 0, 0, 0, 0, 0, 0
Double line spacing.	27, 65, 24, 0, 0, 0, 0, 0, 0
(Note:- For correct paging set 'No of Lines' to half)	

Indent left margin 6 col.	27, 108, 6, 0, 0, 0, 0, 0, 0
Indent left margin 8 col.	27, 108, 8, 0, 0, 0, 0, 0, 0
Indent 8 + set 12 char/inch.	27, 108, 8, 27, 77, 0, 0, 0, 0

6. Printer Control Codes

Special characters can be placed within the text that give instructions to the printer such as to change to emphasised printing. These characters are generated when the function keys <f1> to <f9> are pressed with <SHIFT> or <CTRL> also pressed. (Function keys are the separate pad of number keys).

These keys have been programmed to suit an Epson compatible printer where <SHIFT> turns the effect ON and <CTRL> turns it OFF. All eighteen keys can be redefined by the user and are saved with the text file.

When the programme encounters a control code three special characters and a space are sent to the printer. This arrangement ensures that the character can be treated as a space in the programme. When the printer control character occurs at the start of the line then the space is placed at the first convenient place in the same line.

<SHIFT> Function.....ON <CTRL> Function.....OFF

<f1> ENLARGED mode. (Square bracket with 'E').
<f2> CONDENSED mode. (Square bracket with 'C').
<f3> UNDERLINE mode. (Square bracket with '-').
<f4> **EMPHASISED** mode. (Square bracket with 'S' for Strong).
<f5> SUPERSCRIPT mode. (Square bracket with up arrow)
<f6> SUBSCRIPT mode. (Square bracket with down arrow).
<f7> DOUBLE STRIKE mode. (Square bracket with 'D').
<f8> *ITALICS* mode. (Square bracket with 'A').
<f9> DOUBLE HEIGHT. (Large 'E' symbol).

Equations such as $Y=ax+bx^2+cx^3+dx^4+ex^7$ will be displayed on the screen with a proper display of the numbers. To achieve x^2 press x, then shift <f5>. x will be followed by a special square bracket up arrow character. Now press 2 and the special character will change to ^{2}. Similarly, H_2SO_4 or $NOTE_5$ can be achieved using shift <f6> followed by the number.

6.1. Redefine Printer Codes

Let us assume that the function key <SHIFT> and <CTRL> <f7> is to be programmed to set and cancel the double strike mode. The printer manual gives ESC G as the code to set the Epson RX80 to DOUBLE STRIKE. ESC is 27, and G is 71 in ASCII.

Press <ESC>, P to display the print menu then hold <SHIFT> and press <f7>.

'Printer Control G No.1' will appear. Type in the first number. In our example this is 27.

'Printer Control G No.2' will appear. Type in the second number. e.g. 71.

'Printer Control G No.3' will appear. Type in the third number. In our example the third number is not used so 0 must be input.

'Print Menu' is now displayed and the process can be repeated to set <CTRL> <f7> to cancel the double strike mode. Press <CTRL> <f7>.

'Printer Control P No.1' will appear. Enter 27.
'Printer Control P No.2' will appear. Enter 72.
'Printer Control P No.3' will appear. Enter 0.

The <SHIFT> and <CTRL> function keys can be set to any code and need not be in pairs. However, this does help in remembering the code.

6.2. Non Epson Compatible Printers

The Elite version of BrunWord has no provision to drive printers that do not use the standard Epson printer codes.

7. Group Print Files

A group print file is a file containing the names of several files that are to be printed automatically and is any file that has &&& or &&&$ at the start before any other text. The page numbering will start from the page number in the group file but headers and footers will be taken from the last file loaded. Each file name must be on a new line.

Example 1	&&&	Example 2	&&&$
	Part1		Part1
	Part2		Part2
	Part3		Part3

Example 1 will print the three files in sequence starting each file on a new page. Headers/footers will be updated as each file is loaded but page numbers will follow from the previous page. With $ immediately after &&& as example 2, the files will follow directly without starting a new page. The disc can be changed while printing.

8. <ESC> X - BrunSpell

A file in the work area can be checked for spelling errors using BrunSpell. Press <ESC> X and the BrunSpell menu will be displayed, showing the word counts of the five dictionary sections ABCD, EFGHIJK, LMNOPQR, STUVWXYZ + non letter words and DICT5 which can be saved to and loaded from disc.

BrunSpell can also be entered directly from the editor by pressing <f3>. In this case BrunSpell will test just the word at the cursor and then return to the editor. This also has the effect of setting the BrunSpell pointer and can be used to set a particular starting point.

8.1. Check Spelling

Press X to start the spelling check. The file is tested for normal words and then for non letter words. Any marked text will not be checked. The words as they are tested will be flashed on the bottom left of the screen. When a word is found that is not in the dictionary, the testing will stop and 'Save, Edit, Help, Cont?' will be displayed after the word. Press S, E, H, C or <ESC>.

S..Save The word will be added to DICT5 which is allocated 3K of the computers main memory. When the testing is finished, DICT5 can be saved to your disc, if you wish to keep a permanent record of it (see para 8.4).

The idea is that DICT5 should be saved to each of your discs so that all the unusual words and abbreviations, specific to files on that disc, are permanently recorded (after careful cross checking).

E..Edit The user is returned to the editor with the cursor at the start of the last word tested. The word can be changed and the spelling checker re-entered with <ESC>, X. In this case the BrunSpell menu will display 'CONTINUING' in place of the word count lists. Press X again to start the test from the beginning of the word that the cursor is at.

H..Help The BrunSpell help routine has two levels of search. The first is quite rigorous while the second takes a broader spectrum of possibilities intended for errors that are only vaguely similar to the word. At the end of the first search '* * *' is displayed under any words found and the programme waits for instructions. Press <ESC> to exit or C to Continue with the second search.

At the end 'Finished' is displayed but <ESC> can be pressed at any time to stop the Help routine.

The testing will also pause when the screen is full. Press <ESC> to exit from HELP or C to continue.

C..Cont The spelling check continues ignoring the possible error.

The <ESC> key can be pressed at any time to stop the testing. In this case the word counts are replaced with 'CONTINUING' to warn that the test will continue from the word which contains the cursor.

8.2. Automatic Correction

Spelling errors can be automatically corrected using one of the words found with the help routine. First, use HELP as above and as soon as the correct word is displayed, press <ESC>. The first word in the HELP list will be displayed immediately above the incorrect word.

Step down the list to the correct word using the down arrow key (or up using the up arrow key) then press T for Transfer. The error will be automatically corrected keeping the first letter the same case as the original word. The programme will return to the editor so that the correction can be seen. Resume the testing with <ESC> X X.

8.3. Load Dict5

With the BrunSpell menu displayed, press L. The disc will be CATalogued then 'Load Dict5' will be displayed. Press Y to load Dict5 or <ESC> to return to the BrunSpell menu.

8.4. Save Dict5

With the BrunSpell menu displayed, press S. The disc will be CATalogued then 'Save Dict5' will be displayed. Press Y to save Dict5 or <ESC> to return to the BrunSpell menu.

8.5. Reset Pointer

If 'CONTINUING' is displayed when BrunSpell is entered and it is required to start the checking from the beginning then press R to reset the pointer.

When Brunspell is exited before the checking is complete the pointer will store the last position. This happens quite normally when editing corrections. On entering BrunSpell the next time the checking will start from the current cursor position unless the cursor has been moved back to the start of the text at any time since leaving BrunSpell.

8.6. Delete Words

The main dictionary is stored in the BrunWord ROM which is permanent memory. It is obvious therefore, that words cannot be deleted from the main dictionary. We have also not provided this for Dict5 as the user may not know which area the word is in and, being very small, Dict5 can easily be remade.

8.7. Non Letter Words

Dict5 can contain strings that are numeric or alphanumeric. These use more memory than normal words but if Dict5 is kept specific to each project, there should be adequate memory. Single numbers 1 to 10, 1st, 2nd, ...,31st etc are already stored in the ROM. No 'number trap' option is given as it is quite simple when the programme finds an unknown number, to press <ESC> to end. But it makes more sense to save all these to Dict5 so that a complete test is possible. The HELP facility does not work with non letter words.

9. A Worked Example

This is a step by step example to demonstrate the basic principles of using BrunWord. The methods used are intended to show the simple formatting capability of the programme and should be developed by the user to suit his own style.

Load the programme as explained on page 7 and press the <ENTER> key to enter the editor. 'Insert' will be displayed at the base of the screen with the cursor data and the file name 'NONAME'. Type the following text exactly as instructed.

Brunning Software,
138 The Street,
Little Clacton,
CO16 9LS.

Word Processor User,
Your Address.

Dear Sir,

This is a demonstration letter to show the basic principles of using BrunWord. Remember that all words must have at least one space between them and that each paragraph is typed as if it is one very long line. The programme automatically moves words as necessary to prevent them being broken at the end of the line.

Each paragraph must be ended by pressing either ENTER or RETURN. It is difficult to forget this as the cursor will not move past the end of text marker. To test the spelk checher we need some errers!

Yours sincerely,

Brunning Software.

With the cursor sitting on the diamond end of text marker, at the top left corner, type 'Brunning Software' then press <ENTER>. A paragraph end marker will appear at the end of the line and the cursor will move to the start of the next line.

Press the up arrow key to move the cursor back to the 'B' of Brunning then press the <TAB> key to move the text across the screen. Press the space bar until 'Software' moves down to the next line, then use the <DEL> key until 'Software' just moves back, and press <DEL> once more.

Press the down arrow key and type '138 The Street,', press <ENTER>, press up arrow and again use the <TAB>, space bar and <DEL> key to position the '1' under the 'u' in Brunning.

Press the down arrow key and type 'Little Clacton,', press <ENTER>, up arrow and move to the right using <TAB>, space bar and <DEL> so that 'L' is under the 8.

Press the down arrow and type 'CO16 9LS', press <ENTER>, up arrow and move to the right using <TAB>, space bar and <DEL>.

Press down arrow and then <ENTER> to move down. Type 'Word Processor User,' and press <ENTER>.

Type 'Your Address.' and press <ENTER> twice.
Type 'Dear Sir,' and press <ENTER> twice.

Now type in the first paragraph as a continuous stream using the space bar between words. At the very end press <ENTER> twice. If <ENTER> is used part way through the paragraph then the formatting routines will treat it as more than one paragraph.

Type the second paragraph in the same way, copying the spelling errors in the last line, then press <ENTER> three times.

Type 'Yours sincerely,', press <ENTER> and press up arrow once to come back to 'Y'. Now centre the line by holding the <CTRL> key and pressing C.

Press down arrow then press <ENTER> 4 or 5 times. Type 'Brunning Software' and press <CTRL> C to centre the line.

The paragraphs as typed in will have a ragged right margin. This can be left as it is or justified using either <CTRL> B for one paragraph or <CTRL> W for the whole text. Hold the <CTRL> key and press W. The entire text will be justified.

This letter with its spelling errors will be used for further demonstrations so save it to disc as follows. Insert a disc into the disc drive. (If the disc is brand new see bottom of page 8).

Press the <ESC> key. 'BrunWord' will be displayed at the bottom left of the screen. Release the <ESC> key and press S. The current files on the disc will be CATalogued then 'SAVE-Name?' will be displayed. Type LETTER1 and press <ENTER>. 'SAVE?..Work or Files+Work' will be displayed. Press W and the programme will save the work area onto the disc.

9.1. Loading the Example

All further examples will assume that LETTER1 has been typed exactly as described in section 11 and saved to a disc.

Before loading, CLEAR the work area. Press <ESC> then press C. 'Clear Work or Files?' will be displayed. Press W. The work area will be cleared and the main menu displayed. Insert the correct disc in the disc drive and press L. The disc will be CATalogued then 'LOAD-Name?' will be displayed. Type LETTER1 and press <ENTER>. As the work area is clear the letter will load directly into the editor.

Before any changes are made the letter can be saved into memory for fast access. Press <ESC> then press M and 'Mem Save-Name?' will be displayed. To use the current file name LETTER1 press <ENTER> before any other key. The file will be copied into memory and the directory of memory files will then be displayed to show that the file has been saved. Press <ENTER> to return to the editor.

9.2. Spell Check Example

This continues from section 9.1 Press <ESC> then X.

If you have followed this example exactly then the BrunSpell menu will be displayed showing the word counts of the four dictionary sections. Press X to start the spelling check.

Our test letter has some deliberate spelling errors. The words will be flashed onto the screen until SPELK is reached. The checking will stop and 'SAVE, EDIT, HELP, CONT?' will be displayed on the bottom right of the screen.

Press H to request HELP and BrunSpell will search the dictionary for similar words, displaying them on the screen. '* * *' will show the end of the first search and 'ESC or CONT?' will be displayed at the bottom right'. Press <ESC> to exit from HELP and the first word in the HELP list will be displayed immediately above the error. Press the down arrow key until SPELL is reached then press T for Transfer. (The up arrow can be used to go up the list if the correct word is passed by).

SPELK will automatically be corrected to SPELL and the programme will return to the editor so that the correction can be seen. Press <ESC> then X and X again to continue the spelling check.

The next error is 'CHECHER'. Again press H for HELP and just two words will be found the first is the correct spelling. Press <ESC> to stop the search then T for Transfer.

Press <ESC> then X and X again to continue the checking. The next error is 'ERRERS'. Press H and a list of words will appear on the screen. Press <ESC> to exit from HELP then use the down arrow key to advance down the list to the correct word. Press T for Transfer.

Press <ESC>, X and X again to continue the checking and when 'Finished' is displayed, press any key to return to the editor. Hold <CTRL> and press W to re-justify the text.

The HELP routine always 'Pauses' after the first search. Normally, it is only worth continuing with the second search if the word is very badly spelt or if the second letter may be wrong.

Now Memory save the corrected version. Press <ESC> then M. Then type LETTER2 <ENTER>. Press <ENTER> again to return to the text.

9.3. Editing The Example

Either continue directly from section 9.2 or follow section 9.1 to load LETTER1 with a copy in the memory file.

Indent Paragraph

The paragraphs in the letter are not indented and if the space bar is used to do this they will be removed with <CTRL> B or <CTRL> W. Fixed spaces must be used to indent.

Move the cursor to sit on the 'T' in 'This' at the start of the first paragraph and press the <f4> key in the function key pad nine times. The special character generated is a fixed space. Press <CTRL> B and the paragraph will justify. When this is printed the <f4> fixed spaced will be printed as spaces.

Set Main Margins

The margins are preset at switch on to 10 and 70 which are convenient for letter writing and short pieces of text. These can be set either from the print menu or while in the editor.

Hold the <CTRL> key and press L. 'Left Margin 10' will be displayed. Type in 5 followed by <ENTER>. Now press <CTRL> R and type 75, <ENTER>. The margins will now be set to 5 and 75 but the text will need to be justified. Press <CTRL> W.

The address at the top is now too far to the left. Press the space bar to move the top line right and the <DEL> key to move it back. Move down with the down arrow key and correct the rest of the address.

Set Temporary Margins and Centre Paragraph

Move the cursor into the second paragraph and press <CTRL> and V to unjustify the paragraph. Then press the space bar until the column count at the bottom of the screen reaches 20. Press <f1> in the function key pad and the left margin will move in.

Now move the cursor across using the right arrow key until the column count reaches 60. This is not a convenient position as the cursor is resting on the end of 'pressing'. Move right one more space. Press <f2> and the right margin will instantly move in.

Press <CTRL> B to reformat the paragraph which will also set the cursor to the start of the paragraph. Press <CLR> several times and the paragraph block will move left keeping its basic format. Now hold <CTRL> and press C and the paragraph will automatically centre itself. The cursor can be anywhere in the paragraph for <CTRL> B or <CTRL> C.

Sometimes it is better to define the format in the preceding blank line, particularly when exact margins are required. Move the cursor to the start of the first paragraph and press the up arrow key to move the cursor to the start of the blank line above. Press the space bar until the column count reaches 20. Press <f1> then press <f4> until the column count reaches 60. Press <f2>. The format is set but it has its own paragraph end marker and so the first paragraph is not affected. Press <CLR> once or twice to remove the paragraph end marker. Press <CTRL> B.

GET from Memory

The letter is not quite what is wanted after all the editing. Press <ESC> then press G. The DIRECTORY of memory file will be displayed with 'Get Mem File-Name?' at the bottom. As there is a current file in the work area a warning will be given 'File In Work Area' .

Type in LETTER1 (or LETTER2 if the errors have been corrected) and press <ENTER>. The original Letter will be loaded into the editor.

QUICK Move and QUICK Copy

Now the first and second paragraphs will be changed round. Move the cursor to the start of the first paragraph and press the <f6> key. All the text from the cursor onwards will turn to inverse video. Move the cursor to the line between the paragraphs and press <f6> again. The text from the cursor onwards will turn back to normal video.

Move the cursor to two lines below the second paragraph and press <ESC> then press Q. 'Move/Copy Marked Text?' will be displayed. Press M and the marked paragraph will move to the cursor position and will still be marked. <f9> can be used to reset the marked text but leave it for the next example.

Move the cursor to the start of the other paragraph and press <ESC> then press Q. Press C and the paragraph will be copied to the cursor position. It will now be in both positions. Press <f9> to reset the marked text.

Use of TEAR WEAVE & REMOVE

The same result as QUICK move and QUICK copy can be achieved using the TEAR, WEAVE and REMOVE commands. Mark the second paragraph again using the <f6> key as described above. Press <ESC> then press T and 'TEAR-Name?' will be displayed. Type in PARA2 and press <ENTER>. If no warning is given then the file is saved in memory.

Press <ESC> then R. 'REMOVE Marked Text?' will be displayed. Press Y for yes and the marked block will be deleted.

Now move the cursor to two lines below the bottom paragraph. Press <ESC> then W and the DIRECTORY of memory files will be displayed with 'WEAVE-Name?' at the bottom. PARA2 should be one of the files listed. Type in PARA2, press <ENTER>, and the paragraph will be inserted at the cursor position.

These examples of moving text have used whole paragraphs but any piece of the text can be marked and moved in the same way.

Delete/Undelete Word

For moving one or two words the DELETE word and UNDELETE word functions are very useful. Move the cursor to the space on the left of 'show' in the first paragraph. Hold <CTRL> and press D. 'show' will be deleted. Move the cursor to the space on the left of 'demonstration' and use <CTRL> D again to delete that word. Move the cursor to the space to the left of 'the basic' which is to the right of where 'show' was removed. Hold <CTRL> and press U to return 'demonstration' to the new position.

9.4. Printing The Example

If continuing from 9.3 above, press <ESC> then G and enter either LETTER1 or LETTER2. If starting at this section then first load LETTER1 into the work area as explained in section 9.1.

To print the letter press <ESC> then P and the print menu will be displayed. FOOT 1 and FOOT 2 are shown and are both the same. These are set to give a simple page number at the bottom of the page.

Set the paper to the top of the form and switch the printer ON. Press P and 'Single Pages?' will be displayed. If single sheets are being used then answer Y for yes but normally fan fold paper is used and the answer is N. 'Copies?' will be asked, enter 1 followed by <ENTER>.

The letter will be printed. At the end of the letter the paper will be moved up to print the page number two lines below the 'No of Lines' which in this case will be line 60. The <ESC> key can be pressed at any time to stop the printer.

Now repeat the printing but without the page number. Display the print menu with <ESC> P. Press H and then N for None. The print menu will now show no headers/footers. Press P and answer the question as before. This time the letter will be printed and then end with a form feed. If a file needs to be printed without the form feed this can only be done automatically using a group print file.

9.5. Special Formatting Example

Follow these instructions to produce some special effects.

A. Press <CTRL> back arrow, to move to the start of the text.
B. Press <f4> on its own. (Forces C & D to be treated as spaces).
C. Press <SHIFT> and <f4> to set emphasised.
D. Press <SHIFT> and <f1> to set enlarged.
E. Type 'Headed Note Paper'.
F. Press <CTRL> and <f1> to cancel enlarged.
G. Press <CTRL> and <f4> to cancel emphasised.
H. Press <f4> seventeen times (once for each character in the heading).
I. Press <ENTER> twice then up arrow twice to get back to the top line.
J. Press <CTRL> and C to centre the heading.
K. Move the cursor to the 'd' in demonstration.
L. Press <SHIFT> and <f3> to set underline.
M. Move the cursor to the space after 'n' at the end of the word.
N. Press <CTRL> and <f3> to cancel underline.
O. Press <CTRL> W to justify the text.
P. Press <ESC>, P, P, N, 1, <ENTER>.
Q. Switch on the printer to see the result.

The formatting routines do not take account of different character lengths. This can be overcome as illustrated above by adding fixed spaces to force the correct format. Enlarged characters are twice as long and so require an equal number of fixed spaces.

10.1. Getting Started

Setting up a database can be a daunting prospect and many a programme has been tried and abandoned permanently. Imagine if a child was isolated from language and then suddenly expected to communicate at the age of maturity. Language is far too complex to learn in that way, yet we all learn to speak at a very early age and long before we understand the theory. We have taken this hint from nature and arranged Info-Script so that it can be used immediately by everyone.

The first time that the programme is entered you will be asked to enter todays date, do this and then press <f7> to select the first set of headings. Press N for NEW and you are ready to type in your first name and address. No setting up what-so-ever. When the name and address is entered, simply press <COPY> and the first record is saved to the memory. Press N for NEW to enter the next address and so on. Periodically save the file to your data disc by pressing S then <ENTER>. (The file name will be DATA unless changed).

Providing that you accept our format, and we have used this to store thousands of names and addresses, then there is no problem jumping straight in and entering, for example, all the names and addresses of club members. Some time later you can change the headings of lower fields for whatever use comes to mind. It is not necessary to define the use of the fields before starting to enter data. In fact, all the fields have a free format and never need a field type or length to be defined.

Imagine that you have entered twenty names and addresses. Press D for Directory then 1 and a summary will be listed to the screen in alphabetical order of surnames. Info-Script always stores records in a random order in the memory and sorts as it prints to the screen or printer. This means that it is very simple and fast to display records in any order.

Now print out twenty labels. Load the printer with labels. Press <f0> to select all the records and to set to the beginning. Press A for Address, press 2 for two across labels, and the first two labels will be shown on the screen ready for printing. Press P to print or M for multi-step. If P is pressed then the programme stops after printing, with the next pair on the screen. Press P again or M for multi-step to run through the list without stopping.

Having entered the names and addresses and printed the labels, press B and you go directly into BrunWord. No disc changes, no disc access and no delay. The simplest personalised letters use just three special markers &A &N &D. These construct a full address, a full name and insert the date respectively. Simply type your letter into BrunWord using the three markers where applicable.

Press <ESC> then * and you are back in the database with everything just as it was. Press <f0> to select all the records and set to the start. Press either O for one-step or M for multi-step.

As with the labels, the one-step option is the most useful for beginning and it works like this. The first record is found from the current list and the relevant data is

transferred to the letter pattern that has just been typed into BrunWord. The programme then stops with the letter displayed on the screen but with all the data correctly entered. You are still in the database programme but the letter can be moved up and down the screen, just as if you were in the word processor. This allows the whole letter to be viewed. If it is correct press P to send it to the printer. If not press <ESC> then B to go directly to the word processor, modify the complete letter, print it and return to the database with <ESC> *.

On returning to the database everything is as you left it. Press right arrow to advance to the next record and again press O for one-step or M for multi-step.

None of this time is the disc accessed. What happens is that BrunWord uses its memory filing system to keep a copy of the letter pattern before adding the data. This means that any time during the process the letter pattern could be retrieved and modified.

This example shows how a simple process becomes extremely powerful due to the flexibility of having both programmes and all the data sitting in the memory. From here on the sky is the limit but Info-Script is intended to be learnt in simple stages.

10.2. The Examples

While the above can be used as an actual example, it is intended as an illustration of the simplicity of Info-Script. The fundamental example on page 37 is really the place to start. It may look over simplified but it actually answers many of the question that we have been asked by experienced users who think they understand the programme and need a little extra help!

The example starting on page 45 is equally important but it is no accident that there is a section of text before each example!! The idea is to read what we have written without trying too hard to understand, and then to work carefully through the example that follows. A combination of theory and example is a very fast way to become an expert, but remember that the examples are the most important means of learning NOT the written material.

10.3. LOADING Info-Script

Info-Script on ROM cannot be entered directly but is always accessed from the BrunWord main menu using <ESC> * and the use of Info-Script on ROM does not reduce the BrunWord work area or restrict the use of any other facility on the ROM. Info-Script, BrunWord, BrunSpell, Headline, 9 pin and 24 pin fonts, are all permanently resident. However, if a Headline font is loaded from disc either automatically or via the Headline menu, then the available memory for Info-Script data is reduced by 16K.

The BrunWord files needed by Info-Script to produce labels, are resident on the ROM but any extra files needed should be loaded directly into BrunWord.

When Info-Script is entered for the first time each secession, you will be asked for "Today's Date". Type this in carefully in the form 22nd August 1991 and press <ENTER>. There is no way to correct it later. When the main menu is displayed check that the correct number of banks is displayed at the bottom right. 4 = normal, 16 = 256K, wrong number = hardware problem (one byte of each bank is tested to be unique), but don't forget that this is reduced by 1 if a Headline font is loaded from disc.

11.1. Operating Commands

	L	- LOAD from Disc.
	S	- SAVE to Disc.
<SHIFT>	@	- CAT, DIR, DISC, ERA, TAPE.
	E	- EDIT current record.
	N	- NEW record.
	R	- REUSE current text.
	V	- Set up VARIATION of titles.
	C	- CLEAR all the records.
	K	- KILL current record.
	G	- GET next record.
	D	- List all records alphabetically (DIRECTORY).
	Q	- List preselected records (QUICK list).
	F	- FIND Field or Phrase.
	U	- UNRAVEL records.
	P	- PRINT or Set Format.
	X	- Add, Clear or Invert one set of markers.
(Minus Sign)	-	- Invert the direction of sorting.
	M	- Multi-step Data Merge.
	O	- One-step Data Merge.
	T	- Transfer data and go to BrunWord.
	A	- Address.
	J	- Justify On/Off.
Right Arrow		- Get next record.
Left Arrow		- Get previous record.
<CTRL> Left Arrow		- Reset to the start of the current list.
<SHIFT> Right Arrow		- Go to next SON (not in QUICK list).
<CTRL> Right Arrow		- Go to next DAUGHTER (with different 123 markers).
Left Arrow		- Go back to PARENT.
<f0>		- Select ALL records.
<f1>/<f2>/<f3>/<f4>		- Select records with marker 1 2 3 or 4.
<f5>		- Set to beginning of QUICK list.
<f6>		- Switch from QUICK list to DIR.
<f7>/<f8>/<f9>		- Select Variation 1 2 or 3.
<SHIFT>/<CTRL> <f1>		- Set/Clear marker 1 on current record.
<SHIFT>/<CTRL> <f2>		- Set/Clear marker 2 on current record.
<SHIFT>/<CTRL> <f3>		- Set/Clear marker 3 on current record.
<SHIFT>/<CTRL> <f4>		- Set/Clear marker 4 on current record.
<SHIFT>/<CTRL> <f5>		- Set/Clear marker Q on current record.
<SHIFT> <f7>		- Set Current record to Variation 1 (Enters Editor).
<SHIFT> <f8>		- Set Current record to Variation 2 (Enters Editor).
<SHIFT> <f9>		- Set Current record to Variation 3 (Enters Editor).
0 to 9		- Set ink Colours.
B		- Go to BrunWord.
<ENTER> or <RETURN>		- Display the text in the work area.

11.2. Editor Functions

Left Arrow - Move cursor back one space.
Right Arrow - Move cursor forward one space.
Down Arrow - Move cursor to next field.
Up Arrow - Move cursor to previous field.

<CTRL> <TAB> - Insert/Overwrite.
<CLR> - Delete character at cursor.
<DEL> - Delete character before cursor.
<COPY> - Press to save the record to memory.
<ESC> - Press to cancel the change.

The editor can be entered from the command mode (with "Info-Script" displayed) by pressing N, E or R :-

N - NEW The editor is entered and any existing data in the work area is cleared. "New Record" will be displayed at the bottom left.

E - EDIT If the internal pointer shows a current record then that record will be rewritten into the work area, the editor will be entered and "Edit Record" will be displayed. If there is no current record then any data in the work area will be left intact, the editor will be entered and "New Record" will be displayed.

R - REUSE This is the same as NEW Record but the data in the work area is not cleared.

11.3. Creating a Record

On entering the editor (see para 11.2), the titles of the fields will be displayed on the left of the screen and any data will be displayed to the right of the titles. The cursor will be at the start of the first field.

Type in the data for the first field, editing any errors using the left cursor, right cursor, <CLR> and <DEL> keys . When the data is correct press <ENTER>, <RETURN> or down arrow to advance to the start of the next field. It is not necessary for the cursor to be at the end of the line. Type in the data for the next field and press <ENTER>. Continue in this way until all the data is entered. When the cursor is in the last field, pressing <ENTER> will return the cursor to the start of the first field.

The <COPY> key is used to save the data but first check that "New Record" or "Edit Record" is displayed as appropriate. In the case of "New Record" the data is copied into the file area. With "Edit Record" the original record is deleted and then the new record is saved.

Press <ESC> to exit from the editor without saving the data.

It is important to periodically save the data to disc just in case of a power failure. We recommend doing this every 10 minutes or so.

When a record is first edited then Info-Script is in the overwrite mode. Hold <CTRL> and press <TAB> to switch to insert.

11.4. Name and Address Formats

The BrunWord interface routines rely on collecting certain data to make its decisions on how to address letters and labels. By entering the data according to simple rules it is possible to have implied information about the style of addressing. This avoids the need to enter this as separate data and saves time and memory. The following formats must be used for this to work successfully.

Heading	Private Address	Business Addr 1	Business Addr 2
Surname	Smith	Bettering Ltd	Copper Ltd
Forename	John James	Paul	
Title	Mr	Mr Jones	
Street	5 Spring Road	8 London Road	1 Rose Court
Town	Chesterford	Oakford	London
County	Essex	Sussex	
Post Code	CM7 8PG	SP1 5TJ	SE2

Notice that the business name is in the "Surname" field and that the name of the contact follows after the title. Any data that is not known is left blank and the forename can be replaced with the initials. If a business contact name is given it must have a title.

This enables business names to be filed under the business name and allows the choice of using a contacts name in the address or not.

11.5. Formats For Correct Sorting

Alphabetical - Upper and lower case are treated the same. Numbers come before letters.

Numerical - Starts with the shortest word or lowest number and ends with the longest word or biggest number.

Date - MUST be in the format Day,Month,Year (e.g. 31,12,84).

11.6. D - DIRECTORY

The directory is an alphabetical list of the records with the data displayed across the screen in a condensed form. Two patterns can be used to condense the data. Number two can be reset by the user and is saved with the file. (See section 11.18 page 32). If there are more than 20 records then "Continue?" will be displayed at the bottom. Press <ESC> to end or any other key to continue.

11.7. Q - QUICK Save or List

The QUICK list is the current SELection of records. This list can be saved to disc or listed on the screen in a condensed format in the same way as the DIRECTORY. Pressing <f1> <f2> <f3> or <f4> will instantly SELect all the records with marker 1 2 3 or 4 set.

Saving the QUICK list can be quite slow, with large files, as the programme must sort as it saves. The disc drive motor may stop several times before the end but the disc MUST NOT be removed.

11.8. L - LOAD from Disc

This routine is used to load a file from disc. The disc is automatically CATalogued and then the file area is checked and if there are current records "CURRENT RECORDS - Load or Merge?" will be displayed. In this case press L to overwrite the current records or M to merge the new records into the existing file.

The name of the file to load is then requested. Type in the name and press <ENTER>. It is not necessary to type "&".

WARNING:- The programme will attempt to merge files even if they are too big so watch out for the OUT OF MEM warning. The current records will not be lost but may require editing as not all the records from the second file will be present. Always save the current records before merging.

11.9. S - SAVE to Disc

This routine is used to save all the records to disc. The records are not saved in any particular order as Info-Script always sorts directly to the screen or printer. Sorting onto disc would take considerably longer and normally this is of no importance.

On entering the SAVE routine, the disc is CATalogued and then the name of the file to save is requested. Press <ENTER> before any other key to use the current file name or type in a new name followed by <ENTER>. If a new name is typed then the current name will be updated.

All Info-Script files have a name beginning "&". This is so that BrunWord and Info-Script files are easily distinguished. The "&" at the start of the name does not need to be typed (except when erasing the file).

When saving a file that is larger than 59K, it will be necessary to erase the .BAK version before attempting to save. Similarly, if a 256K memory expansion is fitted, it will be necessary to erase the current file before attempting to save a file larger than 89K. It is wise with a file larger than 89K to turn the disc over each time it is saved and to mark the latest side in pencil. (These restrictions do not apply to a 3.5 inch second drive).

11.10. <SHIFT> @ - ¦ Functions

Press <SHIFT> @, and "¦" will be displayed. Press <ENTER> to CATalogue the disc.

¦CAT	The disc files and file sizes will be displayed.
¦ERA NAME	Type ERA then one space, then the file name. The name will be deleted from the disc.
¦TAPE	All subsequent loading and saving uses cassette.
¦DISC	All subsequent loading and saving uses disc.
¦A	All subsequent loading and saving uses drive A.
¦B	All subsequent loading and saving uses drive B.

If two disc drives are connected and only one has a disc in it, then the programme will automatically select that drive.

Press <ESC> to return to the command mode.

11.11. V - VARIATION

This is used to define new headings for the fields. The procedure is similar to creating a new record except that the data will be used for the headings in subsequent displays. From the command mode (with "Info-Script" displayed) press V and the first headings will be displayed. Edit or retype the headings leaving lines with no text where a blank line is required in the display. When all the headings are correct press <COPY> to change the internal heading or <ESC> to leave unchanged. The second headings will be displayed and then the third headings.

Headers will be truncated to 8 characters in each line in the display and the overall size will be truncated to 160 characters.

It is very important to keep the name and address fields the same as in the original format if the automatic construction of names and addresses is to be used. Headings can be moved up to fill blank lines without affecting the data but if a new heading is typed into a previously blank line then any existing records will have data in the wrong fields.

Remember that once data has been saved using a particular VARIATION then headings can only be added at the bottom of the headings. Gaps can be added or deleted by retyping the same headings in the same order but on different lines.

The field names can also used to instruct the programme in arithmetical operations and to define the DAUGHTER link field. There are five special operator characters ! + * & > and these MUST be the first character in the heading. THE SAME FIELD NUMBER MUST BE USED IN ALL VARIATIONS FOR >.

Operator	Meaning
!	Test for a number and reset the total to this figure.
+	Test for a number and add it into the total.
*	Test for a number and multiply the total by this figure.
&T	Put the current total into the last number pattern in the field.
>	Use the data in this field as the DAUGHTER link code.

e.g.

Field No	Heading	Data typed in	Data after <COPY>
5	!Part1 £	13.98	13.98
6	+Part2 £	27.15	27.15
7	*Quant..	3	3
8	&Total £	00000.00	123.39
9	>Link	BZW	BZW
10	!Part3 £	30.54	30.54
11	*Quant..	9	9
13	&Total £	00000.00	274.86
16	&T*1.15	00000.00	316.09
17	&T*1.15	00000.000	316.089
18	&8+&13	00000.00	398.25

11.12. F - FIND Field or Phrase

Pressing F from the command mode will bring the response "FIND Field or Phrase?". Press F again to search for data in a particular field or P if the location of the data is unknown or if the data is at an unknown position in the field.

FIND Field:-

This will have the appearance of creating a "NEW" record and this is exactly what happens. Type data into one or several fields and press <COPY>. The "FIND" record is then compared to all the other records and any that contain all the information in the correct fields will be invisibly marked.

FIND Phrase:-

Type in any phrase up to 15 characters using just one space between words then press <ENTER>. You will then be given the choice of searching all the records or just the QUICK list. Press <ENTER> or A for a full search or Q for a short search. All records that contain the phrase in any field will be marked.

If only one record is found then this will be displayed. If more than one is found then these will be displayed as a list. This list becomes the QUICK list and can be recalled with "Q" provided that the Q markers are not reset.

When creating a FIND field or phrase, any number of characters can be replaced with a wild card "?". Putting just one "?" in a field (FIND Field) will be a request for the record to have SOME data in that field.

11.13. U - UNRAVEL

Normally the QUICK list will be displayed in alphabetical order on the first field. The UNRAVEL routine allows this to be arranged alphabetically, numerically or by date, on any field.

On entering UNRAVEL the records headings are displayed with a "*" in the first field. Move this "*" to the field that is to be tested using the down arrow then press A, N, or D for Alphabetical, Numerical or Date. Press <RETURN> and the QUICK list will be displayed as required. If no preselection has been performed with FIND then the QUICK list will contain all the records.

When sorting by date, the programme will search each record for the first date format, (e.g. 12,8,31) starting at the field set by the "D" and then sort into date order. This allows each field to have a separate date and still to be generally sorted by date.

11.14. G - GET

Press G to display the next record in the current list. If the QUICK list is the current list then the order will be the one set by unravel. Pressing the right arrow key is the same as GET.

11.15. C - CLEAR

Answer "Clear Records?" with Y to clear all the records. Any other key will cancel the change. Beware, there is no way back.

11.16. K - KILL

If a current record is in the work area then K will bring the response "KILL Record?". Press Y for yes to KILL the record, any other key will cancel the change. After KILLing a record the data will remain in the work area and so can be edited or just returned to the file with R for REUSE followed by <COPY>.

11.17. X - MARKERS

There are four markers which can be used to distinguish between different groups of records and these do NOT necessarily relate to a particular VARIATION. Pressing X from the command mode will give the user the choice to ADD any group to any other group, CLEAR any group or INVERT the QUICK list.

The use of this can be seen by working through the examples.

11.18. P - PRINT or Set Format

Most printing will be performed using formats in the BrunWord work area but the database has a simple form of printing intended for making straightforward listings of the data.

On pressing P, "Print or Set Format" will be displayed and the user has the following options:-

P - This is similar to pressing Q from the command mode but the listing will be sent to the printer as well as the screen. The listing will always start from the beginning of the QUICK list.

The data will be taken from each field in succession and truncated according to either format 1 or 2. These will then be strung together, with one space added after each part, and sent to the printer as one long line. If this is longer than the length of line set on the printer, then the data will be truncated to the line length. The left margin is fixed to 5.

F - This is used to set format 2. A copy of the current record will be displayed on the screen. Use the right arrow key and the down arrow key to put a number of "+" in each field corresponding to the length of the required print format. If any field is not to be printed then leave with no "+" in it. Exit is automatic after the last field.

If the format needs to be set exactly to get the most data on each line, then it will be necessary to count the number of + that is typed into each field. Add one count extra for each space between fields and another 5 for the left margin. The total must not be more than the line length set on the printer to avoid missing the last characters.

8 - Sets an Epson compatible printer to 80 characters.
9 - Sets an Epson compatible printer to 96 characters.
1 - Sets an Epson compatible printer to 137 characters.

PRESS <ESC> TO EXIT IF THE PRINTER IS NOT CONNECTED OR NOT SWITCHED ON OR TO STOP THE PRINTING.

11.19. Relational Records

Info-Script has two methods of linking records together.

The first is the simplest to understand and easy to operate providing two rules are remembered. All records to be linked must have identical data in the first two fields that is unique as a combination AND only the parent can be in the QUICK list. Think of this as parent and SONs.

The second type requires a special link code to be entered in the field with > as the first character in its heading AND requires that the different groups have different markers combinations for the first three markers. Think of this type as parent and DAUGHTERs.

Press the <SHIFT> Right Arrow key to find the next SON or <CTRL> Right Arrow to find the next DAUGHTER. Press Left Arrow on its own to return to the parent. A record can have SONs and DAUGHTERs but you must return to the parent before searching for the other type as there is only one pointer.

THE LOGIC:-

All records are based on one screenful of data but by linking records together there is no limit to the amount of data that can be stored. There are two fundamental way that this can be used.

1. When a record is full, a new record is created using REUSE and then stripped of all the data except the main lines. (i.e. name & address etc are kept). It is marked the same as the old record and then the old record is relieved of all its markers and the data in the address lines. The marked record will be the only one normally used but the SONs may be referred to (when not in the QUICK list) by pressing <SHIFT> Right Arrow. The new record becomes the PARENT and carries all the data while the SONs carry only the necessary data (including the first two fields).

2. The DAUGHTER link is intended for files that are in different groups and that have no obvious connection. This might be the suppliers name and address linked to the items of stock that he supplies.

To understand the operation, think of each record as a card in a filing cabinet where the Info-Script marker defines which draw the card is in. But, unlike a real filing cabinet, this one can treat all the draws as one big draw (the DIR list) or take any selection and treat as a separate draw (the QUICK list). Think of pressing <f1> to <f4> as opening one of the four standard draws. <f1> to <f3> are the main draws while <f4> contains duplicates of a particular selection of records. <f4> could also be a main draw but it is most useful as a temporary store.

Type 1 relational link is equivalent to having an extra draw purely for storing cards that are full, leaving only the active cards in the four main draws. The DIR list will include the old cards but as all markers should be cleared on the old cards, none will appear in the <f1>/<f4> QUICK lists.

Type 2 relational link gives the ability to be looking through say draw 3 and refer to the linked cards in all the other draws while ignoring any that might be in draw 3.

11.20. Fundamental Example

Load the programme as explained in section 10.3. Press <f7> to set VARIATION 1 then press N for NEW. The headings will be displayed with "New Record" at the bottom left of the screen. Type in a surname of "Brown" followed by <ENTER>. Type in "Fred" <ENTER> then "Mr" <ENTER> then press the <COPY> key. "Saved" will be displayed at the bottom. Press N again and repeat the process to save the following names:-

Brown	Mike	Mr	Browne	Pat	Mrs	Jones	Hubert	Mr
Masters	Mike	Mr	Jones	Fred	Mr	Brown	Peter	Mr
Smith	David	Mr	Sykes	Bob	Mr	Smith	John	Mr
Brown	John	Mr	Gill	David	Mr	Brown	Ian	Mr

Press D then 1 and the records will be listed alphabetically.

Now imagine that we have left the "e" off Brown in the first name typed in. Press F and "Find - Field or Phrase?" will be displayed. Press F again and "Find Field" will be displayed at the bottom while the rest of the screen will appear as for NEW. Enter "bro" in the surname field and press <COPY>. Info-Script will now list all the records beginning "Bro" alphabetically, treating upper and lower case the same.

Hold <CTRL> and press the Left Arrow key to GET the first file of the current list. Press Right Arrow to advance through the file or Left Arrow to go backwards. We could stop at the correct record and press E for EDIT but let us try another FIND before making the change. Press F and F again and enter surname "Br" <ENTER>, "Fred" <ENTER>, <COPY>. Info-Script will find the correct record first time as there is only one record with surname beginning "Br" and forename "Fred"

Now press E and "Edit Record" will be displayed and the record can be changed. Use the right arrow key to advance the cursor to the end of "Brown" and then add the "e". Press <COPY> to update the data in the file area. "Replaced" will be displayed to show that it has been updated.

As another demonstration of FIND press F then P. "FIND Phrase?" will be displayed. Type "FRE" then press <ENTER>. "All or Quick list" will be displayed. Press A to search all the records. Info-Script will list the two records containing "Fre" in alphabetical order of surnames.

It is also possible to list the names in alphabetical order of forenames. Press <f0> to SELect all the records. Press U for UNRAVEL. Press the down arrow key to move the "*" to the second field and press A for alphabetical then <ENTER>. The names will be listed in order of forenames. Press Q then 1 and the list will be repeated. Press D then 1 and the original list will be displayed.

Now try a different print format. Press <CTRL> Left Arrow to reset to the start of the current list. Press P then F. The current record will be displayed and Info-Script is ready to accept the format data. Press the right arrow 4 times and 4 "+" will appear in the first field. Press <ENTER>, press the right arrow key 10 times to put 10 "+" in the second field, press <ENTER> and then <COPY> to reset number 2 format. Press <ESC> to return to the command mode then D 2 to see the new format. The surname will be truncated to 4 characters and the forename will be printed in full. Press D then 1 to see the old format again.

SETTING MARKERS

If you have followed the instructions exactly you will see that all records have marker 4 set. Every new record is marked this way so that the newest records can easily be found.

Use the FIND Field routine as above to find all the records with surname beginning Bro. These will be temporarily marked with Q. Press X then C then 1 to clear the 1 markers. Press X A Q 1 to add all the Q marked records to the 1 group.

Press X then I. This will invert the Q markers so that all the records with surnames NOT beginning Bro will be marked Q.

Press X then C then 2 to clear the 2 markers. Press X A Q 2 to add the Q markers to the 2 group.

It is now possible to instantly switch between all records with surname beginning Bro and those NOT beginning Bro. Press <f1> to set to the start of the 1 group and <f2> to set to the start of the 2 group. Do this and use the right and left arrow keys to look through to groups of records.

Press <f1> then Q 1 and see the Quick list for group 1. Press D 1 to see the DIR list, then Q 1 again to see the Quick list. Press <f2> then Q 1 to see the just group 2. Press D 1 to see the DIR list, then Q 1 to see the Quick list again. Notice towards the right of the status line near the bottom that Q or D is displayed as appropriate.

All the new records have been categorised so press X C 4 to clear marker 4.

Remember:- Press <f1> to <f4> to set to the start of group 1 to 4. Press <f5> to set to the start of the current Quick list. Press <f6> to set to the start of the full DIR list and <f5> to switch back to the Quick list. Press <f0> to SELect all the records (i.e. DIR and QUICK lists become the same). The current record can be marked with <SHIFT> <f1> to <f4> and cancelled with <CTRL> <f1> to <f4>.

PRINTING

Most printing will be done using defined patterns in BrunWord but Info-Script has a simple method of printing directly. This is intended for making a straightforward copy of the data for reference.

Press <f0> to SELect all the records, then press P. "Print or Set Format" will be displayed. Switch on the printer and press P. Info-Script will print all the QUICK list to both the screen and the printer. Press <ESC> to exit if the printer is not connected.

Simple printing is also possible in 96 and 137 characters to the line. Press P from the command mode (with "Info-Script" displayed) then press 1 to set the printer to CONDENSED mode. Press P to send the data to the printer.

12.1. DATA MERGING

Info-Script, BrunWord and BrunSpell are all resident together on the ROM, and all three can be used freely, without needing any extra memory or without the BrunWord work area being reduced.

Info-Script data is stored in the banked memory, meaning that 64K is available for data using an unexpanded machine. If a Dk'tronics 256K memory expansion is fitted then the full 256K is available for data storage (subject to being able to save this to your disc - see section on 3.5 inch drives).

Having both Info-Script and BrunWord in the memory with their own work areas, enables data to be transferred from the database to the word processor with minimal preparation.

The outline procedure is:-

1. Enter BrunWord in the normal way with !BW. All the standard label formats and various BrunWord example files are stored on the ROM but, if necessary, load any special files into the BrunWord file area. When this is done enter Info-Script with <ESC> *, setting the date carefully, as already explained.

2. Use Info-Script to create a file of names and addresses. Save this to disc for permanent storage.

3. Press B to go to BrunWord and use BrunWord to create a file that contains the relevant Info-Script instruction markers.

4. Press <ESC> then * to return to Info-Script and select the particular files that are required to be used. The data merge will start from the current file in the Quick list. Pressing <f1>, <f2>, <f3> or <f4> will select group 1, 2, 3 or 4 and set to the beginning ready for data merging OR press <f5> to set to the beginning of the current quick list.

5. Select the relevant Data Merge option.

   M - Multi-step Data Merge
   O - One-step Data Merge
   T - Transfer data and go to BrunWord
   A - Address

   J - Justify ON/OFF

12.2. M - MULTI-STEP Data Merge

A search is made in the BrunWord text areas for a file containing Info-Script markers. The search is intended to enable most data merging to become automatic using data loaded within the LABELS file. But for simplicity it is also possible to load or type a letter into BrunWord and this would then be used in preference to other data.

The search follows the following sequence (don't worry too much about this detail as normally this will all happen without your knowledge):-

1. BrunWord's work area is searched for markers and if one is found it is assumed that the work area contains the correct file.

2. If BrunWord's work area contains no markers then BrunWord's file area is searched for a file of the same name as the current name of the work area. If found then this file is tested for markers.

3. If BrunWord's work area is clear AND there is no file of the same name in BrunWord's file area then the file area is searched for a file with the same name as the name of the Info-Script data area but with the & removed. If found then this file is tested for markers.

4. If BrunWord's work area is NOT clear and no markers are found with searches 1 & 2 then the programme stops and reports NO MARKERS. This is in order to preserve the data in the work area.

Data is then transferred from the Info-Script files marked Q, to the BrunWord file, in the order set by UNRAVEL and then sent to the printer. The BrunWord file is continuously loaded with data and printed until all the Q files have been used. The <ESC> key can be pressed at any time to stop the process.

NOTE:- The text will only be justified before printing if J ON is in the main Info-Script menu or if the marker &J is encountered anywhere in the BrunWord file.

12.3. O - ONE-STEP Data Merge

This follows the same process as Multi-step Data Merge but stops before printing. Press P to Print, <ESC> to stop, or G to GET the next letter without printing. OR the BrunWord file may be examined using the down or up arrow keys on their own or with <CTRL>.

12.4. T - TRANSFER & Go To BrunWord

This follows the same process as One-step Data Merge but goes directly to BrunWord when the data loading is complete.

12.5. J - JUSTIFY ON/OFF

This toggles Justify ON and OFF and the state is shown in the main menu. Normally, Justify should be OFF as the marker &J can be used to turn J ON from within the BrunWord file. Only the files that have data inserted into paragraphs actually need to be justified and this saves on the data loading time.

12.6. A - ADDRESS

The ROM version of Info-Script has a set of label patterns stored in the ROM but an independent LABELS file, as used by the disc version, can be loaded into BrunWord and that will take preference over the resident labels, if the names are duplicated.

On pressing A the user will be given the choice of 1 (one across labels or envelopes), 2 (two across labels), L (left side only of two across) or R (right side only of two across). After this the user chooses Print, Get or Multi-step.

The process is identical to manually loading one of the LABELS files into BrunWord and then returning to Info-Script and calling either One or Multi-step data merge. The address routine does all this automatically, preserving any data that is in BrunWord's work area and returning it when completed.

BUT if it is interrupted with <ESC> while printing then the programme will stop in BrunWord and the work area will contain a label pattern with a name beginning with *. Any file name beginning * is volatile in that it will be deleted when Info-Script is next entered and any previous data will be restored to the work area.

If the address routine is interrupted in this way the simplest way to complete the process is to press <ESC> * to re-enter Info-Script. This is not essential so long as the name is changed by loading another file into BrunWord's work area.

12.7. Summary of Info-Script Markers

All data merge markers begin with &. When Info-Script looks for markers it uses a reasonable degree of intelligence but it is possible for a mistake to be made. (The Hex number &AE1C will be taken as an address marker but Mr & Mrs causes no problem).

&1	-	Insert First field.
&2	-	Insert Second field.
etc		
&A	-	Insert Address .
&F	-	Insert Forename.
&N	-	Insert Name.
&D	-	Insert Date (as entered when first loaded).
&G	-	Advance to next record.
&Z	-	Change to overwrite mode.
&RT	-	Reset Total.
&R4	-	Reset to start of group 4
&J	-	Turn Justify ON.
&+	-	Add into the Total
&%	-	Add into VAT Total
&T	-	Put Total into the pattern nearest to the line end.
&IF	-	Conditional PRINT or LOAD
&" "	-	Repeat between quotes until data exhausted.

Most of these markers can be mixed logically.

12.8. Insert Markers

These are the simplest to use and can be put anywhere in BrunWord's text with the exception of the Address marker, &A, which will only give a sensible format if it is placed at the left margin in a line on its own.

Each marker will be deleted and then data from the correct field will be inserted into the text at the same point. If the data is inserted into a paragraph then it is wise to turn Justify On.

e.g. &J13 will cause all the data in field 13 of the current record to be inserted at the marker. BrunWord will Justify all the text before printing. It is only necessary to have one &J anywhere in the text.

For the simplest personalised letters:-

&A

Dear &N,

12.9. &Z - Overwrite Markers

&Z1********** - Overwrite first field into format

```
&ZA**********        Overwrite Address into format
 **********
  **********
   **********         * = FIXED SPACE
    **********
     **********
```

```
&ZGA**********       Advance to next record and
 **********          overwrite address into format
  **********
   **********         * = FIXED SPACE
    **********
     **********
```

NOTE: Each "*" shown in the formats above represents a BrunWord fixed space, i.e. the <f4> key.

Overwrite formats MUST be followed by a number of fixed spaces to define the size of the format. Overwrite address formats MUST be provided with six sets of fixed spaces, in consecutive lines. The data will be truncated if necessary to fit the format.

With purely overwrite formats, there is little point in justifying after adding the data as it is faster to justify the pattern when it is created. But if insert markers are also used then it may be necessary to justify.

12.10. &G - GET

If G is encountered in the marker string then Info-Script advances to the next record.

12.11. &RT - Reset Total

If RT is encountered in the marker string then the running total is set to zero.

12.12. &R4 - Reset 4

Some applications, such as an invoice, may require two separate groups of data. The first group should have the Q marker set and the second should have marker 4 set. The data merge will proceed normally until R4 is encountered in a marker group. The Q markers will then be cleared and Group 4 records will have the Q marker set. The loading of data will then continue.

12.13. &J - Turn Justify ON

If J is encountered in any marker group then the whole text will be justified before printing.

12.14. &+ - Add Into Total

If a + is placed immediately before the field number then that field will be tested to see if it contains a number. Date formats will be ignored and if two numbers exist in a field then the first one will be used. &+Z13 is NOT valid as the + is separated from the field number. &Z+13 is valid.

12.15. &T - Totals

If &T is encountered then Info-Script will look for the first number pattern between the &T and the end of the line. Any text will be skipped over. If a suitable pattern is found then the running total is put into the pattern, rounding the smallest decimal and truncating the higher numbers if necessary.

A number pattern consists of any string of numbers with or without a decimal point. It can have a maximum of 8 characters above the decimal point and 7 below. However, the accuracy will be reduced proportionally if multiplying with a number less than one (the equivalent of division).

This marker can be used with the Z marker for fixed formats and with simple arithmetical instructions. It should not be used within paragraphs as it is essential for the number pattern to be on the same line and should not be used with other marker groups.

e.g.

```
&ZT       Total Ex  VAT  = £0000.00
&ZT*0.15       VAT       = £0000.00
&ZT*1.15  Total Inc VAT  = £0000.00
```

12.16. &% - Add Into VAT Total

The % must be followed by the number of the field that contains the price without VAT then * then the number of the field that contains the VAT rate in percentage. The VAT of the price will be calculated and then added into the VAT running total. The marker will be replaced by the VAT rate in percentage.

e.g. &Z%7*4 where field 7 contains 34.95 and field 4 contains 15.

12.17. &IF - Conditional Marker

&IF must be followed by a field number then either = > < or <> then LOAD NAME or PRINT " ".

Conditional LOADing

```
&IF 10=L1  LOAD LETTER.1
&IF 10=L2  LOAD LETTER.2
```

If field number 10 of the current record contains L1 then Info-Script will attempt to load LETTER.1 from BrunWord's file area and failing that will attempt to load it from disc. Similarly if field 10 contains L2 it will attempt to load LETTER.2.

If either LETTER.1 or .2 is loaded then the work area will be completely overwritten with the new file and the data loading will start again using the new pattern. The new pattern could itself load another file and so there is no limit to the number of branches that can be made. It is also possible to load files from two disc drives by using B:LETTER.1 and A:LETTER.2 for B and A drives respectively.

Conditional PRINTing

```
&IF 10=L1  PRINT "This is sales letter one"
&IF 10=L2  PRINT "This is sales letter two"
```

The text between quotes will only be left if the condition is met. Any BrunWord text can be between the quotes including paragraph end markers, page markers etc. Normally, the second lines would start at the end of the first line without even a space, to ensure that the two lines appear exactly in the same place.

12.18. &" " - Repeat Marker

This marker allows several pages of data to be constructed using just two basic patterns. These are identical except that the second also contains &G" ".

e.g.

```
          Surname          Forename         Title

&Z1********** &Z2**********  &Z3**
&G"&Z1********** &Z2**********  &Z3**
"
```

(Note * = BrunWord <f4> fixed space)

When data is loaded into the pattern the last line will repeat until all the data is used up or BrunWord runs out of memory. Note that a paragraph end marker is included within the quotes.

13.1. Simple Merge Example

1. Enter Info-Script and press <f7> to set the first VARIATION of headings. Type in the three addresses listed on page 31 and add the following extra data:-

	Mr Smith	Bettering Ltd	Copper Ltd
Item1...	23,1,86	1,6,86	28,12,86
Item2...	23.00	48.50	52.45

2. Press B to go to BrunWord, press <CTRL> R then type 64 <ENTER> to set the right margin to 64. Now type in the following letter

16 Lever Street,
Potter,
Cambridge,

&A

Dear &N,

We are writing to let you know that your membership is now due for renewal. Please send £&J12 before &11 if you wish to continue to receive our magazine.

Yours Sincerely,

Fast Sale Ltd.

3. Save this letter to your own disc. Press <ESC> S, type LETTER1 <ENTER> then W.

4. Press <ESC> then * to return to Info-Script.

5. Press <f0> to ensure that all the records are SELected and to set to the beginning. Press M for Mult-step Data Merge and switch on the printer. Three personalised letters will be printed.

NOTES:-

A. Info-Script automatically places commas after the address lines and a full stop at the end.

B. The text is expanded by one line for each of the address lines.

C. As Copper Ltd has no contact name, the programme replaces &N with "Dear Sir" but uses only the company name in the address.

D. As data is inserted into the paragraph, the first marker in the paragraph includes J so that BrunWord will justify before printing.

6. When FILE END is displayed, press B to go to BrunWord. Type in the next example but first clear the work area with <ESC> C W then <ENTER> to go into the editor.

7. Set the margins to 6 and 75. Press <CTRL>L 6 <ENTER> <CTRL>R 75 <ENTER>. Type in the following format using the <f4> key wherever * is shown. All Info-Script Markers must be numbers or capital letters. Note the ZG in the last line.

```
&ZA**********    &ZA**********              &ZA***
**********        **********              ******
**********          **********            ******
**********            **********          ******
**********              **********        ******
**********                **********      ******
```

```
Name          Forename   Address          Fee    Date

&Z1**********&Z2** &Z3 &Z4********** &Z12*  &Z11****
&ZG1**********&Z2** &Z3 &Z4********** &Z12*  &Z11****
```

8. Press <ESC> then * to enter Info-Script. Press <f0> to SELect all the records and set to the beginning. Press M and switch on the printer. Two pages will be printed as follows:-

```
Mr P Jones,          Mr P Jones,            Mr P J
Bettering Ltd,         Bettering Ltd,       Better
8 London Road            8 London Road      8 Lond
Oakford                    Oakford          Oakfor
Sussex                       Sussex         Sussex
SP1 5TJ                        SP1 5TJ      SP1 5T
```

```
Name          Forename   Address          Fee    Date

Bettering Ltd Paul  Mr   8 London Road    48.50  1,6,86
Copper Ltd                1 Rose Court    52.45  28,12,86
```

```
Mr J J Smith,        Mr J J Smith,          Mr J J
5 Spring Road,         5 Spring Road,       5 Spri
Chesterford,             Chesterford,       Cheste
Essex,                     Essex            Essex
CM7 8PG                      CM7 8PG        CM7 8P
```

```
Name          Forename   Address          Fee    Date

Smith         John  Mr   5 Spring Road    23.00  23,1,86
```

(Note that the last line is missing as there is no more data)

9. Finally, print out the 3 addresses as labels. It is not necessary to go to BrunWord. Press <f0> to SELect all the files and reset. Press A for Address and then 1 2 L or R as appropriate. (1 across, 2 across, Left of two across or Right of two across). Then load the printer with labels switch ON and press M for Multi-step.

13.2. Relational Example

Enter BrunWord from a "clean" machine (see section 2 page 7). This will ensure that the detail in this example is correct. Load the letter patterns into BrunWord as follows. Insert the examples disc and with the BrunWord main menu displayed press L, wait for the disc to be CATalogued, type DATA <ENTER>.

Press <ESC> * to enter Info-Script. Type todays date <ENTER>. With the Info-Script menu displayed, press L then <ENTER> to load &DATA. The data in this file is a typical example of the use of this database and contains customer names and addresses <f1>, suppliers names and addresses <f2> and items of stock <f3>. Remove the examples disc.

Press <f1> then Q 1 to list the first 20 customers. Press any key to continue to the end of the QUICK list. Press <f2> then Q 1 to display the seven suppliers. Press <f3> then Q 2 to display the items of stock.

Press <ESC> then <f1> then press Right Arrow to advance through the file, one record at a time. Stop with Miss Andrews displayed.

Miss Andrews has been a good customer and has three previous orders filed. Hold <SHIFT> and press Right Arrow. Do this twice more to see the three orders. These are SON related records as the data in the first two fields is identical. Press left arrow on its own to return to the parent file of Miss Andrews.

Press <f3> then Right Arrow to advance through the SELection. Stop at CPC6128-M. Hold <CTRL> and press Right Arrow and you will see the current file of BZ Wholesale, the supplier. As a recent order has been placed with BZW a summary has been typed into the current record. This is quite an extravagant use of memory but it does demonstrate the flexibility of Info-Script. Press Left Arrow to return to the parent record.

Press <f2> then Right Arrow to advance through the suppliers and stop at BZ Wholesale. Hold <CTRL> and press Right Arrow several times until the word "Marker" vanishes at the bottom right of the screen. This is using parent and DAUGHTERs but from the other way. Press Left Arrow to return to the parent. Hold <SHIFT> and press Right Arrow. There is one SON record containing data of a previous order.

Notice that the BZ Wholesale records contain several items of data in each field. The sequence is very important. The unit price MUST be the first number from the left excluding any numbers that are preceded with a non number character. The multiplier MUST be preceded immediately with *. The total MUST be the last number pattern in the field.

```
e.g.    +Item1..  CPC 6128M  234.75  *3    18384.00   <<< ERROR <<<
        +Item1..  CPC6128M   234.75  *3      704.25   <<< CORRECT <<<
```

The first line has a space before 6128M so it is taken as the unit cost. Space compression is used when the record is stored so there will be only one character between each item although some have several spaces.

Go though these sequences again and take careful note of the markers that are displayed. Then read section 11.19 again.

13.3. Invoice Example

If you have followed our loading instructions correctly for this example (section 13.2), then you have already loaded DATA into BrunWord. This is a file containing the INVOICE and ORDER patterns required for this example. The actual BrunWord file called DATA contains the selection instructions for the Info-Script file of the same name but with an & in front. (Don't try to too hard to understand this at the moment). There is a logical link between the file name in Info-Script and the patterns that are searched for Info-Script markers when merging data.

Let us imagine that Miss Andrews wishes to place another order and we want to print an invoice. The first step is to mark all the items that she requires with marker 4. This has already been done so press <f4> then Q 2 to see the list.

Now find the customer record. Press F then F again, type in Andrews then press <COPY>. Four records will be listed so press G to GET the first which will be the one with the address.

Before constructing the invoice, let us print the address. Press A for Address then 1 for one across. Press O for One-step (letter O). Info-Script will load the correct pattern into BrunWord and load it with the address data. Press <ESC> to avoid printing or P to print. (If P is pressed and the printer is either not on or not connected, press <ESC>. This will take you into BrunWord so press <ESC> then * to return to Info-Script).

Hold <CTRL> and press Left Arrow to ensure that the correct record is displayed then press T for Transfer. Watch the bottom left of the screen. Loading and Formatting will be displayed several times as Info-Script follows the search sequence and then follows the conditional loading instructions in the file. The first record in the <f4> list will be shown when the reset instruction is reached.

After a second or two the loading will be complete and control will be passed to BrunWord. The programme will now be in BrunWord and you can edit the data in any normal way before sending to the printer with <ESC> P P N 1 or other appropriate sequence.

Finally, to return to Info-Script, press <ESC> then * and the programme will display the main menu of Info-Script.

13.4. Order Example

For simplicity in presenting this example we have assumed that the same items will be ordered from one manufacturer. In practise you would go through the file and mark the required items with marker 4, using <SHIFT> <f4> after first clearing marker 4.

This follows directly from the above example. Press <f2> then Right Arrow until BZ Wholesale is displayed. (It is important that the file left in the BrunWord work area does not contain Info-Script markers which should not be the case if you are following the instructions. If in doubt go to BrunWord and clear the work area).

With the BZ Wholesale record displayed, press T for Transfer and the ORDER will be constructed.

13.5. Advanced Patterns

Following on from above you will be in BrunWord with the ORDER in the work area. The file in the database is called &DATA and a file called DATA will be in the BrunWord file area. The BrunWord file DATA has already been used twice, in the above example, to construct the INVOICE and the ORDER.

Load DATA into the BrunWord work area. Press <ESC> G, then type DATA <ENTER>. This file contains a list of IF statements which test field number 10 and load a particular file according to the content. Read para 12.2 again and you will start to understand the way that Info-Script is able to use the word processor almost invisibly.

The basic idea is to keep the BrunWord file DATA as small as possible and to use it to load the patterns, as and when they are needed, directly from disc. However, if you always use a certain selection then it may be a good idea to include these in the DATA file but remember that will reduce the size of BrunWord's work area when DATA is loaded.

The content of the BrunWord file DATA can be changed and saved to your own disc so that your particular patterns are auto-loaded. There are many ways that this can be done using BrunWord's memory filing system.

Follow this procedure to change the content of DATA. Clear both the file area and the work area with <ESC> C F then <ESC> C W. Load DATA from the examples disc with <ESC> L DATA <ENTER>. Move the cursor to the end of the file with <CTRL> Right Arrow and type:-

&IF 10=REC LOAD RECEIPT (press <ENTER> at the end of the line).

This is an instruction to load the pattern called RECEIPT if field 10 (field headed ACTION) has REC in it.

The file can saved to your disc. Insert your disc then press <ESC> S <ENTER> F. This will save the work area and the file area of BrunWord all under the one name of DATA. (You MUST save Files+Work i.e. F).

It would be quite normal, in time, to have several files of Info-Script data all with different file names and each one of these would require a BrunWord file containing letter patterns. For example an Info-Script file &CUST would need a BrunWord file for text patterns called CUST. The procedure is virtually the same as just described but a new file is created and saved under the name of CUST.

13.6. Fixed Size Invoice

The INVOICE and ORDER patterns used in the examples have been designed to expand to fit the data. If you use a standard form for these then you may prefer to use a fixed data pattern. To do this GET the pattern into BrunWord's work area and delete &G" " in the second format line. Insert a G before the first Z (&GZ1). Then mark the second format line using the <f6> key and use <ESC> Q C to copy the line as many times as you want to fill a whole page.

14.1. Using Disc Drive B

The CPC6128, 6128 Plus or CPC464 can control up to two disc drives but a single disc drive is perfectly adequate for the vast majority of uses.

Using the BrunWord ROM module with two disc drives is simplicity itself. If just one disc is inserted then the programme automatically selects the correct disc drive. If both drives have discs then no automatic switching occurs and the user must select the correct drive using the |A or |B commands or by specifying the drive in the file name e.g. B:LETTER1 or A:LETTER2.

Normally, only one disc will be inserted, as automatic drive selection is much more convenient.

The second disc drive can be either a standard 3 inch drive or a 3.5 inch drive.

14.2. Using 3.5 inch Disc Drive

3.5 inch disc drives have 80 tracks per side and two heads so that both sides can be used without turning the disc over. This means that the 3.5 inch drive, when used with the correct disc operating system, can store 4 times more data than each side of a standard 3 inch disc.

The BrunWord ROM module can be supplied with KDS ROMDOS already programmed into the system (optional extra) and if your ROM has this then a 3.5 inch disc drive can be used at full capacity without any special preparation. Drive B is used in exactly the same way as drive A but the system will recognise it as a high capacity 3.5 inch disc.

The <ESC> Y routine from BrunWord will format both 3 inch and 3.5 inch discs (see page 8). For simplicity, the formatting routine assumes that drive B is 3.5 inch and for this a choice of D/F is given.

D (for data) will format a disc THAT CAN ONLY BE USED IF KDS ROMDOS IS INCLUDED.

F (for fast) will format a disc that can be used on any CPC computer, with a 3.5 inch 2nd drive, with or without KDS ROMDOS

If you have KDS ROMDOS then all your 3.5 inch discs, for normal use, should be formatted using D for data. This gives a total of 712K of storage on each disc. We have deliberately avoided the 10 sector 800K format as the margins for disc drive wear, with this format, are considerably less.

The F (for fast) format is primarily intended for use with Info-Script. This operates as a normal 178K disc, for BASIC or BrunWord files but the same disc the same way up can also be accessed by Info-Script, using the second head, for storing one fast file up to 320K. In practise a standard computer will be limited to one fast file up to 64K but with a Dk'tronics 256K memory fitted, the fast file can be up to 256K.

An Info-Script fast file MUST have the single letter name &F. Any Info-Script file called &F will be assumed to be a fast file for use with the special format 3.5 inch disc, using drive B. A small 1K file is also saved onto the standard part of the disc and that is displayed in the CATalogue.

15.1. Getting Started

The problem facing us on writing this manual was how to explain the comprehensive features of BrunWord Elite without making it sound too complex. We concluded that this is not possible. The examples are the easy way into BrunWord Elite but you also need a detailed technical description of the features.

Start by reading very quickly through these pages. Then print out the examples that are relevant to your printer. Take one of the simpler examples for your printer and carefully delete our text, without disturbing the INCODEs. Type in your own text and print it out. You should get a perfect result, without any knowledge of how to do it. Try this with the other applicable examples and you will start to feel the power of the engine within BrunWord Elite.

Read the manual again and the light will start to shine. Take one of the examples that you have already used and experiment by changing one of the INCODEs, after reading the technical description of that INCODE. Understanding the operation of an INCODE is quite easy if approached in this way.

15.2. Introduction

BrunWord Elite is most easily understood as an extension of BrunWord 6128. This means that the user must be familiar with BrunWord 6128 before the advanced features of BrunWord Elite can be used. The first part of this book is the BrunWord 6128 manual. BrunWord Elite on ROM does not suffer the shortage of memory of the disc version, so all the features are available at the same time. Headline, all the standard fonts and three extra fonts are all permanently resident, and the use of these does not affect the spelling checker or Info-Script.

Originally BrunWord Elite was designed for 24 pin printers but with the later addition of Headline, virtually all the features, including the same high quality fonts, can now be used on the cheaper 9 pin printers (Amstrad DMP2160, Star LC10 etc). The only requirement is that the printer must have <ESC Z = Quadruple bit image mode>.

The 'Type Setting' fonts of BrunWord Elite are used in totally different ways for 9 pin or 24 pin printers. With a 24 pin printer, the font is downloaded to the printer and BrunWord Elite sends periodic instructions to the printer on how to use the font. The printer doing the work according to the programmes requirement. This achieves a fast print rate as the data to send to the printer is little more that the actual text.

To use these 'Type Setting' fonts with a 9 pin printers, the programme needs to tell the printer how many dots to print and where to print the dots. This requires the programme to send a huge amount of data to the printer. Fortunately, this is done at very high speed, but it still means that the printer will print a little slower than normal NLQ printing.

You will now see why we have given the 9 pin printer driver a name of it's own (Headline). It really is a separate programme within BrunWord Elite, and if you only think of Headline in this way then you will understand why it needs a slightly different approach, compared to the rest of BrunWord Elite.

16. INCODE Printer Controls

INCODEs, as the name suggests, are printer control codes that can be typed anywhere within the text. These complement the normal BrunWord 6128 printer codes (page 17) and it is very common to use both types within a piece of text. The BrunWord 6128 codes are primarily intended for simple printer switching operations such as to **emphasise** or underline a word. INCODEs have a much more complex use and generally control ***how*** the programme instructs the printer rather than sending a specific set of codes. Hold <SHIFT> and press the dot key in the function key pad, to produce the INCODE character. This must always be followed immediately with a letter, with no space inbetween, and then normally a number or a series of numbers. First is a summary:-

16.1. All printers

1.1. **Line Spacing (GAP).** In inches multiplied by 216 (9 pin) or 180 (24 pin).

.G36	Sets 9 pin printer to 1/6 inch.
.G30	Sets 24 pin printer to 1/6 inch.

1.2. **Printer Margins.** Left offset followed by column width (optional).

.M10 30	Sets left margin to 10, right margin to 40.
.M50 30	Sets left margin to 50, right margin to 80.

1.3. **Header Margins.** Left offset followed by column width.

.H5 70	Sets header margins, left to 5 and right to 75.

1.4. **Title Switch.**

.T1 "FOOTER 1*Page ?"	Set first header or footer.
.T2 "Page ?*FOOTER 2"	Set second header or footer.
.T1 ""	Set first header or footer to blank.
.T2 ""	Set second header or footer to blank.

1.5. **Direct Printer Codes.** String of decimal numbers sent to the printer.

.P3 27 85 1	Sets printer to uni-directional printing.
.P2 27 71	Sets printer to double strike printing.

1.6. **Download Disc File.** File name must begin $.

.D $BITDATA	Sends $BITDATA directly from disc to printer.

1.7. **Delayed INCODE.** Inches from top, times 216 (9 pin) or 180 (24 pin).

."432.M50 30"	Margins will be set to 50 and 80, 2" from top (9 pin).
."360.M50 30"	Margins will be set to 50 and 80, 2" from top (24 pin).

1.8. **Print in Columns.**

."."C2 0 40"	Whole file printed in 2 columns offsets 0 and 40.

1.9. **Line Repeat.**

▶L3	Line repeat 3 times i.e. print line 3 times.

1.10 **Video Dump.** Number of lines is optional.

▶V1 25 MERMAID	Print 25*8 lines of 'Mermaid' - 9 pin small.
▶V2 25 MERMAID	Print 25*8 lines of 'Mermaid' - 9 pin large.
▶V3 25 MERMAID	Print 25*8 lines of 'Mermaid' - 24 pin small.
▶V4 25 MERMAID	Print 25*8 lines of 'Mermaid' - 24 pin large.
▶V5 25 MERMAID	Print 25*8 lines of 'Mermaid' - 24 pin medium.

16.2. Printers with Reverse Line Feed

2.1. **Reset to.** Inches from top, multiplied by 216 (9 pin) or 180 (24 Pin).

▶R648	Sets 9 pin printer 3 inches below top of text.
▶R540	Sets 24 pin printer 3 inches below top of text.

2.2. **Relative Reverse.** In inches multiplied by 216 (9 pin) or 180 (24 Pin).

▶U216	Reverse upward by 1 inch (9 pin) or 1.2 inches (24 pin).
▶U1	Sets reference to current position.
▶U0	Reverse to last reference.
▶U0-216	Reverse to 1 inch (9 pin) above last reference.
▶U0+324	Reverse to 1.5 inches (9 pin) below last reference.

2.3. **Epson Reverse.** Special control for Epson LQ500 & LQ550.

▶E5	Set reverse routine for Epson LQ500 & LQ550.
▶E3	Set reverse routine for normal printer.

2.4. **Box Reverse Control.**

▶X0	Do NOT reverse after box or vertical line.
▶X1	Do reverse after box or vertical line.

16.3. Printers with Justification

3.1. **Justification Control.**

▶J0	Sets printer to ragged right. (Prints against LHS).
▶J1	Sets printer to centre the line of text.
▶J2	Sets printer to ragged left. (Prints against RHS).
▶J3	Sets printer to justify the text within paragraphs.
▶J4	Same as ▶J0 but line filled according to char size.
▶J5	Same as ▶J1 but line filled according to char size.
▶J6	Same as ▶J2 but line filled according to char size.
▶J7	Same as ▶J3 but line filled according to char size.

All normal BrunWord 6128 printer codes, <SHIFT> <f1> etc, will only have a space sent to the printer if ▶J0 (the default condition).

3.2. **Reference Width.** Number required depends on the width of 'a'.

▶W	Sets Width to the value of 'a' in internal table.
▶W27	Sets Width to 27.

3.3. **Size Factor.** Number required depends on the printer and the font.

▶F	Sets Factor to 27. Usual proportional requirement.
▶F28	Sets Factor to 28. For more open proportional text.
▶F32	Sets Factor to 32. Usual non-proportional requirement.

3.4. **Use Absolute TAB in place of left margin.**

▶A0	OFF (Star LC24-10, Citizen HQP40/45).
▶A2	ON (Epson LQ500).
▶A3	ON (Epson LQ550, Citizen Swift-24).

16.4.24 Pin Printers

4.1. **Download Font.** Any file name NOT beginning $ is assumed to be a font.

▶D MIDLINE	Downloads middle size FINELINE font.
▶D FINETYPE	Downloads large size FINETYPE font.

4.2. **Download Switch.**

▶Y0	Switch printer to internal fonts.
▶Y1	Switch printer to downloaded font.

4.3. **Set Space Size.** For Star printers.

▶S0	Set normal space size in table when downloading.
▶S36	Set space size in table to 36 when downloading.

4.3. **Print Box or Line.** Thickness, depth, type, 1st position, 2nd position, etc.

Thickness	1 pin thick = 16. 2 = 24. 3 = 28. 4 = 30. 5 = 31.
Depth	Inches multiplied by 180.
Type	2 = box. 0 = hor line. 1, 3, 4 etc = vert line(s).
1st position	Inches multiplied by 60 from current left margin.
2nd position	Inches multiplied by 60 from current left margin.

▶B16 360 2 60 180	Box, thin line, 2 inch square, 1 inch from margin.
▶B28 0 0 60 180	Hor line, 3 pins thick, 2" long, 1" from margin.
▶B24 360 1 60	Vert line, 2 pins thick, 2" deep, 1" from margin.
▶B16 360 3 30 60 90	Vert lines, thin, 2" deep, .5" 1" & 1.5" from marg.

17. All Printers

All facilities described in this section can be used with any printer that uses the standard Epson control codes (all well known modern dot matrix printers). BrunWord Elite uses some very complex printer techniques and because of this there is no provision to drive printers that are not Epson compatible.

17.1. Line Spacing (GAP)

This INCODE enables the line spacing to be changed any number of times on a page. This is very useful to finetune the layout of a page. If the GAP is set then the automatic formfeed at the end of the text is inhibited. The INCODE character <SHIFT> <f.> is followed by G and then a number calculated as follows (if in doubt see ESC J in your printer manual):-

9 pin printer	Gap in inches multiplied by 216.
24 pin printer	Gap in inches multiplied by 180.

◨G36	Sets 9 pin printer to 1/6 inch.
◨G30	Sets 24 pin printer to 1/6 inch.
◨G15	Sets 24 pin printer to half line spacing.
◨G60	Sets 24 pin printer to double line spacing.

If the line spacing is not constant on a page and normal footers are used, then these will not be in the correct place unless the GAPs add up to cancel the changes. (e.g. ◨G15 followed by ◨G45). The best solution is to use the Reverse INCODE to print a line of text at an exact position.

The Reverse INCODE will always reference itself to the first line where the GAP is set (or the top of a new page if it is already set). The GAP should be set in the first line.

17.2. Printer Margins

The printer margins will normally correspond to the screen but the margin INCODE can be used to set the printer margins independently. This is most useful when the printer is being used to justify or when very wide printing is required.

The INCODE character <SHIFT> <f.> is followed by M and then the left margin offset and the column width (optional). Simple text can be thought of as being one column, in which case the column width is the width of the text.

◨M15 40	Sets left margin to 15, right margin to 55.
◨M0 40	Sets left margin to 0, right margin to 40.
◨M25	Sets left margin to 25, column width unchanged.

The programme will use the column width shown on the screen with zero offset until a margin INCODE is encountered. If just the left margin offset is specified then the column width will be left unchanged.

Notes 1. This INCODE sets an offset and column width rather than absolute margins.
2. If the column width is changed from that shown on the screen then it is normally essential for the programme to be allowed to fill the line independently from the screen. (INCODEs ◨J4 ◨J5 ◨J6 or ◨J7 section 13.1.).
3. The offset value is always added to the left margin shown on the screen.

17.3. Headers & Footers

If no action is taken then the header and footer margins will be the same as the screen, even if the printer margins are changed within the text. When two or more columns are printed, it is usual for the total width to be wider than the screen. The automatic footers (not headers) can still be used but their column width must be set to the full width of the text. This is done in the same way as setting the margins but using the 'header' INCODE ▶H. This can be done anywhere before the footer is printed.

▶H5 71 Sets 'header' margins, left to 5 and right to 76.

Headers and footers can also be set within the text using the Title INCODE. In this case the correct header/footer arrangement must be turned on in the print menu but the first header can be inhibited by setting it to blank in the first line of text. To do this, the Title and Header INCODEs must be the very first text in the file.

	▶T1 "FOOTER 1*Page ?"	Set first header or footer.
	▶T2 "Page ?*FOOTER 2"	Set second header or footer.
	▶T1 ""	Set first header or footer to blank.
	▶T2 ""	Set second header or footer to blank.
(File start)	▶T1""▶H5 71	Turn OFF header and set header margins.

With complex layouts it is often best to use the Reverse INCODE to print a line of text at the exact position. On this page the footer is printed 9 inches below the first line (before photographic reduction).

17.4. Direct Printer Codes

BrunWord Elite can send an embedded string of decimal numbers directly to the printer. This is most useful in situations where a special feature of the printer is needed, which does not warrant a permanent change to the BrunWord printer codes.

The INCODE character <SHIFT> <f.> is followed by P, the number of codes to send, and a list of the numbers.

▶P3 27 85 1 Sends 27, 85 & 1 to the printer.

All the INCODE instructions contained in a whole line of print are acted upon **before** the line is printed. If an effect is turned ON and turned OFF in the same line using INCODEs then the whole line will be printed according to the last instruction. Normal Brunword single character control codes are acted upon at the point they occur.

17.5. Downloading Disc File

The use of this INCODE is superseded by the Video INCODE. It is retained purely for continuity.

Any file saved on disc can be downloaded directly to the printer, during normal printing providing that its name starts with $. The INCODE character <SHIFT> <f.> is followed by D and then the name of the file. If the file name does not start with $ then the programme will assume that it is a FONT and will be unable to recognise it. The file must contain exactly what is to be sent to the printer as the programme does not interrogate the data in any way. The length of the data is taken from the header.

17.6. Delayed INCODE

This is the fundamental page layout control of BrunWord Elite and it allows any INCODE to be set to operate at a particular distance down the page. This INCODE will always reference itself to the first line where the GAP is set (or the top of a new page if it is already set). Normally, the GAP must be set in the very first line for this to work correctly.

First work out the distance down in inches that the INCODE is required to operate at, and multiply this with 216 (9 pin) or 180 (24 pin). Place this number infront of the INCODE instruction that is being delayed and put in double quotes with a second INCODE character at the beginning

```
▶"648▶M5 40"   Sets margins to 5 and 45, 3" below top (9 pin).
▶"540▶M5 40"   Sets margins to 5 and 45, 3" below top (24 pin).
```

Before any printing takes place the programme searches the whole work area for a delayed INCODE. It stops at the first one it reaches and notes its operating point. At the beginning, and after each line feed, the programme tests to see if the operating point of the current delayed INCODE has been reached. If it has then its instructions are activated and the programme looks for the next delayed INCODE.

Each delayed INCODE is operated in sequence, starting with the one nearest the start of the text and ending with the one nearest the end of the text. Later delayed INCODEs often operate higher up the page particularly when complex layouts are used. (Obviously, reverse line feed would be used inbetween).

Delayed INCODEs can consists of any compatible INCODEs strung together. Compatibility though, will depend on how your printer is able to cope. For example, setting the margins may cause the printer to ignore a previous instruction within the sequence. There are ways round this such as ▶P1 13 to effect a line return within the INCODE sequence but this is not a solution for all problems. Keep it simple at first.

17.7. Temporary Margins

BrunWord Elite controls the temporary margins in a different way to BrunWord 6128 but most of the time this will go unnoticed. (see page 9). BrunWord Elite actually resets the printer margins when the temporary margin characters are encountered. This ensures that the margins are in the correct place to allow the printer to justify correctly.

Printer margins can only be set in 0.1 inch steps but BrunWord Elite always ensures that the column width is kept constant if the left margin is moved. However, when the temporary left margin is encountered a new column width is calculated and the new right margin can have an error of 0.1 inches. If this happens then the right margin will not be in line. Moving the temporary left margin one character width will usually correct this.

17.8. Absolute TABs

If your printer has the ESC $ command (absolute dot position) then the absolute TABs of BrunWord Elite can be used. Move the cursor to the position required, hold <SHIFT> and press <f0>. When this is encountered, the programme calculates the absolute dot position from the position on the screen and moves the print head accordingly. With proportional printing the programme assumes that all characters are 'a'.

17.9. Printing in Columns

There are two ways that the programme can print in columns. The method described in this section will work with any printer that uses standard Epson codes to set the margins. (All well known modern dot matrix printers). The columns are created by sending control codes to switch the printer margins as required. The second method is covered in the section on Page Layout.

Simply type or load any text into the work area and set the width of the margins to the width of the column. This means that a single page of text that is to be printed in two columns shows as two pages on the screen and a three column printout shows as three pages on the screen.

The column information is given to the programme as an INCODE instruction. This consists of the INCODE character <SHIFT> <f.> followed by C then the number of columns (1 to 6) then a list of the left offsets for each column. For example, the INCODE to produce two columns with left margins of 5 and 40 is:-

Actual INCODE ▶C2 5 40

Delayed format ▶"▶C2 5 40"

This INCODE is typed once, anywhere in the text, regardless of how many pages there are. Usually it will be typed near the start of the text but any convenient line, or a blank line, can be used. Before the programme starts printing it searches the whole work area for column data and the whole file will be printed in columns if this INCODE is found.

If the INCODE is used exactly in the form ▶C2 5 40 then all the numbers in the INCODE will be printed, as it is not recognised as a normal INCODE. This is because it cannot be allowed to operate a second time when it is encountered during the printing. It MUST therefore be used in the delayed format ▶"...." to prevent the numbers being printed.

It is a useful rule to remember, that all correctly used INCODEs are not printed. If all or part of an INCODE is printed, then it is not in the correct format or has an error.

When this INCODE is used, the programme will make a dummy run through the print routine to find the start of each page, and then print consecutive pages in adjacent columns. The maximum number of columns is six and there is no limit to where the columns can start. They can overlap each other or be in any order simply by changing the column data at the start of the file. The column width is normally taken as the width on the screen. However, if the programme is performing the justification, then the column width can be set by placing the margin INCODE at an appropriate place.

The temporary left margin <f1> cannot be used as this will confuse the programme but the temporary right margin <f2> can be used.

All embedded controls will be applied during the dummy print run (except embedded column data). These will normally apply across all the columns and this means that most embedded controls cannot be used properly. (The page layout commands must be used to achieve complex layouts and these can be used with any Epson compatible printer that has reverse line feed).

As you might expect, BrunWord Elite is being used to print the masters of this manual, and we have used the layout of this page to show a typical simple column layout. The heading is wider than one column but we have ensured that the second column starts with two blank lines so that the text is below the heading.

A very similar page to this is included in the examples files on the accompanying disc.

17.10. Line Repeat

This facility is primarily intended for use with 24 pin printers though it can be used with 9 pin printers. BrunWord Elite prepares the data for one line of printing then sends the whole line to the printer. The line repeat INCODE defines how many times the programme sends its internal line buffer to the printer. Its main use is to produce darker printing than achieved using double strike but it is important to remember that it is a simple line repeat.

▯L3	Line repeat 3 times i.e. print line 3 times.

The repeated lines will produce a different result, if the line contains printer codes which leave the printer in a different state at the end of the first printing.

17.11. Video Dump

All normal art programmes and the Dart scanner store their images by saving the screen memory to the disc. The Video Dump INCODE enables any of these standard screens to be printed during the normal printing process of BrunWord Elite. When the programme encounters this INCODE, it stops printing, loads the screen image into the screen memory, converts it into the correct format and then sends it to the printer with the left side in line with the current left margin. The programme keeps track of how far the print head moves down the page and when the picture is finished, resumes its normal printing sequence from the line below the picture.

The user can print a second screen directly to create taller pictures and can set a 'Reverse Reference' at the top of the picture so that wider pictures can be printed. This is most easily understood by printing the examples on the disc and then examining the incodes within the BrunWord files.

▯V1 25 MERMAID	Prints 25*8 lines of 'Mermaid' - 9 pin small.
▯V2 25 MERMAID	Prints 25*8 lines of 'Mermaid' - 9 pin large.
▯V3 25 MERMAID	Prints 25*8 lines of 'Mermaid' - 24 pin small.
▯V4 25 MERMAID	Prints 25*8 lines of 'Mermaid' - 24 pin large.
▯V5 25 MERMAID	Prints 25*8 lines of 'Mermaid' - 24 pin medium.

Some pictures do not occupy the whole screen and these should be positioned at the top left hand corner. To save time or to avoid the print head being moved too far down the page, the number of lines to print can be specified. The screen height consists of 25 lines each of 8 pixels. It follows that the maximum number is 25.

There are five video dump routines. Only the first, second and fifth can be used with a 9 pin printer but a 24 pin printer will print using any of them. However, the first two 9 pin routines use predistortion to ensure that a 9 pin printer will print with the correct aspect ration. The fifth video dump is the same as the first but with no predistortion, which is the requirement for 24 pin printers. The third and fourth routines use 24 pin graphics which is not available on 9 pin printers.

A standard screen can be viewed anytime without disturbing other data. From BrunWord press <ESC> V and press V again to load the screen. With the screen displayed press U to resave as an Uncompressed file, C to resave as a Compressed file (only for use with BrunWord) or <ESC> to terminate.

18. Printers with Reverse Line Feed

Some 9 pin and most 24 pin printers have the facility of reverse line feed. BrunWord Elite is programmed to use this feature to reverse to the top of the page or to set to an exact distance down the page. (See the Headline section for printers that have no reverse). The simple method of printing columns is restricted to uniform text with equal line spacing but if the columns are created one at a time, reversing the printer in between, then there are no restrictions on how the printing is done.

18.1. Reset to

This INCODE is used to set the print head to an exact position down the page, which can be higher or lower than the current position. It will always reference itself to the first line where the GAP is set or the top of a new page if it is already set. Usually, the GAP is set in the first line.

The INCODE character <SHIFT> <f.> is followed by R and then a number that is the distance down the page in inches multiplied by 216 (9 pin) or 180 (24 pin).

▶R0	Resets the printer to the top of the text.
▶R216	Resets the printer to 1 inch below the top (9 pin).
▶R180	Resets the printer to 1 inch below the top (24 pin).

18.2. Relative Reverse

This is the same as the Reset INCODE except that it operates relative to the current print head position or relative to a previously defined reference.

▶U216	Reverse upward by 1 inch (9 pin) or 1.2 inches (24 pin).
▶U1	Sets reference to current position.
▶U0	Resets printer to last reference.
▶U0-216	Resets printer to 1 inch (9 pin) above last reference.
▶U0+432	Resets printer to 2 inches (9 pin) below last reference.

18.3. Epson Reverse

The Epson LQ500 will only reverse if applied in a particular way and great care is needed to ensure that the end of the paper has not gone too far. Use two joined sheets of continuous paper and set the printer with the single sheet feeder, with the tractor removed. The page is printed on the top of the two sheets, the second sheet ensuring that the paper can reverse without getting caught. If any other printer does not respond to the reverse instruction then try the ▶E5 INCODE. Some 'normal' printers tend to overshoot if the Epson reverse is used, so use the 'normal' if possible. The Epson LQ550 ***may*** need the ▶E5 INCODE.

▶E5	Sets reverse routine for Epson LQ500 & LQ550.
▶E3	Sets reverse routine for normal printer.

18.4. Box Reverse Control

Normally the programme will reset the printer to its starting point after drawing a box or vertical line. However, in some layouts it is more efficient if the is not done.

▶X0	Do NOT reverse after box or vertical line.
▶X1	Do reverse after box or vertical line.

19. Printers with Justification

BrunWord 6128 has its own system of justification which will operate properly with any printer, providing that all characters have the same width. However, if this is used with the printer set to proportional printing, then the justification will not be correct.

Some 9 pin printers and most 24 pin printers have their own justification system which BrunWord Elite can use to achieve a near perfect result with any mix of text on a line. There are eight different INCODE instructions in this category, all of which start with <SHIFT> <f.> followed by J then a number between 0 and 7. These give the writer full control of the printers justification system.

Note:- All normal BrunWord 6128 printer codes, <SHIFT> <f1> etc, will only have a space sent to the printer if ◙J0 i.e. the default condition.

19.0. Print Against Left Margin

◙J0	Sets printer to ragged right. (Prints against LHS).
◙J4	Same as ◙J0 but line filled according to char size.

The ◙J0 INCODE switches OFF the printers justification so that all text will be printed as shown on the screen (as far as is normally possible). This will only be needed if one of the other justification controls has previously been used. For example if ◙J1 is used to centre the heading then ◙J0 will normally be needed on the next line (unless a different justification control is required).

The ◙J4 INCODE switches OFF the printers justification but it also instructs the programme to ignore the end of line shown on the screen, unless it is marked with a paragraph end marker, and to fill the line according to the current column width.

The ◙J4 INCODE can be used to print unjustified text that is much wider than is shown on the screen. Simply type in the text in normal paragraphs, using any convenient screen margins (usually 1 and 80). Set the printer margins with the margin INCODE then ◙J4 and print out the file as normal. Its can also be used in situations where a long sequence of control codes would otherwise upset the layout. i.e. where the line is made too long on the screen with codes that will not be printed.

19.1. Print in Centre of Margins

◙J1	Sets printer to centre the line of text.
◙J5	Same as ◙J1 but line filled according to char size.

When the programme encounters the ◙J1 INCODE, it immediately sets the printer to centre all the text. Usually, it will be necessary to reset the printer on the next line, with ◙J0 (or other justification instruction). When text is centred in this way IT MUST BE TYPED ON THE SCREEN AS CLOSE TO THE LEFT MARGIN AS POSSIBLE. Any spaces at the beginning, or the end, will be included in the length that is centred and so these can cause an offset.

The ◙J5 INCODE sets the printer to centre the text and instructs the programme to ignore the end of the line on the screen unless this is a paragraph end marker. This can be useful when a line is made too long on the screen with codes that will not be printed, or if the screen column width is narrower that the printer column width.

19.2. Print Against Right Margin

▮J2	Sets printer to ragged left. (Prints against RHS).
▮J6	Same as ▮J2 but line filled according to char size.

When the programme encounters the ▮J2 INCODE, it immediately sets the printer to print against the right margin, with a ragged left appearance. This is useful to print the top address and the date of a letter. When text is printed in this way it will normally be typed close to the left margin but this is not essential. Any spaces at the end of the line will offset the text from the right margin.

The ▮J6 INCODE has the same function but also instructs the programme to ignore the end of the line on the screen unless this is a paragraph end marker.

19.3. Full Justification

▮J3	Sets printer to justify the text within paragraphs.
▮J7	Same as ▮J3 but line filled according to char size.

The ▮J3 INCODE instructs the programme to switch on the printers justification 'when appropriate'. If the justification was simply switched on, then all lines longer than 75% of the column width, would be justified and all lines shorter than this would be left unjustified. This is an over simplified answer to the problem and would often cause the last line of a paragraph to be justified, when obviously it should not be. BrunWord Elite will only turn on the justification for a line when the line does not end with a paragraph end marker. This ensures that the last line in all paragraphs is unjustified and that tabulated text is unjustified even if justification is ON.

The ▮J7 INCODE is similar to the ▮J3 but is much more powerful. It allows the programme to fill the line according to the true character size and it expands any short lines so that lines shorter than 75% are justified when it is right to do so.

When complex pages are laid out using the delayed INCODE, it will always be necessary to use ▮J7 (or ▮J4 for unjustified printing). If this is not used then the programme will take the line ends from the screen, and be unable to follow the margin changes correctly.

NOTE:- The printer justifies between its own margins. This means that BrunWord Elite always sets both left and right margins so that the column width is correct. Most printers set margins to the nearest 0.1 inches but BrunWord Elite is programmed for the general case to cater for all printers. This means that occasionally the programme and the printer will have a small disagreement in the true width of the column. The programme may decide that the last line in a paragraph does not need to be justified and cause the printer to overspill onto a second line. If this happens then 3 or 4 fixed spaces <f4> should be added to immediately follow the last word. (This makes the last word effectively longer and forces the whole word onto the next line).

When ▮J4 ▮J5 ▮J6 or ▮J7 are used, then the screen will not normally show the correct position of words, lines or pages.

19.4. Reference Width

When printing normal non proportional characters, the printer margins are set by sending the simple logical number to the printer. However, when proportional characters are used, the programme must calculate the margin number according to the average number of characters per inch. BrunWord Elite has a table of widths so that it can look up the size of a proportional character. When the programme is loaded it starts by assuming that the printer is set for printing non proportional characters and that the margins will be the logical number.

The reference width can be set with the INCODE character <SHIFT> <f.> followed with W and then an optional number. If there is no number or the number is 0 then the programme will use the width of the character "a" as its average width. The switch ON value is 32 and this can be reset with ▶W32.

When a font is downloaded for the first time when printing a file, it will normally be necessary to set the reference width and the usual way is by following the download INCODE with ▶W. The need for this is very easy to understand, if we consider an extreme example. The characters in the SLIMLINE font are roughly half the width of the internal character set of the printer. So if we download SLIMLINE, without changing the reference width, and send the same number of characters per line to the printer, then it is quite obvious that the line will only go half way across the margins. If we then force the printer to justify between its margins, it will stretch the line so that the space between letters will be nearly as wide as the letters, which is not acceptable.

However, in our example, if we use ▶W after downloading then the reference width will be taken as the width of 'a' in SLIMLINE. The programme will then calculate new margins using this width and set them to half their original value. Alternatively we could allow the programme to send enough characters to the printer to fill the line sensibly. This can be achieved with the justification INCODEs ▶J4 ▶5 ▶6 or ▶7. If we allow neither of these, then it's reasonable for the programme to assume that we are deliberately after an unusual appearance.

The size Factor (see below) must also be set correctly.

A final point to remember, when using proportional printing, is that most printers set the margins to the nearest tenth of an inch and so the margins cannot always be exactly in the right place. Sometimes its worth juggling them up or down one digit to achieve the best compromise.

19.5. Size Factor

The need for the size FACTOR comes about due to the way in which printers set their margins. Sending a right margin of 80 to a printer will not always set the right margin at 8 inches. The margin in inches will depend on the mode that the printer is in. To further complicate this, the ratios are not the same for all printers.

32 is the correct value for the size FACTOR for all non proportional printing while 27 is correct for most printers in the proportional printing mode. One exception is the Epson LQ500 which requires a FACTOR of 32 for proportional printing. Its successor, the Epson LQ550, and all other printers that we tested require 27. Sometimes a factor of 28 rather than 27 is useful to give a less compact appearance to the text. If there is no number or 0, then the FACTOR will be set to 27.

19.6. Page Layout

If the delayed INCODE is coupled with the reset INCODE and the margin INCODE then the flexibility of layout is almost unlimited. If a very complex page is designed then it is best to produce just one page at a time. In this case the 'No of Lines' in the print menu should be set to 255 which will allow the page to have any number of lines.

Typical sequence:-

▶G30	Sets 24 pin GAP to 1/6 inch. (First line).
▶H0 116	Sets header margins to 0 and 116.
▶M1 75	Sets start margins to 1 and 76.
▶"612▶M1 36"	At 3.4 inches set first column width to 36.
▶"1908▶M42 36▶R648"	At 10.6in reset to 3.6in & set offset to 42.
▶"1908▶M81 36▶R162"	At 10.6in reset to 0.9in & set offset to 81.
▶R132▶J7	Reset to one line above 0.9in. Justify On.

First line of actual text typed here.

The text is typed into the word processor, on the line immediately below the ▶R132 INCODE, without worrying about how it will be printed, or the margin widths. The delayed INCODE sequence will create three columns, with the first column being the width of two columns, for just over 3 inches. It will need to be printed out to find how well it fits the page and edited to be the right length.

Notice that the above delayed INCODE sequence has ▶J7 in its last line which allows the programme to fill the lines according to the column width and character sizes. This can be omitted if you use non proportional spacing but then the temporary right margin must be used to trim the screen columns in the correct places.

19.7. Absolute TAB Left Margin

The Epson LQ500, LQ550 and Citizen Swift-24 do not allow the left margin to be set beyond 4 inches which prevents printouts using more than two columns. In this case the programme can be instructed to use absolute TABs in place of the left margin.

▶A0	OFF	(Star LC24-10, Citizen HQP40/45).
▶A2	ON	(Epson LQ500).
▶A3	ON	(Epson LQ550, Citizen Swift-24).

If an Epson LQ500 is being used to create a page with three columns, or there is any other reason for needing to set the left margin far to the right, then place ▶A2 anywhere before the need occurs. Similarly, if an Epson LQ550 or Swift-24 is being used then place ▶A3 anywhere before the need occurs.

Once the instruction is given it will remain in operation, even with new files, until it is reset or the programme is reloaded.

Most 24 pin printers accept absolute TABs which means that most will accept the ▶A2 or ▶A3 INCODE. However, only *some* printers justify correctly after receiving this instruction. If your printer is not listed above then try three columns without this command (or use ▶A0 to ensure that it is OFF). If the third column prints in the wrong position then try ▶A3 at the start of the text.

20. 24 Pin Printers

BrunWord Elite is at its best when used with a 24 pin printer but all 24 pin printers are not the same. The Citizen HQP45 is our favourite printer but is no longer manufactured. The Swift-24 is not fully compatible with its Citizen predecessors or with the Epson LQ550. The Star LC24 does not produce such technically good printing and this, and Panasonic KXP1124, have badly organised buffers, meaning extra RAM is needed before a font can be downloaded, which greatly affects their cost effectiveness. In our limited experience, the Epson LQ550 is the only one to buy, combining excellent quality printing with superb mechanics.

20.1. Downloading a Font

BrunWord Elite on ROM is supplied with 10 resident fonts. Press <ESC> H to display the names then B to return to the Editor. All these can be downloaded to a 24 pin printer except Chelmer and Clacton. You will need to read your printer manual first and ensure that its buffer is correctly set to accept a downloaded font. Certain printers will need a RAM card inserted before this is possible.

A font can be downloaded any time during printing with the use of the INCODE character followed with D and then the name of the FONT. The name ***must*** be followed with a space, which will usually be followed with ▶W ▶F so that the reference WIDTH is updated and the size FACTOR set for proportional printing.

Sometimes it is not convenient to place this INCODE in the first line but obviously the font must be downloaded before the printer can use it. The delayed format can be used, and it this case it can be anywhere in the text, even at the end, but it ***must*** be the first delayed INCODE and ▶W▶F ***must*** still be in the first line.

▶D FINELINE ▶W▶F	Downloads the FINELINE font.
▶"▶D FINELINE "	As above but in delayed format.
▶Y0	Do not switch printer to downloaded font.
▶Y1	Switch printer to downloaded font.

Each font has a table of character widths and this updates the table in the programme. Numbers 2 3 4 5 6 7 8 9 0 and characters + - * / = % £ $ are the same width to assist tabulation. The back slash character (key no. 22) has been defined as an equal width number 1, <SHIFT> back slash as an equal width decimal point and <CTRL> <f0) as an equal width space.

If a font has been downloaded since the start of the file, then BrunWord Elite will send a 'switch to download font' instruction before each line. This is a requirement for some printers such as the LQ500. ▶Y1 allows this to be enabled without a font being downloaded, which can save time with a mail shot (only send the font with the first letter). The printer can be switched back to internal fonts using Direct Printer Codes but ▶Y0 will also be needed to inhibit the line start sequence.

20.2. Fonts for Star Printers

The Star LC24-10 does not allow the space character to be defined, it will ignore the space in the downloaded font and continue to use its normal space. Printers with this limitation use the normal fonts but the programme must be informed of the actual space size using ▶S36 ***before the font is downloaded.***

20.3. Font Print Examples

Most fonts used in magazines fall into one of two types. We have optimised our own variations of these, and named them Fineline and Finetype. Both are supplied in 3 sizes. The large size of Fineline is the font used throughout this manual. 'Large' being the largest size that the printer can print without using double height or double width. Midline is the middle size and Slimline the small size.

This paragraph is using the 'large' size 'Finetype', which is also supplied in medium and small. Many readers would choose this type face for the whole booklet rather than our choice of Fineline as both styles have a wide appeal. Midtype is the middle size and Semitype the small size.

Now we are using 'Heavy', a simple name to depict a straightforward type setting font. Too heavy for this booklet but useful where a more rugged appearance is required or for short pieces of text such as letters. It is only supplied in this size, 'large'.

This is 'Comput', which is a simulated rather than a true computer font, intended for headings or other special uses. We have deliberately deviated from the normal interpretation of this font, and made the numbers over square but without the Computer blob. 1234567890.

This manual was photographically reduced to 85%.

20.4. Print Box or Line

This INCODE will draw a box or line of any size and with a line thickness of 1 to 8 pins (print head). The lines or box will start from the middle of the current print head position, while all the other parameters will be taken from the data in the INCODE. The programme draws the box or the lines and, if the box reverse is not turned OFF, reverses the printer back to the starting point. The Epson reverse INCODE, if needed, must already be set, for the box reverse to function correctly.

▶B <thickness> <depth> <type> <1st position> <2nd position> etc.

Thickness	1 pin thick = 16. 2 = 24. 3 = 28. 4 = 30. 5 = 31. 6 pins = 63. 7 pins = 127. 8 pins = 255.
Depth	Inches multiplied by 180.
Type	2 = box. 0 = hor line. 1, 3, 4 etc = vert line(s).
1st position	Inches multiplied by 60 from current left margin.
2nd position	Inches multiplied by 60 from current left margin.

▶B16 360 2 60 180	Box, thin line, 2 inch square, 1 inch from margin.
▶B28 0 0 60 180	Hor line, 3 pins thick, 2" long, 1" from margin.
▶B24 360 1 60	Vert line, 2 pins thick, 2" deep, 1" from margin.
▶B16 360 3 30 60 90	Vert lines, thin, 2" deep, .5" 1" & 1.5" from margin.

▶X0	Box reverse OFF.
▶X1	Box reverse ON.

Boxes with lines thicker than 5 pins will not have perfectly square corners and old printer ribbons may jam when a thick line, of 4 or more pins, is drawn.

21. Introduction

Headline is a separate programme within BrunWord Elite. When Headline is turned ON, it intercepts the data being set to the printer and converts it into a special format, so that even a simple 9 pin printer can use the high quality 24 pin fonts of BrunWord Elite. The only requirement is that the printer must have <ESC Z = Quadruple bit image mode>, which includes all well known modern 9 pin printers and all 24 pin printers.

Using Headline with a 24 pin printer is slower than using downloaded fonts but this is a useful variation as the fonts print about 50% bigger. Chelmer and Clacton are actually 32 pin fonts which accounts for their extra high quality and, although they are too big to be downloaded, they can be printed on a 24 pin printer (and a 9 pin printer of course!) using Headline.

The Headline menu is displayed by pressing <ESC> H from BrunWord. This lists the names of all the fonts currently resident which consists of 10 permanent fonts and one vacant slot. If you have the Elite Font Editor then any fonts created will be stored on disc. One of these fonts can be loaded into the vacant slot, either automatically by the programme during printing or from the Headline menu.

When 24 pin fonts are used with a nine pin printer, the printing is taller and wider than normal printing. If this printing is reduced after printing, to its normal size using a photocopier then the printing will be virtually identical to a 24 pin printer.

The use of Headline does not inhibit any other programme on the BrunWord ROM. Info-Script can use Headline within mail shot letters, the spelling checker can be used normally and Headline text can be mixed with downloaded fonts if a 24 pin printer is used. The only time Headline uses extra memory is if an external font is loaded from disc and this takes one bank (16K) of Info-Script memory.

21.1. Loading Headline

Headline is permanently resident in the BrunWord Elite ROM module and no special action is necessary. All the instructions that Headline needs are typed within the text (Headline INCODES) and a finished file can be printed without needing to know if it contains Headline instructions.

22. Limitations

Some BrunWord Elite features require two or more sections of text to be printed on the same line which is not easily possible with Headline. Headline uses the printer in the quadruple graphics mode and each line of text is built up with two or more printing operations. The print head is moved down the page during this process to get the required height to the letters. Many 9 pin printers cannot be reversed so we assume that the print head cannot be returned to the top of the line after printing part of a line. (For major features such as page formatting, with a printer that cannot reverse, the programme will stop and ask to be reset to a reference point).

22.2. Temporary Left Margin

If a whole paragraph needs to be indented, then the Margin INCODE must be used to set new margins. The temporary left margin must not be used as the requirement is too complex for Headline and various strange results can occur. If you do, it may be necessary to switch the printer OFF to recover.

22.3. Absolute TABs

This feature is available on some 9 pin printers but cannot be used with Headline. Tabulation using the Headline fonts is most easily achieved by using the 'Reset to' INCODE to create the columns.

22.4. Headers & Footers

Headline does not compensate the automatic Headers and Footers for proportional letters and so these will not correspond to the expected margins. The best way to print a Footer is to define a line of text to be printed at an exact position using the 'Reset to' INCODE. (See the example files).

23. Headline INCODEs

Only some of the standard BrunWord Elite INCODEs are suitable for use with a 9 pin printer. Headline has an extended set of INCODEs which are all primarily designed for use with a 9 pin printer. The only special requirements for the printer are that it must be Epson compatible and it must have <ESC Z = Quadruple bit image mode>. It is an advantage for the printer to have reverse line feed but this is not essential as the programme can wait for the user to manually reset the paper.

24 pin printers can use all the normal INCODEs and all the Headline INCODEs and so have even greater choice of styles and sizes of printing.

When the BrunWord Elite ROM is first entered, Headline is in the OFF state and text will be sent to the printer in the normal way. Headline is turned ON when it receives an H-INCODE which specifies a font name.

Normal printer control codes will be ignored when Headline is turned ON.

23.1. H-INCODE Structure

Hold <SHIFT> and press the dot key in the function key pad, to produce the INCODE character. This must always be followed immediately with D* with no spaces. This is usually followed by various Headline instructions, with no spaces, then one space, the font name and one space to mark the end of the name.

The font name or the Headline instructions can be left out if these have already been set by a currently operating H-INCODE. If no font name is specified then the end is marked with a second * and in this case the whole H-INCODE must contain no spaces.

23.2 H-INCODE Patterns

The following is a list of typical H-INCODEs but remember that these are typed within the actual BrunWord text. The example files are the easiest way to understand.

▶D* SLIMLINE
Switches Headline ON (if necessary) and selects the SLIMLINE font. All subsequent printing will be in the quadruple bit image mode using the SLIMLINE font. As no other Headline parameters are specified, these will be left as previously set. Headline is initially preset to single width, single height, justify OFF, single strike and reverse without stopping.

▶D*J1 CHELMER
Switches Headline ON, prints in the centre of current margins and selects CHELMER.

▶D*32* Sets triple width and double height. All other parameters unchanged.

▶D*J3 FINETYPE
Switches Headline ON, sets full justify ON, and selects FINETYPE.

▶D*J3* Sets justify ON. All other parameters unchanged.

▶D*52J1* Sets five times width, double height and prints text in the centre of current margins. All other parameters unchanged.

▶D*12J3M4R CLACTON
Switches Headline ON, sets normal width, double height, full justify ON, multi-strike four times, reverse without stopping and selects CLACTON.

▶D*32J2M1S*
Sets triple width, double height, ragged left printing, multi-strike once (i.e. single strike), and stop to reverse.

▶D*J0* Sets justify off. All other parameters unchanged.

▶D*J1 MYFONT
Switches Headline ON, sets to print text in the centre of current margins and, as the font name is not in the ROM, loads MYFONT from disc. All other parameters unchanged.

▶D*0 Switches Headline OFF and allows the printer to use its normal fonts.

NOTE:- H-INCODEs that do not specify a font name will *not* turn Headline ON. If Headline has not been turned ON by a previous H-INCODE then obviously the font name *must* be specified.

All normal printer control codes will be ignored when Headline is turned ON.

24. Headline Fonts

Ten proportional 'type setting' fonts are permanently stored in the BrunWord Elite ROM. When the programme encounters a Headline INCODE containing a font name, it scans all the data ROMs, compares the names of the fonts found and stops at the correct ROM. If it fails to find the font, it will attempt to load the font from disc and if this is successful, the font will be loaded into the top Info-Script memory bank, if it is free. It is also possible to load a disc font manually from the Headline menu.

The font selection H-INCODE has the following form:- The INCODE character <SHIFT> <f.> is followed by D then * then any formatting parameters then one space then the font name and then one space before any following text.

Headline fonts are available in four natural heights. The smallest is 16 dots high, which produces text which is marginally shorter than the printers normal type face. The middle size font is 21 dots high, the large size is 24 dots high and the extra high quality fonts are 32 dots high.

Fonts Supplied:-			
	SLIMLINE	16 dots high	2 print head passes
	MIDLINE	21 dots high	4 print head passes
	FINELINE	24 dots high	4 print head passes
	SEMITYPE	16 dots high	2 print head passes
	MIDTYPE	21 dots high	4 print head passes
	FINETYPE	24 dots high	4 print head passes
	HEAVY	24 dots high	4 print head passes
	COMPUT	24 dots high	4 print head passes
	CHELMER	32 dots high	4 print head passes
	CLACTON	32 dots high	4 print head passes

25. Print Size

Headline has very flexible print sizes. The width can be set from single width to nine times width in steps of one. The height can be set to single height, double height or eight times height. Add to these the four possible sizes of the fonts and there is an enormous number of combinations. All these can be used in any combination but there are obvious choices for best appearance. Headline is initially set to single width and single height.

The H-INCODE for setting the size has the following form:- The H-INCODE sequence ◗D* is followed with two numbers the first sets the width multiplier and the second the height multiplier. If no other headline parameters follow then a final * is required. In a complex H-INCODE sequence, the first lone number is always the width and the second lone number is always the height. When the width is changed using this H-INCODE, the table of character widths in the programme in multiplied by the width multiplier.

If the width of the printed line is too wide for the current printer margins then the programme will reduce the width multiplier until the line fits or the width equals one. (This is a permanent change until it is reset with a further H-INCODE). This allows the width to be set wider than required, forcing the programme to give the widest characters possible for the allocated space.

26. Multi-Strike

Nine pin printers often produce printing that is a little too faint. The Multi-Stike facility of Headline allows each stage of printing to be repeated up to nine times without the print head being moved up or down. This enables dense sharp characters to be printed even with quite an old ribbon. Usually, it will not be necessary to use more than double or triple strike. Headline is initially set to single strikes.

The H-INCODE for setting the number of strikes has the following form:- The H-INCODE sequence ▯D* is followed with M then a single number. If no other Headline parameters follow then a final * is required.

27. Reverse or Stop

Many 9 pin printers do not have the ability to reverse the paper, but some of the complex formatting routines of BrunWord Elite (with Headline) would not be practical if the paper was not reversed. All printers can obviously wind on paper, so the programme can be set to stop at the critical points and request the paper to be set to your reference point at the top of the sheet. The programme then winds on the paper to the exact position that is required.

This H-INCODE has the following form:- The H-INCODE sequence ▯D* is followed with S for 'Stop' or R for 'Reverse without stopping'. If no other Headline parameters follow then a final * is required.

If the programme encounters an INCODE which directs the print head further down the page then the programme will continue in both cases.

28. Print Box or Line

When Headline is turned ON, it redirects the 24 pin box INCODE to a special 9 pin version. This operates in the same way as for 24 pin boxes except that the depth of the box is in units of inches times 216. For printer without reverse line feed, it will be necessary to set Headline to 'Stop'. This INCODE is used in its standard form:-

▯B <thickness> <depth> <type> <1st position> <2nd position> etc.

Thickness	1 pin thick = 16. 2 = 24. 3 = 28. 4 = 30. 5 = 31. 6 pins = 63. 7 pins = 127. 8 pins = 255.
Depth	Inches multiplied by 216.
Type	2 = box. 0 = hor line. 1, 3, 4 etc = vert line(s).
1st position	Inches multiplied by 60 from current left margin.
2nd position	Inches multiplied by 60 from current left margin.

▯B16 432 2 60 180	Box, thin line, 2 inch square, 1 inch from margin.
▯B28 0 0 60 180	Hor line, 3 pins thick, 2" long, 1" from margin.
▯B24 432 1 60	Vert line, 2 pins thick, 2" deep, 1" from margin.
▯B16 432 3 30 60 90	Vert lines, thin, 2" deep, .5" 1" & 1.5" from margin.

▯X0	Box reverse OFF.
▯X1	Box reverse ON.

Boxes with lines thicker than 5 pins will not have perfectly square corners.

29. Justification

Headline has the ability to perform the complete range of justification features normally only available on expensive 9 pin printers. The full justification system uses micro spacing between the individual letters, which produces a very balanced appearance, and as the programme knows which lines needs to be justified, the range of justification is almost infinite (in expansion). Headline is initially set with justification Off.

This has the following form:- The H-INCODE sequence ▶D* is followed with J then number 1 2 or 3 and if no other Headline parameters follow, a final * is required.

29.0. Print Against Left Margin

▶D*J0* Sets Headline justification OFF. (Prints against LHS).

Following this H-INCODE, the text will be printed as shown on the screen, as far as this is possible using proportional printing.

The normal justification INCODEs (section 19) cannot be mixed with H-INCODEs, except ▶J4, which will allow the programme to fill a line according to its true character widths. This is most easily understood by printing the examples.

29.1. Print in Centre of Margins

▶D*J1* Sets Headline to centre the line of text.

Following this H-INCODE, all lines of text will be printed in the centre of the current margins. When text is centred in this way IT MUST BE TYPED ON THE SCREEN AS CLOSE AS POSSIBLE TO THE LEFT MARGIN. Any spaces at the beginning will be included in the length that is centred and cause an offset.

29.2 Print Against Right Margin

▶D*J2* Sets Headline to ragged left. (Prints against RHS).

Following this H-INCODE, Headline will print all text against the right margin, with a ragged left appearance. This is useful to print the address and date on a letter. When text is printed in this way it will normally be typed as close to the left margin as possible but this is not essential.

29.3 Full Justification

▶D*J3* Sets Headline to justify text within paragraphs.

Following this H-INCODE, Headline will justify all text within paragraphs, leaving the last lines and tabulated text unjustified. Headline as no limit to its expansion capability and even single words can be justified to extend across the full width.

For best results, the programme should be allowed to fill the lines according to their true character size (as with the standard INCODE ▶J7). This is achieved by setting the standard ▶J4 INCODE as well as the ▶D*J3* Headline INCODE. This will be more easily understood by studying the examples.

30. BrunWord Elite Examples

BrunWord Elite is a very powerful programme, yet easy to use, but that does not mean that you will be able to use the programme without spending some time learning about the control techniques and potential pitfalls. These examples are included to show you exactly how the programme works and to enable you to ensure that your printer will perform in the way that you are expecting.

30.1. Example 1 - Simple Columns

This example demonstrates the simple method of printing in columns and will work correctly with any 9 pin or 24 pin Epson compatible printer.

1. Insert the Examples disc. Press <ESC> C W to ensure that the work area is clear. Press <ESC> L EXAMPLE.1 <ENTER>.

2. Press <ESC> P and the Print menu will be displayed. The printer status should be 'Printer OFF'. Make sure that there is no paper in the printer and switch it ON. The printer status should change to 'No Paper'. It may report 'OFF Line' while the printer is being initialised but if any status other than 'No Paper' is reported once it has settled, when it really is out of paper, then either your printer does not report correctly (which may mean it is not truly Epson compatible) or have not fitted the Printer Status Port. Load the printer with paper and press the ON LINE button on the printer. The programme should report 'On Line'.

3. Press P N 1 <ENTER>, to print out the file.

4. If just the first line is printed and the programme returns to the editor then either you are not using the Printer Status Port or your printer is not Epson compatible and is sending the wrong answers when the programme interrogates it.

30.2. Example 2 - IBM Boxes

This example demonstrates the use of the IBM box characters. The number keys 3 to 0 across the top of the keyboard, if used with the <CTRL> key, produce the special IBM box characters. If your printer accepts IBM codes as well as Epson codes then this file should print out correctly. If strange things happen then either your printer does not accept IBM codes or it uses a different standard.

1. Insert the Fonts & Examples disc. Press <ESC> C W to ensure that the work area is clear. Press <ESC> L EXAMPLE.2 <ENTER>.

2. Switch your printer OFF if it is already ON, to ensure that it is fully reset. Load the printer with paper and switch it ON. Press <ESC> P P N 1 to print out the file.

3. If the file does not print correctly and your printer is claimed to be IBM and Epson compatible then you should read your printer manual and then read the BrunWord TUTOR2 text file. It is not easy but you may be able to redefine the codes to suit your printer.

30.3. Example 3 - Columns & IBM Boxes

This example shows how the columns can be used to separate the box characters.

30.4. Example 4 - Reset to

If your printer has the reverse line feed facility, then this example file will demonstrate the use of the 'Reset to' facility of BrunWord Elite.

1. Insert the Fonts & Examples disc. Press <ESC> C W to ensure that the work area is clear. Press <ESC> L EXAMPLE.4 <ENTER>.

2. Switch your printer OFF if it is already ON, to ensure that it is fully reset. Load the printer with paper and switch it ON. Press <ESC> P P N 1 to print the file.

3. If your printer does not reverse during the printing and you believe that it should have this facility then try the Epson reverse in example 5.

30.5. Example 5 - Epson Reverse

If your printer has the reverse line feed facility, but is the LQ500 or similar printer, then this example file should be used instead of example 4. It is exactly the same, except that it has the special Epson reverse INCODE ▶E5 in the first line.

1. Insert the Fonts & Examples disc. Press <ESC> C W to ensure that the work area is clear. Press <ESC> L EXAMPLE.5 <ENTER>.

2. Switch your printer OFF if it is already ON, to ensure that it is fully reset. Load the printer with paper and switch it ON. Press <ESC> P P N 1 to print the file.

3. If your printer does not reverse using either this or the previous example then either you are mistaken about it having this facility or it is not Epson compatible.

30.6. Example 6 - 24 Pin Boxes

This example demonstrates the box and line drawing facility for use with 24 pin printers. The printer must have the reverse line feed facility which should be the case with all 24 pin printers. Example 6 and Example 7 are identical except that Example 7 is for use with the Epson LQ500 or similar printer.

1. Insert the Fonts & Examples disc. Press <ESC> C W to ensure that the work area is clear. Press <ESC> L EXAMPLE.6 <ENTER>.

2. Switch your printer OFF if it is already ON, to ensure that it is fully reset. Set the printer to use the tractor feed, load it with continuous paper and switch it ON. Press <ESC> P P N 1 to print out the file.

3. The programme draws each box or set of lines one at a time, returning to the start position at the end of each. Watch as the first box is drawn. If the printer does not reverse after drawing the bottom line then either the printer is the LQ500 type and you need to print Example 7 or the printer does not have the reverse line feed feature.

30.7. Example 7 - Epson 24 pin Boxes

If your printer is the Epson LQ500 or similar type then this example must be used in place of Example 6. It is identical to Example 6 except that it has the special Epson reverse INCODE ▶E5 as the very first instruction. Follow the instructions in example 6 but type in the name as EXAMPLE.7 <ENTER>.

The LQ500 has a pull tractor and does not test whether it is sensible to reverse. It is therefore essential for the user to ensure that the paper is arranged so that it will not jam. Set the printer to use the tractor, tear off two sheets of continuous paper and print on the first sheet. YOU CAN THEN HELP THE PAPER BACKWARDS WITH A GENTLE PULL ON THE SECOND SHEET.

30.8. Example 8 - HQP40/HQP45 Example

This example shows a typical layout for using the Citizen HQP40 or HQP45. It is almost a standard file but uses the special Citizen codes for double height. <CTRL> 1 and <CTRL> 2 have been defined to turn ON and turn OFF double height, double width, emphasised printing, for use only with the HQP40 and HQP45. Follow the instructions in example 6 but type in the name as EXAMPLE.8 <ENTER>.

30.9. Example 9 - LQ550 Example

This is identical to example 8 but uses the standard double height and double width printer codes (page 17), positions the headings slightly differently and has the ▶E5 and ▶A3 INCODEs at the start of the file. Follow the instructions in example 6 but type in the name as EXAMPLE.9 <ENTER>.

30.10. Example 10 - LQ500 Example

This is identical to example 9 but has ▶E5 as the very first instruction to set the Epson reverse, ▶A2 to use absolute TABs in place of the left margin and has ▶F32 to set the print FACTOR set to 32. Follow the instructions in example 7 but type in the name as EXAMPLE.10 <ENTER>.

30.11. Example 11 - Star LC24 Example

Example 11 demonstrates the use of the Star LC24 both with and without the 32K RAM card. The top half of the page uses the internal fonts while the bottom uses the downloaded fonts. The whole page will print correctly if a 32K RAM card is fitted but if not, then the bottom will have mixed characters and will overspill the page. Follow the instructions in example 6 but type in the name as EXAMPLE.11 <ENTER>.

Example 11B is the same as example 8 but for the Star LC10. This will not print correctly without the 32K RAM card fitted.

30.12. Example 12 - Amstrad LQ3500

This is the same layout as example 8 but for the Amstrad LQ3500.

31. Headline Examples

Each Headline example is loaded and printed as described on page 73. Headline examples are named HEADEX.1 HEADEX.6 HEADEX.91 etc and each one contains its own description. The most interesting place to start is HEADEX.92 and then HEADEX.96.

HEADEX.1	Same as EXAMPLE.1 but using a Headline font.
HEADEX.6	Same as EXAMPLE.6 but for a 9 pin printer.
HEADEX.91	Typical headed paper layout.
HEADEX.92	Sample letter.
HEADEX.93	'Programmer at Work' notice.
HEADEX.94	'No Smoking' notice.
HEADEX.95	Print examples of the fonts.
HEADEX.96	Three column layout - (Headline advertisement).

More examples may be added please CATalogue the disc to see the complete list.

32. Picture Examples

Various examples of printing screen dumps will be included on the disc. PICTURE.241 is the first for printing with a 24 pin printer and PICTURE.91 is the same picture with instructions for a 9 pin printer. PICTURE.242 is the second for 24 pin printers and PICTURE.92 is the same for 9 pin printers. Further details are not available at the time of writing this manual.

33. Reasons for Failure

1. **More than ONE space.** All the parts of an INCODE sequence ***must*** have just ONE space between them. Also, all INCODEs within one delayed format ***must*** have no space between them.

2. **Bad Command.** If the font name is wrongly spelt then the programme will try to load this from disc. If the name is too long or contains invalid characters then the error 'Bad Command' will be given by the disc operating system. All font names ***must*** be followed with one space. If not, any following text will be taken as part of the name.

34. Disc Upgrade Notes

If you were originally a disc user of BrunWord Elite, then you should note that all the ROM fonts are stored in the Headline format and are converted for use with a 24 pin printer during the downloading process. MIDLINE is the replacement for the disc font FINELINE.M but MIDLINE is a little narrower. Similarly SLIMLINE is the replacement for FINELINE.S but again SLIMLINE is a narrower font. If you have files which use FINELINE.M or FINELINE.S then these will be loaded from disc in the normal way when the file is printed, but you could try using the narrower ROM fonts.

MIDTYPE on the ROM is the same font as the disc font FINETYPE.M and so files using this font should simply have the name changed before printing. The ROM version will treat any font with .H or .L as being without the suffix. e.g. FINELINE.L and FINELINE.H will both use the ROM font FINELINE without needing to change the name.