INFO-SCRIPT 6128

The Complete Database
with
Wordprocessor & Spelling Checker

Brunning  Software

THE

Info-Script

OPERATING MANUAL

Info-Script is written to be used on the Amstrad CPC6128 but also has built in software to work on an Amstrad CPC464 fitted with a Dktronics 64K or 256K memory expansion.

We welcome all comments, in writing, relating to our products. Please quote serial number and date of purchase.

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CONTENTS

THE INFO-SCRIPT PACKAGE

1.1. GENERAL INTRODUCTION

The Info-Script package consists of a fast and friendly database, a word processor and a spelling checker with 30,000 word dictionary. The word processor and spelling checker can be loaded without the database as BrunWord is a programme in it own right. But the database always loads the word processor as well as it is an integral part of Info-Script.

The first part of this manual describes the operation of BrunWord & BrunSpell used without Info-Script and applies equally well for either of the ways that BrunWord can be loaded. If BrunWord is loaded on its own, the work area is larger but there is no way to go to Info-Script without re-loading the whole programme.

The second part of this manual covers the operation of Info-Script as a database on its own and as a source of data to merge into BrunWord.

1.2. BrunWord INTRODUCTION

BrunWord 6128 is a professional full feature programme written to be used in the 80 column mode. It is a completely original programme designed to avoid the complications and slow response associated with many word processors. Once the programme, spelling checker and dictionary are loaded no access to the disc is needed 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.

Text is 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. Some well known word processors always add spaces right to left, which makes the left side look cramped. The end product from the printer is the most important feature of any word processor.

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. A file of 500 words takes 8 seconds.

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 will work correctly with any 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. The embedded codes are preset for Epson compatible printers and can easily be reset for any other printer. Other printer facilities include - page throw markers, multiple copies, page numbering, odd and even page headers and footers and the ability to print a specified part of the text using page numbers.

The maximum file size is about 8 to 10 pages of text but books or very long articles can be written by saving 7 or 8 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$_{2}$ $Y=ax^{2}+bx^{3}+cx^{4}$ $H_{2}SO_{4}$) Ten characters α λ θ Ω ϕ ω $\pm$ $\cong$ $\neq$ π can be redefined.

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, editor menu, print menu and spell check menu can all be referred to without losing the current cursor position. The editor menu includes a true word count and free memory display.

The user can set a security code of up to fifteen characters and if this is set the file will be encoded before saving to the disc.

A tired eyes facility gives the option to switch to the full size 40 column multicolour mode at any time, keeping the same cursor position and with paragraphs temporarily made longer so that sideways scrolling is unnecessary.

The spelling checker is an integral part of the programme and is supplied with a 30,000 word dictionary which can be expanded to about 35,000 words. Once loaded the dictionary is stored in the memory and a spelling check can be performed immediately without waiting for the spelling programme or the dictionary to be loaded.

It takes just 12 seconds to check a 500 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.

2. LOADING BrunWord

Completely reset the computer by switching OFF then ON and then type run "BRUNWORD". When the programme has loaded the main menu will be displayed with the programme name. Each programme has its own serial number which is displayed at the end of the copyright statement.

Press <ENTER> or <RETURN> and the programme will 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. Newcomers are strongly recommended to work through TUTOR1 on the disc and then the example on page 18, as the quickest way to understand the programme.

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 the start of the text.
<CTRL> Right Arrow	: Cursor forward to the end of the text.
<SHIFT> Up Arrow	: Scrolls up one line.
<SHIFT> Down Arrow	: Scrolls down one line.
<CTRL> Up Arrow	: Scrolls up two thirds screen.
<CTRL> Down Arrow	: Scrolls down two thirds screen.
<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.
<TAB>	: Move to next TAB.
<CLR>	: Delete character at cursor.
<DEL>	: Delete character before cursor.
<CTRL> <COPY>	: 40/80 column switch.
<ESC>	: Press twice to display the main menu.
FUNCTION "."	: Next Find.
FUNCTION 0	: BrunSpell Delete Marker.
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	: Help Edit
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 the <ENTER> or <RETURN> key.

If a gap of one line or more is required between paragraphs then press the <Enter> key once more for each line. The next paragraph can then be typed.

3.2. CURSOR MOVEMENT

The cursor will normally do as expected (page 4) 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 80 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 shift 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. USER DEFINED CHARACTERS

α λ θ Ω ø ω ± ≥ ≠ π

The number keys at the top of the keyboard produce special characters when used with the <CTRL> key. The BrunWord text file TUTOR2 contains full instructions on how to redefine these, and various other symbols.

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 THE 40 COLUMN MODE

The programme is written to be used in the 80 column mode but most operations are also possible in the full size, multicolour 40 column mode. Press <CTRL> and <COPY> together and the programme will switch to 40 columns and keep the same cursor position. The paragraphs will temporarily be made longer so that sideways scrolling is unnecessary.

Formatting with <CTRL> B, <CTRL> W and <CTRL> C must be performed in 80 columns and are not available in 40 columns. Other facilities including entering text, editing, loading, saving and spelling check can all be used effectively in both modes.

We envisage that most work will be comfortable in 80 columns but spelling corrections and detailed editing, particularly on a colour screen, will greatly benefit from this facility. The ability to switch any time, will be the prop to lean on at the end of the day.

The standard colours in 40 columns are:- normal text in yellow
marked text in red
instructions in blue and red

These will be fine on a colour screen but may need changing for a green screen. <ESC> 1 to <ESC> 6 can be used to set different colours and these are detailed on page 8. <ESC> 2 is recommended for green screens and <ESC> 1 for colour screens.

In forty columns, only the insert mode is available and there is no display of the cursor position or the file name.

NOTE:- REMEMBER TO FORMAT IN THE 80 COLUMN MODE BEFORE PRINTING.

3.13. EDITOR MENU

The <F7> key in the number key pad can be pressed any time while in the editor, to display the editor functions, free memory and a count of the words in the current file.

3.14. MAIN MENU

Press the <ESC> key twice.

4. ESCAPE Function

When in the EDIT mode (with "Insert" or "Overwrite" displayed) press the <ESC> key and "Escape?" will be displayed. Release that key then press the first letter of the key word. Press the <ESC> key twice to display the main menu. Press <ENTER> or <RETURN> to return to EDIT.

```
            L - LOAD from Disc.
            S - SAVE  to Disc.
            A - ASCII Save or Load (Not for normal use).
  <SHIFT> @ - CAT, DIR, DISC, ERA, TAPE.
            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 section 3.9 page 6)
            X - BrunSpell spelling checker.
            Z - Security code.
         <F7> - Display editor functions.

            1 - Set ink yellow, paper dark blue.
            2 - Set ink white, paper dark blue.
            3 - Set ink bright cyan, paper dark blue.
            4 - Set ink sea green, paper dark blue.
            5 - Set ink dark blue, paper yellow.
            6 - Set ink dark blue, paper white.

          PRESS <ENTER> or <RETURN> to Return to Text.
```

If BrunWord is loaded on its own there is no way to go to Info-Script.

Care of Discs

Modern discs are very reliable but it is advisable not to switch the equipment on or off with a disc in the disc drive and essential to keep them well away from magnetic material.

Before a new unused disc can be used it must first be formatted. This can be done from within BrunWord if you have Disc Extension. If not, and you are in BrunWord, then save all current files to a formatted disc then reset the computer by turning Off and ON.

CPC6128 - Insert Side 1 of your master CPM system disc into the disc drive. Type !CPM <ENTER>. Type DISCKIT3 <ENTER>. Press <F4> then press <F6>. Now insert the new disc and press Y. When it is finished turn the disc over and press Y again. Take out the disc and reset the computer.

CPC464 - Insert the CPM disc. Type !CPM <ENTER>. Type FORMAT D <ENTER>. Now follow the instruction on the screen to format both sides.

BEWARE, FORMATTING A DISC WILL COMPLETELY ERASE ALL THE DATA.

4.1. <ESC> L - LOAD from Disc

This routine is used to load files from disc (or cassette). The disc is automatically CATalogued and then the name of the file to load is requested. If the user is in the 80 column mode then 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 new 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.

WARNING:- If the file to be loaded has been encoded then the correct code must be set before loading the file. If this is not done then the file will load but will not be readable.

4.2. <ESC> S - SAVE to Disc

This routine is used to save files to disc (or cassette). The disc is CATalogued and then the name of the file to save is requested. If the user is in the 80 column mode then 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.

WARNING:- If a security code has been set then this is used to encode the file before saving. The user must then remember the code as no record is made.

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 up to fifteen digits long can be entered which can consist of any printable keys. Spaces must not be used. The user must VERIFY by typing in the same code again. If <ENTER> is pressed before any other key then there is no encoding. Files will be encoded using the code word when they are saved to disc or cassette. Be sure to remember the code as there is no way to retrieve it.

4.5. <ESC> <SHIFT> @ - ! Functions

Press <ESC>, <SHIFT> @, and ! will be displayed.

!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 and the printer control codes are saved with the file but will only be returned if the file is loaded with GET.

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 only 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 Selective?" 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 "." 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. (Normally 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.

5.1. P...Print Text

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>.

Answer the questions then switch on the printer and the file will be printed. Press <ESC> at any time to stop the printing.

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 60 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 80 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 either be the same lettering 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.

Examples for Epson compatible printer:-

```
Reset Printer................27,64, 0, 0, 0, 0, 0, 0, 0
Double Strike................27,64,27,71, 0, 0, 0, 0, 0
Double Strike + Emphasised...27,64,27,71,27,69, 0, 0, 0
Ignore Paper end Detector....27, 8, 0, 0, 0, 0, 0, 0, 0

Double line spacing..........27,64,27,65,24, 0, 0, 0, 0
(Note:- For correct paging set "No of Lines" to half)

Indent left margin 6 col.....27,64,27,108, 6, 0, 0, 0, 0
Indent left margin 8 col.....27,64,27,108, 8, 0, 0, 0, 0
Indent 8 + set 12 char/inch..27,64,27,108, 8,27,77, 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>... not programmed. (Square bracket with "N").

Equations such as $Y=ax+bx^2+cx^3+dx^4+ex^{27}$ 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 $NOTE_8$ can be achieved using shift <F6> followed by the number.

6.1. Redefine Printer Control Codes

Let us assume that the function key <SHIFT> and <CTRL> <F7> is to be reprogrammed to set and cancel the double strike mode for an Epson compatible printer. 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. In our example this is 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

For printers that are not Epson compatible, it will be necessary to redefine all the printer codes. Find the codes in the printer handbook and follow paragraph 6.1. for each pair of codes.

These codes are saved with each file and to avoid having to enter them each time a new file is created, it is best to have a dummy file just to contain the codes. To do this simply enter the codes, type one word "Codes" in the work area and save the file to disc with the name "Codes". The printer can now be set by loading "Codes" (into the work area) and then deleting the word in the work area. CLEARing the work area does not reset any of the printer data.

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 during the 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 four dictionary sections ABCD, EFGHIJK, LMNOPQR, STUVWXYZ + non letter words.

(If BrunWord has been loaded using Info-Script then an unexpanded CPC6128 will need to load BrunSpell in place of the database and you will be asked to insert the BrunSpell disc.... BEWARE - IN THIS CASE IF YOU PROCEED THEN ALL THE DATA IN Info-Script WILL BE LOST).

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 in large letters. 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 the dictionary in the computers memory but the disc will not automatically be updated. This must be done separately when the test is finished.

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 during the testing to return to the BrunSpell menu. In this case the word counts are replaced with "CONTINUING" to warn that the test will continue from the word which contains the cursor. If words are added to the dictionary then this must be saved to the disc at the end of the test. (See paragraph 8.4.)

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 through the list to the correct word using the down arrow key (or back 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 DICTIONARY

With the BrunSpell menu displayed, press L and "INSERT DICTIONARY DISC" will be displayed. Press <ESC> to return to the BrunSpell menu or insert the correct disc and press any other key.

8.4. SAVE DICTIONARY

Press S when the BrunSpell menu is displayed and "Save Dictionary" will be displayed. Answer Y for yes, N for no or press <ESC>. If the answer is Y then "INSERT DICTIONARY DISC" will appear. Insert the dictionary disc and press any key. BrunSpell is supplied with over 30,000 words which use about 49K of memory. Another 15K is available which should store another 5000 words.

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 last pointer position unless the cursor has been moved back to the start of the text at any time since leaving BrunSpell.

8.6. DELETING WORDS

If it is found that an incorrect word is in the Dictionary then this can be deleted by typing the word in the BrunWord work area with the special character generated with the <F0> function key placed immediately after it. Run Brunspell in the usual way and the option to delete that word will be given. This will remove all words with the same stem from the dictionary. (e.g. help, helped, helps, helping etc).

8.7. NON LETTER WORDS

The BrunSpell Dictionary can contain strings that are numeric or alphanumeric. These use more memory than normal words and only the most common should be stored. Single numbers 1 to 10,, 1st, 2nd, ...,31st, 1987 etc are already stored. No "number trap" option is given as it is quite simple when the programme finds an unknown number, to press <ESC> to end. It is pointless not testing numbers that it recognises. 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 4 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,
34 Helston Road,
Chelmsford,
CM1 5JF.

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.

A. 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.

B. 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.

C. Press the down arrow key and type "34 Helston Road,", press <ENTER>, press up arrow and again use the <TAB>, space bar and <DEL> key to position the "3" under the "u" in Brunning.

D. Press the down arrow key and type "Chelmsford,", press <ENTER>, up arrow and move to the right using <TAB>, space bar and <DEL> so that "C" is under the gap between "4" and "H".

E. Press the down arrow and type "CM1 5JF", press <ENTER>, up arrow and move to the right using <TAB>, space bar and <DEL>.

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

G. Type "Your Address." and press <ENTER> twice.
H. Type "Dear Sir," and press <ENTER> twice.

I. 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.

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

K. 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.

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

M. 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.

N. 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. (See bottom of page 8 "Using New Discs").

Press the <ESC> key. "Escape?" 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 "Memory 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. (If BrunWord has been loaded using Info-Script or an OPTION has been loaded in place of BrunSpell then you will be asked to insert the BrunSpell disc and in this case follow the instructions on the screen).

When the BrunSpell menu is displayed 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 "ERRER". 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 a paragraph.

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 instantly 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-Name?" at the bottom. As there is a current file in the work area a warning will be given "FILE IN WORK AREA WILL BE DELETED"

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.

Switch the printer off ano set the paper to the top of the form. Press P and "Print 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. "No of Copies?" will be asked, enter 1 followed by <ENTER>.

Switch on the printer and 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

If you have an Epson compatible printer then you can follow these instructions to produce some special effects. If your printer uses different codes to Epson then they must first be redefined (section 6).

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 and the letter will be printed with an enlarged heading and with demonstration underlined.

NOTE:- The formatting routines in BrunWord 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. INTRODUCTION

Info-Script is a combined database and word processor and has been designed for the small business, enthusiastic amateur or club, where continual access to both a database and a word processor is needed.

A fast and friendly database has been written and then integrated into our word processor "BrunWord". The result is to be able to have both programmes with data and text all present in the computer's memory. It is possible to have 1000 names and addresses and six pages of text and to switch at will between the word processor and database, without needing to access the Info-Script disc.

This is not done to save on the wear of the disc drive, though obviously it does, but to give the very fast response that we expect from our programmes.

Info-Script has been tuned for simplicity and yet has considerable power. On being loaded, it measures the computer's memory and sets its configuration accordingly. A standard CPC6128 without added memory can hold about 1000 names and addresses and would load the spelling checker from the disc when it is needed. However, with a Dk'tronics 256K memory expansion the programme can hold 3000 names and addresses AND the spelling checker with its 30,000 word dictionary all in the memory ready for instant access.

It is designed to allow the system to grow with your requirements.

The database can only access one file at a time which is held in the computer's memory but this can be split into four sections, each instantly available at the touch of a key. So, one file of data could contain, for example, 760 customer names and addresses, 290 items of stock and 51 suppliers names and addresses. Each section having its own field headings but all three being treated as one file for loading and saving to disc.

The real power of Info-Script lies in the interchange of data from the database to the word processor. Type an invoice pattern into the word processor or load the pattern supplied on the disc. Go to the database. Select and mark the items. Set the quantities and see the totals change. Select the Customer address. Press T for Transfer.

The invoice pattern consists of an address pattern followed by a reset marker and a data pattern with repeat markers. Any field or number of fields from each record can be added as a running total which can be printed at the end of each line as it accumulates or just as a final total at the bottom. Print the total Ex VAT, print the VAT, print the total with VAT and even show the amount if split into several payments.

In most businesses or clubs letters tend to be of similar patterns with slight changes. Info-Script uses this fact to great advantage. A letter pattern can be constructed using conditional markers so that sections of text are changed depending on the data in a particular field. This enables one letter to cover several applications.

A second conditional marker takes this a stage further and enables a particular letter pattern to be loaded directly from the disc. The new pattern can also contain conditional markers so that several hundred different letters could be prepared in this way ready to be selected, personalised and then printed.

When Info-Script is loaded, a special file, LABELS, is loaded into BrunWord. This file contains label patterns but can also contain a number of small files that are the essence of the user's "several hundred letters".

One of the fields is named "Action" and that is where your code is entered to determine the particular letter required for that person. Imagine that you have a number of different but standard letters to write. One by one you find and mark the addresses and set the action code to define the required standard letter. Then simply press M for Multi-step Data Merge and the word processor will be used by the database to create, personalise and print the letters. Then load the printer with labels and press A for address, then 1 or 2 across as appropriate and the labels will be printed.

All this being achieved without entering the word processor, once the letter patterns are created. However, if there is doubt about the suitability of the letters then the One-step Data Merge option can be used and then then process stops before printing, enabling the letter to be examined and modified if necessary.

Info-Script can be used for data merging at virtually any level of complexity. You may want to create a straightforward letter using the word processor and send the same letter with personalised names and addresses to all of your selection. You may want to extend this to taking data out of the appropriate record or you may want to send everyone a different letter constructed from standard patterns where you are only limited by your imagination.

10.2. LOADING Info-Script

Reset the computer completely by switching OFF then ON again. Insert the Info-Script disc and Type RUN "INFO" then press the <ENTER> key. It is important to load the programme from an original Brunning Software disc.

Info-Script, BrunWord and LABELS will all be loaded. BrunSpell and the 30,000 word dictionary will also be loaded if a 'Dk' tronics 256K memory is connected. You will be asked for "Today's Date". Type this in carefully as 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).

If the extra 256K memory is not connected, it is still possible to load BrunSpell after loading Info-Script but, in this case, it will not be possible to return to Info-Script. In either case if Disc Extension or any other option is loaded then it will not be possible to return to Info-Script.

If you wish to use just the word processor and the spelling checker then Type RUN "BRUNWORD". In this case it will not be possible to enter Info-Script. (See page 4 section 2).

11.1. OPERATING COMMANDS

Whenever "Info-Script" is displayed at the bottom left of the screen, the programme is in the command mode. Press the first letter of the keyword for the required option or press <ESC> to display the main menu.

```
                    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.

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

                    J - Justify On/Off.
      (Minus Sign) - - Invert the direction of sorting.

         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> - Switch from DIR to 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).

            1 to 6 - 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 re-written 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, when saving a file larger than 89K, it will be necessary to erase the current file before attempting to save. 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.

11.10. <SHIFT> @ - ¦ Functions

Press <SHIFT> @, and "¦" will be displayed.

¦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

Press <ESC> to return to the command mode.

USING TWO DISC DRIVES

It is best to use the main drive (normally Drive A) for Info-Script data and to use the second drive for BrunWord data. Data merge patterns that use auto-loading should then use the normal name preceded with B: so that the data will be taken from drive B.

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 10.2. 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	Sympson	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.

Now that all the new records have been categorised it is best to clear marker 4. Press X C 4.

Remember:- Press <F1> to <F4> to set to the start of group 1 to 4. Press <F6> to set to the start of the full DIR list and <F5> to switch back to the current 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>.

- Hold <CTRL> and press the left arrow key to reset to the start of the current list. Use the right arrow key to GET the next record or the left arrow key to get the previous record.

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. (Do not connect the printer to the computer with the computer or printer switched ON).

If the printer is Epson compatible then 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. If the printer is not Epson compatible then only 80 column printing is possible.

12.1. DATA MERGING - INTRODUCTION

Info-Script has been written to use parts of BrunWord so that the programme is as small as possible. This enables Info-Script and BrunWord with all its features, to both be memory resident. On an unexpanded CPC6128 Info-Script replaces BrunSpell and takes a little of BrunWord's work area. The data is stored in the 64K banked memory.

With a Dk'tronics 256K memory expansion, the data capability increases three times and BrunSpell with its 30,000 word dictionary is also memory resident.

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. Load Info-Script in the normal way as described in para 10.2. This will also load BrunWord and a file called LABELS into BrunWord's file area.

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

When BrunWord is loaded using Info-Script, BrunWord's maximum work area is reduced by about 33%. This is further reduced as a file called LABELS is automatically loaded into BrunWord's file area. There is enough memory left for normal data merge requirements.

The LABELS file consists of four address patterns and any other files that the user wishes to be automatically loaded into BrunWord. If the maximum size work area is required then the file area must be cleared. This is achieved (in BrunWord) with <ESC> C F.

If BrunWord's file area is cleared then the automatic addressing will report NOT FOUND. LABELS must then be re-loaded to use this routine.

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

When Info-Script and BrunWord are loaded a file called LABELS is also loaded into BrunWord's file area. This contains four BrunWord files that are address patterns for labels or envelopes.

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 One 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 will cause 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 MARKER

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 TO START of GROUP 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 should be identical except that the second will contain a G and the &" ".

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 DATA MERGE EXAMPLE

1. Load Info-Script (see para 10.2). Press <F7> to set the first VARIATION of headings, then type in the three addresses listed on page 28 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. Take note that the last line has a G after the Z.

```
&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 got 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 RECORDS EXAMPLE

Load Info-Script from a "clean" machine as para 10.2. This will ensure that the detail in this example is correct.

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>.

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. DATA MERGE - INVOICE EXAMPLE

When Info-Script is loaded a file called LABELS is loaded into BrunWord's file area. This contains four label patterns and any letter patterns that the user wishes to be automatically loaded. When supplied it includes an INVOICE and an ORDER pattern. 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 0 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. DATA MERGE - 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.

14.1. ADVANCED DATA MERGE 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 will be in the BrunWord file area called DATA as this has been included in the LABELS file. 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>. The DATA 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 LABELS file 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 LABELS file. Remember that this reduces the size of BrunWord's work area.

The content of LABELS can be changed and saved back to the Info-Script 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 LABELS from the Info-Script disc with <ESC> L LABELS <ENTER>. Memory save the single word in the work area with <ESC> M <ENTER>. Load DATA into BrunWord's work area with <ESC> G DATA <ENTER>.

Move the cursor to the end of the file with <CTRL> Right Arrow and type &IF 10=REC LOAD RECEIPT then press <ENTER>.

Kill the DATA file in the file area with <ESC> K DATA <ENTER> and then memory save the work area with <ESC> M <ENTER>. Return the original file to the work area with <ESC> G LABELS <ENTER>.

The LABELS file can now be saved back to the Info-Script disc (DO NOT DO THIS UNLESS YOU ARE REALLY SURE). For this example insert your own disc then press <ESC> S <ENTER> F. (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 it is possible to add an extra text file into the LABELS group, for each of these. For example an Info-Script file &CUST would need a text file for patterns called CUST. The procedure is virtually the same as just described but a new file is created and memory saved under the name of CUST. Obviously, the file called DATA is NOT KILLed when a file with a new name is memory saved.

14.2. FIXED SIZE INVOICE or ORDER

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.

Additions and Corrections

1. 40, 80 and 128 COLUMNS DISPLAY.
BrunWord has three screen modes which are automatically selected according to the setting of the right margin. The display will be forty columns wide if the right margin is 40 or less, eighty columns wide if the right margin is 41 to 80 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 normal 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 the 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 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.

2. SCREEN COLOURS.
The choice of colour combinations has been increased to ten and these have been changed in keeping with the feedback that we have had over the years. Press <ESC> then a number key from 0 to 9 (at the top of the keyboard) to set one of the ten preset colour combinations.

<ESC> 1 - White ink,	dark blue paper
<ESC> 2 - White ink,	black paper
<ESC> 3 - Blue ink,	dark blue paper
<ESC> 4 - White ink,	dark green paper
<ESC> 5 - Orange ink,	black paper
<ESC> 6 - Dark blue ink,	white paper
<ESC> 7 - Black ink,	white paper
<ESC> 8 - Dark blue ink,	light blue paper
<ESC> 9 - Dark green ink,	white paper
<ESC> 0 - Black ink	orange paper

3. EVEN FASTER.
Re-writing the screen routines to achieve the three modes has produces two useful side effects. The normal 80 column mode writes much faster to the screen and this has been used to nearly double the speed of the spelling checker. 4000 words per minute now!

4. REMINDERS.
BrunWord and Info-Script MUST be loaded from an original Brunning Software disc. YOU HAVE BEEN WARNED!

The dictionary can only be saved to the original disc. We suggest that you update side 1 with your additions and keep side 2 as supplied.

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 your file to the disc, so you can type another 80 characters after first seeing the warning. Remember, press <F7> to check the free memory.

Disc Extension

12.1. INTRODUCTION

BrunWord has provision to load various OPTIONs using <ESC> O (letter O NOT number zero). Disc Extension is the first of these to be available and is only recorded on the disc if it is purchased as an extra.

12.2. LOADING DISC EXTENSION

BrunWord must first be loaded as Disc Extension will not run on its own. From BrunWord press <ESC> then O, and enter the name as DISC. Once loaded DISC is available from BrunWord, in place of BrunSpell, by pressing <ESC> then X.

12.3. F - FORMAT DISC

With Disc Extension loaded, it is possible to format a disc while in the middle of typing text into BrunWord. Press <ESC> then X to enter Disc Extension then press F for Format. Normally discs should be formatted to DATA format but can be formatted to SYSTEM format if required by pressing S. Insert a blank disc into Drive A and press <ENTER>.

Before formatting, the programme tests the disc for data and stops with a warning if it is already formatted. Press <ENTER> to ignore the warning or <ESC> to abort with no damage to the data on the disc.

12.4. E - EDIT DISC DIRECTORY

Insert a DATA or SYSTEM disc into drive A and press <ENTER>. All 64 entries of the directory will be displayed:-

<USER No> <NAME> <*> <DIR/SYS> <¹> <FILE SIZE>

An * after the name will show that the file is WRITE PROTECTED and a number ¹ after DIR or SYS will indicate that it is part 2 of the file.

When a directory is first displayed, the long cursor will be in the top left hand corner of the box at the first name. Use the cursor keys to move the long cursor to the required file.

- E toggles Erase on and off (shown by the e in place of the user number on the left of the name).
- D toggles between DIRectory and SYStem. SYStem files are not displayed when the disc is CATalogued.
- R Rename a file.
- * toggles the write protection on and off.
- N set a new User Number.
- S Save the updated directory back to the disc. If this is not done then the changes will be cancelled.

If a file is more than 16K long then it is stored as two (or more) entries and any changes need to be done to both (all) entries. If the file is shown as 16K then look for another file with the same name followed by ¹.

Warning - use this section with care. You have more power than you may realise. Do not make ANY changes to the BrunWord disc.

12.4. C - COPY DISC to DISC

This routine is intended for making backup copies of your own programme or text discs but will copy any disc with DATA or SYSTEM formats. If used on a 464 or 664 machine, then all text in BrunWord will be lost. On 6128 machines, the extra memory is used and BrunWord text will be safe.

12.5. D - ARCHIVE DISC to TAPE

Use this to save any of your little used discs onto tape for permanent low cost storage. Each side of the disc takes 14 minutes to save. This means that C30 is the minimum size cassette that can be used and this will store one side of the disc to each side of the cassette. A C60 will store a whole disc to one side but is much less convenient than C30.

Insert the disc into drive A, press enter and the disc will be CATalogued. Think of a name up to 15 character that describes the content and type this in followed by <ENTER>. Wind the tape to the end of the leader (MOST IMPORTANT!) and insert in the cassette recorder. Press <ENTER> and the disc will be automatically copied, one track at a time, onto the tape

12.6. T - RETRIEVE TAPE to DISC

This will copy a cassette saved by the ARCHIVE routine, back onto disc. Insert a cassette and press <ENTER> and about 10 seconds later the content of the cassette will be shown in a similar form to a disc CATalogue.

Insert a disc into drive A and press <ENTER>. You will be warned if the disc contains data and the CATalogue of the disc will be displayed. Press <ENTER> to ignore the warning or <ESC> to abort.

The retrieval will take 14 minutes and will completely erase any data that was already on the disc.

12.7. V - VERIFY TAPE/DISC

This routine tests any ARCHIVE tape against any disc and displays a continuous count of all the bytes that are different. It can be used to verify that the recording was made successfully or to count the number of changes between an archive tape and any disc.

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