VU-FILE

AN INFORMATION RETRIEVAL SYSTEM
FOR USE WITH FILES, LISTS AND
DATA BASES OF ALL KINDS

VU-FILE
from PSION

VU-FILE is a general purpose electronic filing system for the BBC microcomputer system. Through simple easy-to-use commands you can construct records and files of your choice and, at whim, you may sort, search, list, order, print, store and retrieve records from a huge file.

VU-FILE uses optimized packing routines to maximize file storage and provide efficient operation. The layout of these records (or forms) is defined by you with great flexibility; each record is displayed as a typewriter mode page. Instructions include Append records, Edit a record, Delete a record, List records, Order records, Select a data-field, Re-set and Print a file to printer.

As a useful example of this program we have included GAZETTEER which gives the essential information of every country in the world.

VU-FILE has been implemented on a variety of similar microcomputers and has enjoyed huge sales. Now applied to the BBC microcomputer it is supplied on cassette for use with cassette or disk systems. A booklet giving full instructions and documentation is enclosed.

32K RAM required

USER MANUAL

For the **BBC** MICROCOMPUTER Model **A** and **B**

32K RAM

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1.0 Loading Vu-File from cassette

VU-FILE is supplied on cassette tape and was recorded at 1200 baud (this is the default filing system if you do not have a disc connected), VU-FILE is written in machine code so you need to use a W command to load, run or save.

1.1 Tape Only Systems

Load and run VU-FILE with the command:
*RUN VUFILE
and then start the tape playing.

1.2 Disc Systems

You can save VUFILE on disc by loading VU-FILE from tape and then saving on disc as follows:
*TAPE 12 (selects the 1200 baud cassette file system)
*LOAD VUFILE (loads VU-FILE from tape)
*DISC (selects the disc file system)
*SAVE VUFILE 1900+ nnnn 34DO (save to disc)
where nnnn is the length of the file as displayed by the *LOAD command. Subsequently, you can run VU-FILE by entering (from the disc filing system):
*VUFILE

2.0 Learning VU-FILE

At both home and work we continually use lists, card indices, filing cabinets etc, to store in an ordered manner repetitive data for all kinds of information. In the home this includes address books, lists of members of clubs or societies that we may belong to, dictionaries, encyclopedias etc. At work, schools, colleges, businesses and particularly government departments have numerous filing cabinets and card indices for all manner of information.

VU-FILE is a computer program for the electronic storage of lists or files. The advantage of a computer for doing this is not only that the information can be stored easily and compactly, but particularly that the computer is very powerful in ordering, sequencing, searching, finding and listing such files.

VU-FILE allows you to lay out or format the standard record of a particular file in a manner of your own choosing. After laying out or formatting the record a whole series of commands allows you to develop the file and interrogate it. In addition you can save the file permanently on your own cassette or disc and retrieve it from the cassette or disc for subsequent use.

2.1 File Structure

The files consists of a collection of "records" where each record may contain various items of information. For example, a suitable file structure for an address book would be such that each record would correspond to a name, address and telephone number. There would be as many records in the file as there are names in the address book. VU-FILE works in such a way that the record is also the unit of information which may be displayed on the screen at any one time.

Each record is split into a fixed number of parts called data fields. The data fields correspond to logically distinct parts of a record and are also used to determine the layout of the displayed record (each data field starts at a prescribed position on the screen). Each record will appear as one page on the screen and you may have as many data-fields in each record as is consistent with your layout on the screen. It is up to you to decide how to split up records into data fields since an appropriate choice depends upon the nature of the data and how you want to see it displayed. It is usually the case that the appropriate split suggests itself and when this is not the case and there is more than one way of splitting up the record then it is often unimportant which choice is made. For example, for an address book, the name and telephone numbers would each be distinct fields. Although it can be argued that the address is a single logical entity, VU-FILE does not allow a single field to use up more than one line of the display. So, for practical reasons, the address would be split into more than one field and three to five fields would be sufficient and reasonable.

To summarise the file structure of VU-FILE: a file consists of a variable number of records; each record consists of a fixed number of fields and each field consists of a variable number of characters.

2.2 Creating A File

Load and run VU-FILE by entering
*RUN VUFILE
if you have o tape system, or just
*VUFILE
if you have a disc system. The screen will clear and prompt you to either press E to enter VU-FILE or to press L to load a data file. You press key E when you wish to create a new file and L when you wish to continue working on an existing file. Most of the time, you will choose the load option to continue working on an existing file. As this is the first time that you are using VU-FILE this will be one of those rare times when you will press E to enter VU-FILE and create a new file. Press E and the display will change to a mostly blank screen with the top three lines informing you that you are to set the record layout and that you are in "typewriter mode for the entry of titles on a blank record." You are also informed that you can move the cursor (the cursor is the flashing underline at the top left of the blank part of the screen) with the arrow keys and that you should press the f0 function key to exit this stage.

The space underneath the dotted line is the space allocated to display a record which, in the address book example, would correspond to the name address and telephone number of any one person. Throughout VU-FILE you will find the command or information heading in the top three lines of the screen. This heading continually prompts you as to what to do next and in addition tells you the present command under which you are acting. The rest of the screen always shows the general or current record. Since we have not defined anything yet, the space for the record is presently blank.

The purpose of this part of starting a file is to define the fixed titles of a record. You do not have to have any fixed titles at all and could simply continue by pressing f0, but using titles makes the information of a record far more presentable and easier to read. The fixed titles can be understood by analogy with the card index system used by libraries. Because libraries use card indexes extensively, their cards are not initially blank but are customised with rulings and titles or headings such as "Author," "Title" and "Subject" with spaces allocated for the actual entries under those titles. In the record layout stage of VU-FILE, you can design your own custom blank "card" or, in reality, screen.

Use the arrow keys to the right of the keyboard to move the cursor around the blank area allocated for your record. Notice that you are prevented from moving the cursor outside the record area. Try typing something on to the screen – you can use both upper and lower case letters, numbers and other symbols. You can erase anything with the DELETE key which works in the normal way and holding any key down will repeat that key. Using a combination of say the characters: and –, you can "draw" rulings and boxes to partition the screen and emphasise certain data fields.

Just to practice, type some garbage on the screen and press key f0 to exit. After exiting from the record layout stage the program will immediately enter a new mode called data layout. A new command heading will appear at the top of the screen. The cursor will have been returned to the top left hand corner of the record area and the practice titles that you entered previously will still be there. You can still move the cursor around with the arrow keys but you can no longer enter any text. The purpose of this stage is for you to define the position of the variable information items (the data fields) and implicitly the number of data fields. For example, if a file was being created for names and addresses, each record might show the word "NAME:" followed by the particular name say "BROWN JOHN" of a particular record. The letters "NAME:" would have been entered previously in the record layout stage and are fixed on every record. The letters "BROWN JOHN" make up the data field which varies from one record to another. You must specify the position on the record where the data field (e.g.

"BROWN JOHN") is to appear, namely after "NAME:", by moving the cursor witty the arrow keys to a position immediately after "NAME:" and pressing key f9 at the correct position.

You must specify at least one field and typically you would have four to ten fields. Pressing f0 to attempt to exit this stage without defining any fields will cause an error message to appear and you will be invited to "press any key to continue." To continue our practice run, move the cursor to any position on the screen and press f9 and you will see a double bar symbol has appeared to confirm the position that you have selected. Move the cursor again and define another couple of field positions and then press f0 to exit.

Hardly any of the commands in VU-FILE have any meaning when the file is empty and so the program goes straight to the data entry mode and you will not be able to exit this mode until you have entered some data.

2.3 Entering Data

Data entry mode is used to enter the initial records immediately after defining the record layout and data structure, and is also used subsequently whenever additional records are to be added to the file. The cursor initially appears at the position of the first field which was defined at the previous data layout stage. Normally, you would enter the desired information and press RETURN which would advance the cursor to the next data field position (in the same order as the field positions were defined in the data layout stage) and you would then fill in the information for that field until all the data fields had been defined for that record. After supplying the data for the last field of a record, you would enter that record into the file by pressing f9 if you want to continue adding records or f0 if this is the last record to be entered. Pressing f9 will cause the variable data to vanish and the cursor to be returned to the first field position ready for the next record entry. If you make a mistake or change your mind, then you can skip through the data fields by pressing RETURN until the cursor is positioned at the desired field and simply overwrite the new information. You can continue altering the record for as long as you like and the record will be entered as it appears on the screen when you press either f0 or f9.

Returning to our practice run, enter six or so records – put anything you like into the fields and prove that you cannot continue a field over la a following line. Press f0 to enter the last record.

2.4 The Command Panel

After pressing f0 to exit from record entry, the program will enter the main VU-FILE command point where the available commands are listed on the top three lines. The commands are implemented by typing the first letter of each command. Some commands (Backward, Forward and Reset) are effected immediately without leaving the main command point while others require further qualification.

Pressing A for Append enters record entry mode, This is ice same mode as was described above for creating a new file and is used whenever additional records are to be appended.

2.5 Scanning The File

If you have not already entered some trial records of either garbage or something meaningful, if you prefer, then you should do so now so that you can try out the commands as they are described.

The simplest commands are Forward, Backward and Reset (just press F, B or R). Forward and Backward simply step through the file in the forward or backward direction a record at a time and Reset displays the first record. The sequence of records

is initially defined by the order of entry and so "first" initially means the first record entered. The sequence may be redefined by using the Order command and will be described below.

Press R to display the first record and then press F repeatedly. Each time you press F, the next record in the sequence will be displayed until the last record is reached. Pressing B repeatedly will step through the file in reverse sequence, until the first record is reached.

Another way of scanning the file is to press L for List which will list the whole file, pausing for a short time at each record to allow you to observe the contents. The records are listed in the current sequence (which depends on your use of the Order command) and will continue to the last record unless you hit any key to pause the listing. You can then either continue listing by pressing the space bar or return to the main command panel by pressing any other key.

2.6 Sorting The File

Many of the commands (Forward, Backward, Reset, List and Print) work in relation to a sequence or ordering of the records. Initially and by default, the sequence is defined by the order that the records were entered. Such a sequence is not normally significant or useful and the Order command would be used to sort the records into a different order. The order is defined alphabetically (as in a telephone directory) according to a specified field. The sequence is set according to the first character of the specified data-field which, if the same for two or more records, will be followed by the second character etc.

Press O for Order and the prompt panel will change to explain how the command is used. Pressing the RETURN key moves the cursor through the fields, returning to the first field after the last field in a cyclic fashion. Initially, no field is selected for ordering and a field may be selected by using RETURN to move the cursor to the required field and pressing f0. Pressing f0 will also exit the Order command, sort the records into the new order and return to the main command panel. While the sort is taking place, a "sorting" message will appear in the command panel, but you may not have time to see it if the file is very short. You may also see this message after an Append session if any field has been selected for ordering.

Provided that you did not enter the records in alphabetical order; you should notice the different sequence as you scan through the file. The order is defined by the teletext code of the characters with the left-most character being the most significant. You do not have to know the teletext code (almost the same as the ascii code) of each character, but you will find them in the appendix of the BBC User Guide if you are interested. What you do need to know is that the alphabetic ordering "drops out" from using the character code and that numbers will come before alphabetic characters. You will also find that numbers of equal length (i.e. number of digits) will be ordered correctly and that you can get the correct order from numbers of varying length provided that you put leading spaces before the shorter numbers such that the data field length is constant. This has been done on the example Gazetteer file which is supplied with VU-FILE and so you can, for example, sort the countries according to their populations.

The Order command can be used at any time to change the field or fields which are used to determine the order. Having selected a field for ordering, you can deselect that field and restore the initial sequence by using key f9 from within the Order command. If you use the Order command more than once and select more than one field for ordering (i.e. not using f9 to deselect in between selecting fields) then the most recently selected field will take precedence with the previously defined fields having an effect only when the most recently selected field contents are identical.

2.7 Updating The File

Whenever you wish to add records to the file you use the Append commons which was described earlier. There are two other commands which are used to modify the file: Delete to erase a record and Edit to modify a record. Both commands operate on the current or displayed record and so, for example, to delete a record, you must first find it by simply scanning or using Search (to be described) and then press D for Delete. To avoid accidental deletions, the Delete command asks for confirmation.

If you wish to modify the current record, press E for Edit and the command panel will change to give you information on this mode. The left and right arrow keys can be used to position the cursor within a data field and characters can be overtyped and deleted using the DELETE key. Pressing RETURN moves the cursor to the next data field and pressing f0 replaces the old record with the new record as it appears on the screen and returns to the main command point.

2.8 Selecting Records

One of the most powerful features of VU-FILE is the ability to pick out, find or select a particular record or a particular set of records as opposed to the complete file. There are two classes of application here which are both served by the Search command.

First, you may require information from a single record which you could select by matching a sequence of characters from a particular field. For example, if you had a list of names, telephone numbers and addresses you might match either the christian name or surname in the name field or you might search for the string "bank" in a reference data field to search for the address and telephone number of your bank. Using the Search command in this way represents the fastest and most convenient way of retreiving a single record.

Second, you can use the Search command to select a portion of the file according to single or multiple conditions on data fields and to use the commands Reset, Forward, Backward, List and Print on the reduced file. Using this feature, you can List or Print only Spanish speaking countries from the supplied Gazetteer file in any desired order. As another example, if you had a list of salespersons which included their annual sales figures, you could select only the records of the salespersons who had exceeded a certain sales revenue.

Pressing S puts you in Search mode where the blank record is returned with the cursor at the first data field position. At this stage of the search command the cursor and screen behave in the same way as in append mode, where you can type in information, use RETURN to move onto the next data field and use the left and right arrow keys and the DELETE key. If you enter a complete record (the match record) and press f9 then VU-FILE will search for an exact match to the match record and will apparently do nothing if a match is found (because an exact match is returned) or will return a blank record if no exact match is found. If any data field in the match record is empty then no match will be required for that field. If the match record has only one non-empty field then pressing f9 will search for any record which has an exact match for that field only. More usefully, a pair of dots ".." can be used to rep resent any string of characters so that, for example, if you wanted to search for the string "abc" then:

"abc" will search for a field with just "abc"
"abc.." will search for a field beginning with "abc"
"..abc" will search for a field ending with "abc"
"..abc.." will search for a field which includes "abc".

The last usage, "..abc..", is the most useful for locating single records.
In addition to string matching, the Search command can be used to select records using a match data field of the following forms:

>string
<string
>= string
<= string
<>string

where the operators>, <, > =, < = and<> have the same meanings as in BASIC and where "string" represents a sequence of characters. The "not equals" operator <> can be used to select records which do not exactly match the following string. For example, <>abc will return a record in which the corresponding field does not contain just "abc". The other relational operators will return a record if the corresponding field contents are less than, greater than etc, the supplied string. Here, the relational operators greater than etc. are applied with reference to the way in which fields affect the sequence of records as described above for the Order command. That is, a string is greater than another string if it comes later in the alphabetic sequence. If a field is to contain numbers and these numbers describe a quantity (unlike e.g. telephone numbers) then you should pad out the shorter numbers with leading blanks to keep the field length constant so that these relational operators will be consistent with the magnitudes of the numbers.

After pressing S for Search, we enter a match record which may be quite complex and use more than one field, or which may be quite simple and use only one data field. We press f9 to search for a match and a blank record is returned if no match was found, otherwise the matched record is returned. If a match is found, then further presses of the f9 key will search for further records which satisfy the match criteria.

To enter a new match string in the first field position, simply start typing the required string and the screen will clear (except for the fixed data) and the character corresponding to the key pressed will be displayed at the first key position. Pressing RETURN will also clear the screen and allow you to position the cursor at the desired field.

Pressing f0 to exit gives you the opportunity to keep the search conditions active. With the search string active, you are effectively working with a reduced file which you can scan, list and print in the usual way.

This use of Search allows you to do simple data processing as described at the beginning of this section. For example, in Gazetteer, if you are interested in all Spanish-speaking countries of the world you could use the Search option to place the match string "..SPANISH.." in the "languages" data-field. If you then return to the main command heading and press L for List, a list will immediately be shown of all Spanish-speaking countries.

To deactivate the effect of the search string and restore the records which do not satisfy the search condition, press S followed by f0.

2.9 Printing The File

The print command is used to set up a print layout and then to print the file (which may not be the whole file if Search is active) on an attached printer or to just print the file if a print layout has previously been defined. Setting out the print layout involves defining a title row and allocating a column width to each data field to be printed. This scheme works best when all the information you require fits onto a single line but if you ensure that the data field column edges line up with the edges of the page then you can have more than one line to a record up to a maximum of 256 characters. You can print the fields in any order and you do not have to print all the data fields of the records.

The first time you press P for print you will be put into the forms layout mode. In this mode, you select fields for printing by using RETURN to move the cursor to the required field and pressing key f9. Upon pressing f9, you will be asked for the title to head up the

column which is to take the field. After typing in the title followed by RETURN, you will be asked for the column width to be allocated for the field. This width must be greater than or equal to the width of the title and should also be wide enough to take the longest occurrence of that field. Enter the column width followed by RETURN and you will be returned to the forms layout mode where you will be able to select further fields for printing.

Pressing key f0 exits forms layout mode and passes to the print menu where you can choose one of three options: to press P to print the file; to press L to restart the forms layout mode and define a new print layout or to press Q to abort the print command and return to the main command point. When you have previously defined a print layout, pressing P takes you straight to this print menu. After pressing P to print the file, you will be informed of the total print width and given an opportunity to return to the print menu by pressing N. After pressing Y you will be asked for the number of lines per page (depends on your printer) and after typing this number, pressing RETURN will actually start the printing of your file.

2.10 The Main Menu

Pressing Q for Quit returns VU-FILE to the main menu. The most likely reason for returning to the main menu is to save the current file or to load a different file. In both cases, you are prompted for a file name which should be less than or equal to 10 characters if the tape filing system is active or 7 characters if you have a disc and the disc filing system is active. The other options from the main menu are to press C to reenter the main command panel; E to exit VU-FILE and return to BASIC (make sure you save the current file first if you want to keep it) and R to start all over again and create a new file.

2.11 File Length

VU-FILE keeps the data file wholly within memory and so there is a limit to the size of the file which can be handled by VU-FILE. This limit is 16K bytes or characters but VU-FILE packs each data field tightly in variable length records making full use of the available space. One consequence of using variable length records is that it is impossible to predict the number of records which can be entered. Pressing I for Inform does however allow you to monitor how much of the available space you have used which is presented as a percentage after the heading "Memory used." Inform also informs you of the number of records in the file and the number of fields in each record. Press any key to get back to the main command point.

3.0 VU-FILE Reference

3.1 File Structure

VU-FILE operates on a file which is wholly RAM resident and which may be up to 16K bytes long. The file consists of a variable number of records, each record contains a fixed number of characters. The records are stored compactly in a variable length record form. A single record is displayed on the screen at any onetime in the bottom 20 lines of the MODE 7 display mode. The teletext compatible display mode is used because it is very economical in its use of memory which leaves the maximum amount left for the data file. The user must define the layout of the fields of a record over the available 20 lines of screen which may include fixed titles which help to define the different data fields as they appear on the screen. A field may not span more than one line and so the maximum length of a field is 40 bytes or characters. The contents of a field cannot be entered in such a way that it partially overlays any characters of the fixed titles. The number of fields in a record is defined when the field layout is defined. Neither the fixed titles, the field positions nor the number of fields may subsequently be changed.

3.2 Commands

In this section we will describe the use of the commands which are available from the main command panel. The commands are invoked by typing the first letter of the required command. The commands are described below in alphabetical order.

APPEND

Used to add records to the data file. Pressing A for APPEND, causes the top 3 lines to change to give a brief description of the command and how to use it. The blank record (i. e, fixed titles only) is displayed with the cursor initially at the first field position ready to take the first data field information. The data is typed in followed by RETURN which moves the cursor to the next field position. The order with which the cursor moves through the fields is taken from the order in which the fields positions were initially defined in record layout mode. Pressing either key f0 or f9 enters the record into the file as it appears on the screen. The difference between the two is that f9 clears the displayed record ready for further entry whereas f0 exits Append mode and returns to the main command panel. Pressing RETURN simply moves the cursor to the next field position without alteration of the displayed record and will pass from the last field position to the first in a cyclic fashion. The RETURN key can be used to modify a previously typed field by passing through the record for a second time or as many times as desired. The left and right arrow keys and the DELETE key may be used to modify the record before entering the record into the file with f0 or f9.

BACKWARD

This command is used to scan backwards through the file according to the order set previously by the order command. Every time key B is pressed, the previous record is displayed. Has no effect when the first record is currently displayed.

DELETE

Used to delete the currently displayed record from the file. To avoid losing records as a result of accidentally pressing the D key, this command requires the user to press the Y key to confirm that the current record should be deleted. Pressing N returns to the main command panel without deleting any record. Delete will not delete the last record from a file.

EDIT

Used to modify the currently displayed record. Similar to Append mode except that the current record appears on the screen rather than a blank record. The cursor is initially at the first field position and pressing RETURN moves the cursor to the next field, passing back to the first field from the last field. The left and right arrow keys and the DELETE key may be used to modify fields or the new contents may simply be retyped. Pressing f0 will replace the old record with that which appears on the screen and return control to the main command panel.

FORWARD

Used for scanning forward through the file. Every time key F is pressed, the next record is returned in the order defined by the previous order command. Pressing F has no effect when the last record is currently displayed.

INFORM

Pressing key I gives information on the file which includes the number of records and the number of data fields in each record. The most useful information is the percentage of available memory used by the file. Press any key to return to the main command panel.

LIST

Used for scanning through the whole file, pausing for a short time at each record for the user to have a chance to observe the contents. Pressing any key while the file is listing will halt the listing but will not return control to the main command panel. Once halted, pressing the space bar will continue the listing or pressing any other key will return control to the main command panel. List resets the file and lists through the file in the order defined by the most recent order command and will return to the main command panel when the last record has been reached.

ORDER

Used to define the sequence of records which is subsequently used by FORWARD, BACKWARD, RESET, LIST and PRINT. Initially, the records have the same order as the order in which they were entered This default order is used whenever no data field is selected for the purpose of defining the order, The Order command may be used to select or deselect data fields for defining the sequence of records. In simple situations where a single data field is selected for ordering, the order is defined by the character codes (the teletext character set is used). The records are ordered with ascending character codes where the left-most characters are most significant. That is, the first two characters are compared, and if equal, the second two characters are compared, and so on. By this scheme, numbers will be correctly ordered provided that a fixed number of characters is entered for each number (leading spaces may be inserted as necessary). In more complex situations, where more than one field is selected for the purpose of ordering, the most recently selected field is used to determine the order with the next most recently selected field being used to determine the order when the most recently selected fields are the same, and so on.

In Order mode, the keys f0 or f9 are used to select or deselect, respectively, the contribution of a field to the ordering process. The RETURN key is used to move the cursor to the field which is to be selected or deselected. Control returns to the main command panel when either key f0 or f9 is pressed.

PRINT

Used to print data from the file to an attached printer and to set the layout with which the data is printed. The first time this command is used, control will automatically pass to the forms layout mode where the content and format of the printed output is defined. This involves specifying a column heading and a maximum

width for each field which is to be printed. The fields may be selected for printing in any order and it is not necessary to include every field in the record. The RETURN key is used to position the cursor at the field to be printed. Key f9 selects the field and prompts for the column heading and then the width to be allocated to that field. The column width should be wide enough to accommodate both the column heading and the longest occurence of the field.

When the required fields have been selected, pressing f0 passes to the print menu, from which the user can proceed to print the file (before the file is actually printed, the print width is confirmed and the number of lines per page is requested), re-define the print layout (as just described) or abort and return to the main command panel. The Print command will go straight to this print menu on subsequent use. Pressing key f0 in forms layout mode without selecting any fields will return control directly to the main command panel.

QUIT

Used to return to the main menu from which the user can continue YU-FILE; exit and return to BASIC (losing the file from memory); load a new data file; save the current data file or, finally, reset VU-FILE, clearing the file, and starting afresh.

RESET

Used to display the first record, as defined by the previous use of the Order command.

SEARCH

Search is the most powerful command in VU-FILE and is used for searching for or selecting records according to an input match record. The match record is input using the keys in the same way as in Append mode. That is, using RETURN to position the cursor, the left and right arrow keys and DELETE. Not all the fields need have entries and it is likely that in most applications of this command that only a single field would contain a search string with the rest of the fields blank in the input match record. After pressing f9, the search strings in the match record are compared with the contents of the corresponding fields of records in the file until a match is found, when the matched record is displayed on the screen. If (string) represents a sequence of characters, then the search string may take one of the following forms:

(string) will look for a field which is identical to (string)
..(string) will look for a field which ends in (string)
(string).. will look for a field which begins with (string)
..(string).. will look for a field which contains (string)

In addition to string matching, the search string may take the form:
r (string)

where r is a relational operator (i.e. one of <, >, < =, > = or <> as used in BASIC), to select fields which are less than, greater than etc. (string). The magnitudes are taken from the teletext code of the characters with the left most character being most significant as was defined for the Order command.

Pressing f9 will return the first record found which matches the search condition or a blank record if no matching record was found. If a record is returned then pressing f9 again will return further matching records if they exist.

Pressing f0 exits search mode and gives the user the opportunity to keep the search string active so that the other commands will effectively operate on a portion of the file which satisfies the search condition. To cancel the search condition, press S followed by f0.

3.3 Saving And Loading Files

When VU-FILE is run, the user is given the opportunity to load a file and then contra passes to the main command point. Files may be saved by using the Quit command to return to the main menu and then pressing S. A file may also be loaded from this point by pressing L. The maximum length of file names is 10 characters if the tape filing system is active and 7 characters if the disc filing system is active.

4.0 Gazetteer

"GAZETTEER" is an example of the application of VU-FILE which is supplied on side B of your cassette with file name GAZETTEER. The word GAZETTEER means a geographical dictionary and the file GAZETTEER is a file of records for every country in the world giving the name of the country, the capital city in that country, the main language spoken, the currency used and other information. This file can be interrogated and manipulated with all the commands of VU-FILE.

To examine GAZETTEER, run VU-FILE from cassette in the normal way by entering *RUN VUFILE and then turn the tape over and use the L option to load GAZETTEER, giving GAZETTEER as a file name. Alternatively, if you are already using VU-FILE, GAZETTEER may be loaded from the main menu.

If you have a disc system, you may like to transfer GAZETTEER to disc. You can do this as follows:

*TAPE12 (selects the 1200 baud cassette filing system)
*LOAD GAZETTEER 1900 (loads GAZETTEER from tape)
*DISC (selects disc filing system)
*SAVE GAZET 1900+ nnnn (save to disc)
where nnnn is the length of the file as displayed by the 4 LOAD command. Because of the 7 character limit on disc filing system file names, the name of the file has been changed to "GAZET".