

FOR THE AMSTRAD
CPC464, CPC664, CPC6128

ULTRABASE

General Purpose Database



BEEBUG SOFT

ULTRABASE FOR THE AMSTRAD RANGE OF COMPUTERS

by

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SECTION 1 – INTRODUCTION

ULTRABASE is a general purpose file management program. Its uses are manifold. For example you can file:

- An AMSTRAD USER magazine index
- Names and addresses of friends
- School class lists
- Booklists
- Client/customer lists
- Record collection

Description

This is a very versatile program indeed, and it can take some time to master all of its subtleties however, it is simple to use the standard features which are:

- Saving the file on cassette/disc.
- Loading a previously recorded file back from cassette/disc.
- Displaying individual records on the screen or printer.
- Searching for a particular match.
- Sorting on any combination of items in ascending or descending order.
- Printing of labels.

In this manual each menu option is described individually, and a complete section is devoted to demonstrating the features of ULTRABASE. The demonstration makes use of a file called **PEOPLE** supplied together with the program.

Terminology

Throughout the manual we shall be using the following terms:

- File** An organised collection of related records.
- Record** – A collection of related items of data.
- Field** One single item of information, a section of a record.

Here is an example of the use of the terms, in the next chapter we have a **FILE** of people. Each **RECORD** relates to one person; and each **FIELD** describes one attribute of that person, listed below are the fields that comprise each record:

FIELD CONTENTS

- 1 Title & Initials
- 2 Surname
- 3 Address line 1
- 4 Address line 2
- 5 Address line 3
- 6 Sex
- 7 Date of birth
- 8 Number of Children
- 9 Height (in metres)

The **PEOPLE** file contains 20 records each comprising the 9 fields listed above.

Special Keys

Note: **ENTER** means press the ENTER key.

ESC means press the key marked ESC at the top left hand corner of the keyboard.

SECTION 2

GETTING STARTED

Disc Version

Run the ULTRABASE program by inserting the disc. Type:

```
run"disc ENTER
```

Cassette Version

Hold down the **CTRL** key and press the small **ENTER** key on the numeric keypad. You will be prompted to press the play button on the datacorder and then press any key on the keyboard, now wait while ULTRABASE is loaded.

Set-up Procedure

As soon as ULTRABASE has loaded you will see the message:

SET-UP PROCEDURE

Maximum number of fields:

Maximum number of records:

Just press 'ENTER' for default of
fields=10, records=200

Respond by pressing **ENTER ENTER**. This will set up what is called the default values; this means the most commonly used values. Later on you may wish to enter different values, but for the moment 10 fields and 200 records is ample.

Menu

Immediately after selecting the number of fields and records you will see the **Main Menu**, you will see this a lot during the use of the program. Note that you can always return to this main menu by pressing **ESC**

Mem=12055 U L T R A B A S E

- A. Set up file name
- B. Enter file description
- C. Look at, or alter a record
- D. Load data file
- E. Save data file
- F. Enter search data
- G. Print (and/or search) file
- H. Printer line length
- I. Sort
- J. Clear Records
- K. Cat / Erase / Tape / Disc
- L. Reclaim Memory
- M. Start again completely
- N. Stop the program.

OPTION?

The main body of this manual (Section 4) covers the facilities of ULTRABASE in the order in which they occur on the main menu.

Users familiar with databases in general are referred to that section.

The section immediately following this uses a sample file (provided on the disc or cassette) to take you through the salient features of ULTRABASE. Newcomers to databases are referred to this. You may then use the following sections, which appear in 'menu' order as a reference.

SECTION 3

A DEMONSTRATION

This section will assist those unfamiliar with databases to get started with ULTRABASE. Throughout this section we will be using a ready-made file called PEOPLE provided on the cassette/disc. The file contains 20 records, and each record comprises 9 fields of varying types and lengths, as follows:

FIELD	TYPE	LENGTH	TITLE
1	S	10	Title & Initials
2	S	10	Surname
3	S	20	Address line 1
4	S	20	Address line 2
5	S	20	Address line 3
6	S	1	Sex
7	S	6	Date of birth
8	I	2	Number of Children
9	N	4	Height (in metres)

The first process will be to obtain a printout of the file so that we can refer to it during this demonstration.

During the demonstration I will refer to two keys in particular, these are:

ESC means press the key marked ESC found at the top left of the keyboard.

ENTER means press the key marked ENTER

Load and run ULTRABASE as described in section 2, and choose the defaults. You will then be presented with the main menu:

```
Mem=12055 U L T R A B A S E
-----
A. Set up file name
B. Enter file description
C. Look at, or alter a record
D. Load data file
E. Save data file
F. Enter search data
G. Print (and/or search) file
H. Printer line length
I. Sort
J. Clear Records
K. Cat / Erase / Tape / Disc
L. Reclaim Memory
M. Start again completely
N. Stop the program.
```

OPTION?

Select option A to enter filename

Type filename PEOPLE (upper or lower case it doesn't matter)

Select option D to load the file (cassette users start the datacoder)

From Record number: **ENTER**

To record number: **ENTER**

Records are loaded. Watch the top right hand corner of screen.

Select option C and view record 1.

Now type R19 **ENTER** to look at record 19, the screen will look as follows:

```
Mem=19333 BEEBUG ULTRABASE  Record=19
-----
Field          Data
1 Title and i <Mr A B >
2 Surname      <Safari >
3 Address 1    <89 West Drive          >
4 Address 2    <Computer Town        >
5 Address 3    <Hampshire             >
6 Sex          <M>
7 D o B        <450804>
8 No of Child <8 >
9 Ht (m)       <1.72>

                          Filename:PEOPLE
-----
      Enter field number or use ← → ↑ ↓
A)ll      R)ecord no.      E)rase  D)ump
ESC for menu.                Command?
```

Press **→** to view record 20

Press **↑** to move to record 1

Press **↓** to move to last record on the file (record 20)

Try entering a completely new record in record 21, proceed as follows:

R21 **ENTER** to move to record 21

A **ENTER** ready to enter all fields

Master J **ENTER**
Lewis **ENTER**
22 Green Street **ENTER**
Green Street Green **ENTER**
Redbourne **ENTER**
M **ENTER**
850131 **ENTER**
0 **ENTER**
0.43 **ENTER**

The record is now complete. If you have made a mistake in field 2 say, then respond to Command? 2 **ENTER**

The cursor will move to field 2 ready for your enter your data, upon starting to enter this new data the field is immediately cleared first.

Now let us print a copy of records 15 to 21. We will not bother about printing the first two lines of the address, in other words we will only print fields 1, 2, 5, 6, 7, 8, 9

ESC returns to the menu
G selects the printout option

From Record number: 15 **ENTER**
To record number: 21 **ENTER**

PRINT FIELDS: 1,2,5,6,7,8,9 **ENTER**

Screen, Printer or Labels (S/L/P?) Press P if you have a printer.

The printed output will be as follows:

U L T R A B A S E

File name: PEOPLE
Date created: 06.07.85
Last updated: 18.09.85
Date Printed: 18.09.85
Listed from record: 15 to 21
Print fields are: 1,2,5,6,7,8,9

Title and initials	Surname	Address 3	Sex	D o B	NC	Ht (m)
Dr. B.	Muir	Hampshire	M	391228	4	1.71
Dr. B.L	Roberts	North London	M	421206	2	1.62
Captain R.	Rodgers	Tyne and Wear	M	180412	12	1.80
General B.	Rosko	Essex	M	451216	4	1.71
Mr. A.B	Safari	Surrey	M	450804	8	1.72
Mr J	Shatner	Bedlam	M	411210	2	1.66
Master J	Lewis	Redbourne	M	850131	0	0.43

Number of records is 7

32 10.65

The file was originally in ascending order of surname, however with the addition of Master Lewis the ordering is no longer correct. Nothing lost we proceed to sort the file:

ESC returns you to the menu
I selects the sort option

From Record number: **ENTER**
To record number: **ENTER**

Sort List: 2 ENTER This means sort on field 2.

A few seconds later the file is sorted.

If we have completed all the amendments and additions to the file we must save it. Rather than lose our original copy of the PEOPLE file let's save this under a new name PEOPLE1: proceed as follows from the main menu:

A to enter new filename
PEOPLE1 **ENTER**

E to save the sorted file

From Record number: **ENTER**
To record number: **ENTER**

As a final example let's print a list of people who are less than 40 years old on Dec 31st 1985. You will notice that in the file the date field is stored backwards to enable sorting and searching to be performed accurately. (See appendix 4 for details). Therefore 40 years earlier than Dec 31st 1985 should be represented as 451231.

F This option enters search data
3. D o B >"451231" **ENTER**
G to print file

From Record number: **ENTER**
To record number: **ENTER**

Screen, Printer, Labels (S/P/L?) P

Print List: 0,3,7 ENTER

Note the use of field 0 to obtain the record numbers together with surnames and dates of birth. The printed output will be:

U L T R A B A S E

File name: PEOPLE
Date created: 06.07.85
Last updated: 18.09.85
Date Printed: 18.09.85
Listed from record: 1 to 21
Print fields are: 0,2,7

Search match list is:
7 D o B >"311245"

REC Surname D o B

5
Curtis
521213

9 Gregory 670203
10 Hartnup 480824
11 Hodgson 460908
15 Lewis 850131

Number of records 5

The reader is referred to Section 4 which details the features formally, and also covers a number of the more advanced features of ULTRABASE not treated in the previous examples.

SECTION 4 – REFERENCE

This reference section is organised by menu option, though it is prefaced by a few general comments:

Typical Procedures When Using ULTRABASE

When using ULTRABASE please bear in mind that the valuable data file that you are typing in is never saved to cassette/disc unless you tell it to, you must do this via option E. So even if you make any additions, insertions, deletions or amendments to the file you **must** save the file using option E before quitting the program.

The very first time that you use ULTRABASE to set up your own datafile you will work through the options in the following order:

- A Give your new file a name.
- B Create a description for your new file.
- C Enter data into your new file. You will stay in this option for a while, until you have entered a number of records.
- E Save your newly created data file to disc/tape.

After using these four options it is up to you how you proceed, for example:

If you wish to enter more data select option C. There is no need to load the file, because the action of saving the file does not remove it from the computer, it merely copies the file to cassette/disc.

If you wish to obtain a printout of the data entered so far, select option G

If you wish to examine your records, perhaps with a view to editing them use option C, and so on.

If you have finished using ULTRABASE select option E, followed by option N.

Sorting and printing selected lists is more complex and you should refer to the relevant sections for a detailed description.

MENU OPTIONS A: SET UP A FILE NAME

This option allows you to change the currently used filename. When starting up, you will need to use this option first before you can create a new file or load a previous file from cassette/disc.

When you select A from the main menu, the following will appear:

New filename > <

printer. Also it will not know how many, and what type of characters to allow you to enter when typing in the data.

Upon entering option B you will be presented with the following screen:

Record Description for ALBUMS

```
-----  
Field Type Length Title  
  1      S      0  
  2      S      0  
  3      S      0  
  .      .      .  
  .      .      .  
 15      S      0  
-----  
Enter number of field to be input or  
A for all. 'Esc' for menu. Command?
```

You will notice that the column headed Title is empty. You must proceed to complete this, together with the Type and Length columns. In this case you will only be entering 5 fields.

When starting this package afresh you should have entered just 5 fields in the "Set-Up" procedure described earlier. You can still do it now if you wish, by selecting the Option M. (Start again completely) from the menu. See section 2 entitled "GETTING Started" for precise details.

Proceed with the entry of your file description by pressing A for entry of 'All' fields. The cursor will move to the first field and you can now type:

S **ENTER** 25 **ENTER** Album Title **ENTER**

The purpose of the S is to tell the computer that the data is to be entered here is String data, ie data that can be any collection of characters. In some instances such as 'Age' you would enter an I to tell the computer that only Integer data can be entered. The other option is N for Numeric; numeric data is data which you wish to be able to take decimal values, for example 'height'.

The number 25 following the S is the length of the field (the number of characters that can be entered for this field. Try and keep this to a minimum because this is where you can waste excessive amounts of storage unnecessarily. (25 is the maximum the package will allow, however if this is insufficient, you can always allocate two fields to Album Title if you require a longer field.

You will now see the cursor move opposite the second field. Repeat your entries until you have entered all 5 fields. Now just press **ENTER** when

opposite field 6 and your entry will be complete. (Pressing **ENTER** under Type abandons input and returns to Command at the foot of the screen.)

If you make a mistake it is best to continue your entries until you have done all 5, and press **ENTER** to the 6th field. Now you can correct each one by moving to the respective field (just enter the field number instead of the letter A from Command?).

When complete the screen should look like this:

```
Record Description for ALBUMS
-----
Field Type Length Title
  1     S    25  Album Title
  2     S    25  Artists Name
  3     S     1   Medium
  4     S     6  Date bought
  5     S     5  Ref. Number
  6     S     0
  .     .     .
  .     .     .
15     S     0
-----
Enter number of field to be input or
A for all. 'Esc' for menu. Command?
```

Once you are satisfied with the record description you will next want to enter data into your file. Press **ESC** to return to the Menu.

You should now move to option C and enter data in a similar manner to the 'file description' sequence that you have just done. The only difference here is that you may enter a record number before typing in the data. Use R1 **ENTER** to enter data into record 1 etc.

Compare this with the file description for the People file, this can be looked at and altered at any time by selecting option B from the menu. If you have just created a new file description then save the file first (even though it is empty. Note that when saving the file, the file description is automatically saved first).

MENU OPTION C – LOOK AT OR ALTER A RECORD

This option allows you to look at or alter the data held in any particular record. If you are processing the demonstration PEOPLE file and are looking at record 19 the screen should appear as follows:

Mem=19333 BEEBUG ULTRABASE Record=19

```
-----
Field          Data
1 Title and i <Mr A B      >
2 Surname      <Safari    >
3 Address 1    <89 West Drive      >
4 Address 2    <Computer Town      >
5 Address 3    <Hampshire          >
6 Sex          <M>
7 D o B       <450804>
8 No of Child <8 >
9 Ht (m)      <1.72>
```

Filename:PEOPLE

```
-----
Enter field number or use ← → ↑ ↓
A)ll R)ecord no. E)rase
D)ump
ESC for menu. Command?
```

Whenever a screen is displayed always look at the bottom lines. These hold suggestions, error messages, or prompts for further instructions. In this case if you want to look at a particular record other than the one displayed you can press the cursor keys or enter R 10 **ENTER** if you want to look at record 10. The screen display above shows record 10. Alternatively you could enter R **ENTER** and you will be prompted to enter the record number. Try entering R 10 **ENTER** and you will see the data relating to a different person on the file.

SUB-OPTION E

E will erase the whole record or just individual fields. For example E 5 **ENTER** will just erase field 5. Whereas E **ENTER** on its own will erase the whole record.

SUB-OPTION D

D will dump a copy of the screen to the printer.

CURSOR KEYS

These allow you to move within the file as follows:

- ←** move back to previous record
- move forward to next record
- ↑** move to last active record in file
- ↓** move to record 1

Altering the Record on Display

To effect an alteration, or enter new data to the record displayed, you either enter the number of the field to be altered, or you press A to run through them all. For example if you wanted to change field 6 (the sex) from M to F you would press 6 **ENTER** and the cursor would move to field six, you then type F **ENTER**

As soon as you enter the new data the original contents are blanked out.

To return to the main menu at any stage you press **ESC**.

Pressing **ENTER** to an empty field will restore its original contents.

Using the above technique, you can easily construct new records or modify existing ones.

MENU OPTION D: LOAD DATA FILE

The data is stored on cassette/disc and before it can be processed it must be loaded into the computer. This option performs that function.

You can specify where in the file you want the data loaded, normally you would load the data into records 1 onwards, but under certain circumstances you may want to load a file onto the end of an existing file, or provide a set of blank records at the start of a file.

However in most cases proceed as follows. You will see the following message:

```
From record number:
To record number:
```

Just press **ENTER ENTER** and the whole file will be loaded. If you only wanted to load the first 10 records from tape, but you wanted them loaded into record numbers 20 to 29 then you would respond:

```
From record number: 20
To record number: 29
```

Now wait and watch the top right hand corner of the screen as the file is loaded, you will see the record numbers clocking up as the file is read.

See option J for how to create a set of blank records within a file.

MENU OPTION E – SAVE DATA FILE

The data that you have entered is currently only held in the computer and will be lost when you switch off the machine or exit ULTRABASE using options M or N. In order to save it permanently it must be transferred to cassette/disc.

In normal circumstances you would simply press **ENTER** to both:

From record number:
To record number:

and the whole file will be saved. Watch the top right hand corner of the screen to see the records clocked up as they are saved.

IMPORTANT: Make sure that there is a cassette/disc in the machine before responding to the previous prompts. A disc or tape error could cause your file to be lost.

When saving is complete the menu will reappear, and the file has been saved.

SAVING PART OF A FILE

Suppose that you have a file on which you have recorded 40 records numbered 1-40. Also suppose that you wanted to save only records 10-20 inclusive.

Simply enter:

From record number: 10
To record number: 20

NOTES

Note that if you modify a single field on the file then you will have to re-save the whole file. So it is best to perform **all** the modifications that you require before saving the corrected file. If you have a tremendous amount of modifications then it would be safest to re-save the file in batches after completing a certain number of the alterations. This is because of unforeseen circumstances, eg the cat walks on the keyboard, there is a power cut, the program runs out of memory (See appendix 2). It should go without saying that you should use a fresh cassette, or save the file under a different name on disc, and not over-record your only copy of the file. (See appendix 3 for advice on back-ups.)

MENU OPTIONS F – ENTER SEARCH DATA

Using option F on the menu you can obtain a printed list based on your precise requirements, for example lists containing:

All the males.
Females under 18 on 1st Sept 1985.

Those people with a surname beginning with S with more than 2 children.

List sorted into alphabetical order of surname.

Males in number of children order, followed by females. etc.

A little bit of practice is needed to produce the rules for selection. Those with **a knowledge** of Basic programming will probably find it quite easy.

Option F does not initiate a printout: once you have set up your search parameters you must select option G for the printout itself.

For the PEOPLE file the screen looks like this:

```

                                SEARCH PARAMETERS
-----
Field                           Match command
1 Title and i
2 Surname
3 Address 1
4 Address 2
5 Address 3
6 Sex
7 D o B
8 No of Child
9 Ht (m)

To search select option G from main menu
-----
Enter number of field to be input or
A for all.  ESC for menu.  Command?
```

The idea is to enter the matching criteria against their respective fields.

An example would be:-

In order to specify that we only want those people who have more than 2 children we proceed as follows:

8 ENTER

The bottom of the screen changes and now reads:

```

-----
Enter match description for example....
Example 1:      >1.68
Example 2:      >=5 AND <=9
```

The bottom of the screen is just for reference and gives examples for you to follow. Your requirements would be:

8 No of Child >=2 **ENTER**

The following are examples of valid match commands:

Example 1: All females 1.6m tall and over

SEARCH PARAMETERS	

Field	Match command
1 Title and i	
2 Surname	
3 Address 1	
4 Address 2	
5 Address 3	
6 Sex	"F"
7 D o B	
8 No of Child	
9 Ht (m)	>=1.6

To search select option G from main menu

Enter number of field to be input or
A for all. ESC for menu. Command?

Example 2: People with between 2 and 4 children (inclusive) who live in
"Computer Town":

SEARCH PARAMETERS	

Field	Match command
1 Title and i	
2 Surname	
3 Address 1	
4 Address 2	
5 Address 3	>="Computer Town"
6 Sex	
7 D o B	
8 No of Child	>=2 AND <=4
9 Ht (m)	

To search select option G from main menu

Enter number of field to be input or
A for all. ESC for menu. Command?

(It is advisable to use >="Computer Town" in case there are hidden spaces after the name, in which case ="Computer Town" would not match.)

ENTRY OF MATCHES

String matches must be enclosed in quotes eg:

`= "Bromley" OR = "Nottingham"`

The following operators may be used:

`> < = >= <= <> (notequal) AND OR ?`

but only one **AND** or **OR** may be used in a single match.

Searches are case specific, so certain searches may not find a match. For example if you were not sure if Bromley was held as such or perhaps as BROMLEY then a suitable search would be:

`= "Bromley" OR = "BROMLEY"`

FUZZY SEARCH

ULTRABASE contains a special option called a fuzzy search which allows greater power and flexibility within searching. Whereas the normal search requires an exact match, the fuzzy search permits rough matches to be made. It works on the principle that any occurrence of the string within the field in question, will be classed as a match.

The **?** operator is the fuzzy search operator and only works on string fields. It should therefore always be followed by a string. For example:
`? "HP"`

The effect of this is to search the field for the occurrence of "HP" anywhere within the field.

Example 1:

`1 Title and initials ? "Mr" OR ? "Dr" ENTER`

will find all people with a title Mr or Dr.

Example 2:

`2. Surname >= "M" AND < "T" ENTER
3. Address 1 ? "Road" OR ? "Rd" ENTER`

will find all people with a surname starting with the letters M to S inclusive who live in an address whose first line has Road or Rd in it.

MENU OPTION G – PRINT (AND/OR SEARCH) FILE

Provided that you have a printer, and the program has been configured for your particular printer (See appendix 1) you can obtain a printout for all or part of the file by selecting option G from the main menu. However, for the full output of all fields in the PEOPLE file the output is extremely wide and requires paper that is about 132 characters wide. If you haven't got a printer that will support that width then the output will look messy unless you restrict the number of fields to be printed or can turn your printer to condensed mode printing. (You can select the width of the printed page using option H. This is covered in the relevant section).

For the purpose of the demonstration let us print just three fields from the PEOPLE file: the surname (field 2), sex (field 6) and height (field 9). Proceed as follows:

From record number: 1 **ENTER**
To record number: 5 **ENTER**

PRINT LIST: 2,6,9 **ENTER** Print fields 2,6 and 9 only, in that order.

Screen, Printer, Labels (S/P/L?) P
Display on printer, rather than screen or labels.

The printer should now print the following:

SURNAME	SEX	HT (m)
-----	---	-----
Andrews	M	1.70
Baxter	F	1.83
Brooker	F	1.66
Chandler	F	1.55
Curtis	F	1.58

		8.32

Notice that at the bottom of the column headed "height" there is a number, this is the total height. This total is always printed for N or I type fields.

USE OF FIELD ZERO WHEN PRINTING RECORDS

Field zero can be extremely useful when printing records.

Field zero holds the record number, so that lists can be produced with their corresponding record number, for example:

PRINT FIELDS: 0,2,1 **ENTER**

will produce a list of surname and initials with record numbers in the left hand column. One use for this may be if you wanted to erase from the file all those people whose names began with 'Ro'. You would define the search screen as:

```
2 Surname    >="Ro" AND <"Rp" ENTER
```

When you printed the lists using:

```
PRINT FIELDS: 0,2 ENTER
```

this would produce:

```
REC Surname
---
16 Roberts
17 Rodgers
18 Rosko
```

From this you would know that records 16, 17 and 18 are the ones that need deleting.

LABEL PRINTING

The only type of label paper that is supported for use in this package is the type that has a single label across the page. However, if you use paper with two labels it won't be wasted, because you can always re-thread it the other way round once you have used one of the columns.

In order to print on labels, you must specify the correct fields. In the 'PEOPLE' file this would be 1,2,3,4,5 **ENTER** each would appear on a new address line, however when the prompt comes:

```
Join fields 1 to 2 (Y/N)?
```

then you respond Y so that the Title & Initials are placed on the same line as the Surname.

FIELD ZERO WHEN PRINTING LABELS

You can use record zero here to enable you to get blank lines between labels so that they match the position of the labels on the paper. Printing field 0 in label-mode results in a blank line being printed. Suppose, for example, that you only wanted to print Initials, Surname, and County on the labels, for example:

```
Mr I Jones
Sussex
```

and also suppose that you wanted three blank lines to start, followed by the Name and County, followed by three blank lines to finish. You would use:

PRINT FIELDS: 0,0,0,1,2,5,0,0,0 ENTER

and you would need to respond to the question

Join fields 1 to 2 (Y/N)? Y

You will have to get used to the number of blank lines required between labels in order to force the computer to print blank lines using field 0. Say, for instance, that you require 3 blank lines between labels; you can do this in many ways but here are three of them:

0,0,0,1,2,3,4,5	ENTER
1,2,3,4,5,0,0,0	ENTER
0,1,2,3,4,5,0,0	ENTER

Practise with the PEOPLE file until you feel confident.

PRINTING SORTED AND SELECTED LISTS

In order to be able to print sorted or selected lists or labels we will need to explore options F and I, please refer to the relevant sections.

MENU OPTION H – PRINTER LINE LENGTH

This option allows the package to work on a range of different printer widths. It is set to 80 as standard. However if you have a wider printer, or are using condensed print a width of 132 characters could be used.

If you select a width less than the width of the paper, you will get printing of a record across more than one line, not very readable though. So set the width to the maximum available.

See Appendix 1 for details on how to change the value of the line length permanently.

MENU OPTION I – SORT

One of the particularly versatile features of this package is its powerful sorting capabilities.

You may sort the whole file or just a part of the file if you wish. Enter the relevant range of record numbers when prompted. Pressing **ENTER** to each will select the whole file.

Sorts are specified in much the same way as the PRINT FIELDS are specified. For instance:

Sort FIELDS: 2,1 **ENTER**

would mean sort on field 2 (Surname), and then, if there are two items in field 2 that are the same, on field 1 (Title and initials).

To sort the PEOPLE file with females first, males second, in order of the number of children, and if both sex and number of children are the same, sort in surname order, would be achieved with:

Sort FIELDS: 6,8,2 **ENTER**

The sorts so far have been in ascending order, with numbers first, and the letter A before the letter Z. If you want the sort in descending order then you simply place a minus sign in front of the required field. Any or all of the fields may be negative.

Example 1: **Sort FIELDS: -6,8,2** **ENTER**

Example 2: **Sort FIELDS: 2,-9,-8,6** **ENTER**

Practise using the PEOPLE file, and you will find that sorting is very easy.

SORTING ORDER

Upper case letters are sorted before lower case letters, numbers are sorted before both. For example here is a sample sorted list:

BLOGGS
Bloggs
W7
WILLIAMS
WiLLiams
Williams
bloggs
w7
wiLLiams
williams

MENU OPTION J – CLEAR RECORDS

This option allows you to clear a batch of records completely. Once cleared there is no way of retrieving them unless you have previously saved them to disc or cassette, so beware.

The message:

From record number:
To record number:

appears and you should enter the required range of records to be cleared.

MENU OPTION K – CAT / ERASE / TAPE / DISC

Upon selecting this option a sub-menu will appear:

A Catalogue Tape / Disc
B Erase File from Disc
C Tape Filing System
D Disc Filing System

Enter Choice A – D
Press SPACE for main menu

OPTION A

will produce a catalogue from the disc or tape.

OPTION B(disc users only)

will prompt for a filename, this file will then be erased from the disc. Note that files cannot be erased from cassette with this option.

OPTIONS C and D

allow the Amstrad to be switched between cassette and disc filing systems, for example if you wish to pass a copy of your data file to a person who only has a cassette system.

MENU OPTION L – RECLAIM MEMORY

This option is included for users of the AMSTRAD CPC464. Automatic memory reclamation takes place on other models, although it can be performed manually if required, using this option.

By monitoring the Mem=????? value in the top left hand corner of the screen you will notice that it reduces gradually with every operation. The user has no control over this reduction, it is simply the computer's operating system keeping tabs on what you are doing.

The point here is that when the memory value reaches a very low level (less than 1000 say) in reality the computer actually has significant amounts of memory left. You may reclaim this by pressing option L.

On the CPC464 reclaiming the memory can take up to 45 seconds, so whereas memory reclamation is performed automatically on the CPC664 and CPC6128, it is preferable for the user to initiate reclamation manually at a convenient moment on the CPC464. If you forget however, memory reclamation is performed automatically and you are informed if memory reduces below 800.

MENU OPTION M – START AGAIN COMPLETELY

Once you have entered ULTRABASE and defined the number of fields and records you will be using, they are fixed until the package is re-started. To re-allocate the number of fields and records select this option.

WARNING – you will lose any data in memory, so make sure that you have saved it using option E first.

MENU OPTION N – STOP THE PROGRAM

This is the correct way to end running ULTRABASE and you should get into the habit of ending via this option. It will restore the computer's original settings ready for running another program.

You will be reminded to save your file before exiting.

APPENDIX 1

PRINTER CONFIGURATION

When you type `run"disc` two programs are run consecutively. The first produces the BEEBUGSOFT and ULTRABASE displays and sets up any pre-defined options such as for your printer. This program immediately runs the second program.

In the first program called "disc" lines 1000-1999 are reserved for the user to set up any printer configuration commands that are required.

Line 1010 sets the variable `LL=80`, this is the line length used during printout. If you are always using a printer with a line length of 132 characters then change this value to `LL=132`, and re-save the program.

As an example to set an Epson printer to condensed mode you would place the following lines in the program and then re-save it:

```
1100 PRINT#8, CHR$(15);
```

APPENDIX 2

MEMORY WARNINGS

The program occupies space in the computer's memory. The remaining memory is used for the data, however we must always ensure that all the data fits into this remaining memory.

The limit is 2000 data items. This can mean 200 records of 10 fields, 400 records of 5 fields, 1000 records of 2 fields etc.

This may appear to be a conservative estimate, but experience has shown that continuous sorting and printing on very large files can erode most of this.

APPENDIX 3

FILE BACKUP SUGGESTIONS

For valuable files it is recommended that you follow the Grandfather, Father, Son approach to data file back-ups. By that it is meant that you should always keep at least three generations of file. The three cassettes/discs should be labelled G, F, and S and whenever a new save is to be done then this should be saved on the grandfather file. This will now become the Son, the Father will become the Grandfather and the Son will become the Father. It may sound complicated, but it isn't. It is an essential minimum safeguard against loss of data. For very valuable files three cassettes/discs should be used to guard against the loss or destruction of a single cassette/disc.

You may prefer to invent a system of your own, but nevertheless it is still advisable to keep backup copies of ALL data files.

On a disc system the computer will automatically produce a file with the suffix **.BAK** whenever you re-save the file under the same name as it was loaded. However, the **.BAK** file will not be the same as the current file, it will be a copy of the file **before** it was modified.

APPENDIX 4

NOTE ON DATE OF BIRTH FORMAT

If the date of birth is to be held in just one field instead of three (to save valuable memory space) then it is best that it be held in year/month/day form (eg 2nd April '82 would be held as 820402). The reason being that if it needs to be sorted, then it will be sorted correctly, whereas if it were held in day/month/year form it would not. To illustrate this suppose we have these three dates: 170481, 240180, 300382. This is their correct sorted order, but not their correct date order. Whereas 800124, 810417, 820230 are in correct numeric and date order. The ordering process is not upset if separators are used between the year, month and day eg 85.07.02 or 84/12/09.

It is also advisable to define the date as a string in the file description, rather than a numeric amount for two reasons:

1. Leading zeroes would not be printed if it were a number.
2. Totals won't be produced at the bottom of the date column when printing is complete if it is processed as a string.

APPENDIX 5

SUPPLEMENTARY OPERATIONS

A great many extra things can be achieved besides the standard operations. For example:

Adding an Extra Field

Make sure that the file has been saved.

Load it back making sure that in the "set-up" option you have specified one extra field (ie if it currently has 5 fields, then select 6 fields).

Enter B from the main menu.

Add the description for the new field 6.

Enter option C and put data into all (or some) of the fields. When this is saved it will contain the extra field.

WARNING...if the file has been filled to near capacity with 5 fields say, then adding an extra field may mean that all the records cannot be read back from the file.

Appending Files

This can be achieved by loading the second file into a separate range of record numbers.

Inserting a Set of Blank Records

To provide a set of 10 blank records numbered 25 to 34 in a 50 record file called FRED proceed as follows:

- A Enter file name FRED
- D Load the file into the computer
- A Change name to FRED1

- E Save records 1 to 24
- A Change name to FRED2
- E Save records 25 to 50
- M Start again completely
- A Enter name FRED1
- D Load file into records 1 to 24
- A Enter name FRED2
- D Load file into records 35 onwards
- A Change name to FRED
- E Save whole file.

You now have a new file called FRED with 60 records of which the 10 numbered 25 to 34 are blank records.

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BEEBUGSOFT FOR THE AMSTRAD

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A general purpose file management package, supplied on disc or tape, allowing large amounts of information to be stored and processed. It is extremely powerful yet flexible and easy to use.

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For further information or a technical specification on any of our products, please write to:

The Software Manager, Beebugsoft, Dolphin Place, Holywell Hill, St. Albans, Herts. AL1 1EX.

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