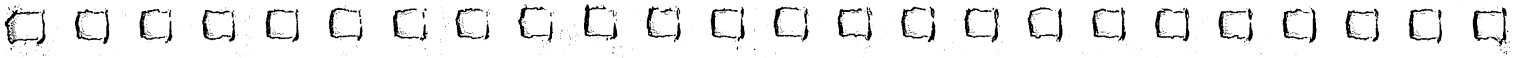
Precision Software

Superbase STARTER

The Computer Filing System
for your
Commodore 64



INTRODUCTION

This manual presents the Superbase database systems in different ways to suit individual learning preferences.

We recommend that everyone listens to the AUDIO LEARNING CASSETTE. This can be obtained on Registration. It takes you through the main Superbase activities:

* Setting up files
* Entering data
* Viewing data records
* Searching the database
* Updating records
* Obtaining screen and printed output

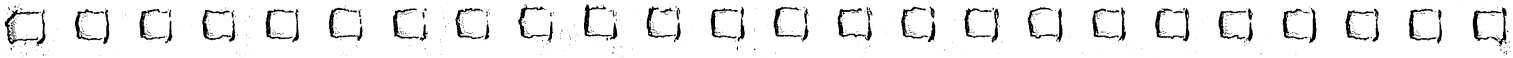
The REFERENCE SECTION is a kind of Superbase Encyclopedia, containing full details of all the Superbase Menu Options.

Most people find the Menu Options cover everything they need to do with Superbase. But for those who want to go a step further, we provide more advanced facilities, in the form of utilities and a full upgrade.

At the back, we've included some essential extra information:

* Printer control
* Error messages
* Glossary
* Maximum values

You'll find a REGISTRATION CERTIFICATE at the front of the manual. Please tear out the part that applies to you, fill it in, and mail it - TODAY! Then you'll be entitled to £5 off the normal cassette price. We'll also send you two FREE £5 vouchers and free copies of Precision Software's newsletter, PRECIS, which contains a technical support section and gives details of special APPLICATIONS TEMPLATES.



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APPENDICES

INSTRUCTIONS FOR RUNNING THE TUTORIAL

YOU'LL NEED

* A COMMODORE 64 or Plus/4 computer, comprising keyboard, disk drive unit and a monitor (either colour or black and white). It will also be useful if you have a printer, but this is not essential, as you can follow the audio tutorial with or without a printer.

* A SUPERBASE system disk.

* A blank, unformatted disk which we will show you how to format as a data disk.

* The SUPERBASE written Tutorial which contains information you'll need to complete the exercises in the Audio Tutorial.

* Paper and pen, in case you want to make notes.

HOW TO OBTAIN THE AUDIO CASSETTE

* Simply send off the Registration Certificate at the front of the manual, along with the appropriate voucher. This entitles you to £5 off the normal cassette price.

* You will receive your audio cassette by return of post.

HOW TO RUN THE TUTORIAL

* The procedure is quite straightforward. You start with your computer turned OFF and without a disk in the disk drive. If you have a printer, make sure it's properly connected. You sit at the computer and follow the instructions you're given in the written tutorial, or tape if you have one.

* Set aside enough time for the training session so that you don't have to rush. Remember, you're in control of the training session, so take as much time as YOU need, you won't get a medal for finishing in record time.

* Don't worry about making mistakes - most people do at first.

* You'll see that the SUPERBASE written Tutorials are split into three levels. Levels 1 and 2 are transcripts of the tape. Don't start level 3 of the Tutorials until you've completed the first two levels.

ADDITIONAL INSTRUCTIONS FOR RUNNING AUDIO TUTORIAL

* In addition to the above requirements, you'll need an ordinary cassette recorder, preferably with headphones to cut out distracting noise. Make sure you know how to PAUSE, STOP and REWIND the tape.

* Listen to the tapes carefully and follow the instructions you're given. If you miss anything or get confused, just wind the tape back and replay the bits you want to hear again, OR look at the printed versions of Tutorial 1 and 2, which contain an edited transcript of the tape.

* When you want a break, stop the tape until you're ready to go on.

SUPERBASE TUTORIAL - SETTING UP INSTRUCTIONS

LOADING SUPERBASE AND CREATING A DATA DISK

If you're using Superbase for the first time, we recommend that you now turn to Tutorial 1, and start the tape if you are using one. The Tutorial will tell you when to load Superbase. You can then follow these instructions for loading the Superbase program and creating a data disk. When you've done this, you can continue with the tutorial. Remember to switch the tape back on if you're using one.

You'll need your Superbase PROGRAM disk and an unused BLANK disk.

If you have any problems during these instructions, take the disk out of the disk drive and switch your computer system off. Then switch the system back on and start the instructions from the beginning.

1. First insert your Superbase disk in the disk drive and close the door. If you're not sure how to do this, refer to your Commodore User's Manual.

2. Load Superbase from the program disk into the computer's memory by keying in:

   ```
   LOAD"SB",8,1
   ```

3. Press RETURN.

4. You'll get a brief message telling you that the computer is searching, then you'll see the PRECISION SOFTWARE logo displayed. Superbase checks whether you are using a Commodore 64 or a Plus/4, and takes the appropriate actions. The screen will flash as Superbase is being loaded into your computer. The loading process will take about two minutes and you'll hear some noises from the disk drive, but don't worry.

5. When it's finished, you'll get a message:

   Remove Program Disk
   Insert Data Disk and Press Return
   or
   Press F1 to Create Data Disk

6. The program disk is the Superbase disk. Press the catch on the disk drive door inwards, then take the disk out of the drive and put in back in its envelope.

7. Normally you'd already have a data disk ready to put into the disk drive on which to store your information. But I'm assuming you haven't yet prepared one, so the next steps show you how to create a data disk ready to receive the information you're going to be entering.

8. Press 'f1' (as the message says) and you'll get another message asking you to insert a blank disk. So put your blank disk in the drive and close the door.

9. Press the RETURN key. You get another message asking for confirmation that you DO want to format this disk and delete any information held on it. The full message reads:

All Data on Drive 0 Will be destroyed, Are you sure?

10. Superbase is telling you to stop and ask yourself if there's any information on this disk which you may want to keep. There isn't, so press the letter 'Y' for Yes.

A prompt now appears:

Enter Disk name, id

Superbase is asking you to give the disk a name and an identification code so that the computer can tell which disk it's working on at any time. This name can be up to 16 characters long, and the identification code can be any two characters.

11. We'll call this disk:

work disk, a1

Key that in and press RETURN.

12. The new prompt reads:

Insert Source Disk

Your computer needs various pieces of information loaded into its memory before you can start using Superbase. These pieces of information are stored on the Superbase program disk, so the Superbase program disk is the SOURCE disk you must now insert into your drive. Remove the data disk from the drive and replace it with the Superbase disk.

13. Press RETURN. A message asking you to 'Please Wait' now appears in the top left-hand corner of the screen, and a series of dots appears across the screen. Superbase is in the process of loading the necessary information from the disk into the computer's memory. So wait until you get the next message.

14. The next message reads:

Insert Destination Disk

The destination disk the message is referring to is your data disk. What Superbase has done is to copy the information from the SOURCE disk (the Superbase disk) into the computer's memory. Now it wants to copy that information from the computer's memory onto the destination disk (your data disk).

15. Take the Superbase disk out now, and insert your data disk.

16. Press RETURN, and as before, you'll get a series of dots appearing across the screen while the computer copies the information onto the disk. Again, wait until you get the next prompt.

17. Depending on which version of Superbase you're using, you may need to repeat this copying procedure. If this is so in your case, you'll get the message asking you to insert your SOURCE disk again. So you'll have to go through the procedure again (starting at instruction 15). When you see the Commodore display on your screen, you're ready to move on to the next instruction.

18. That completes the data disk formatting procedure, and your data disk is now ready to accept any data you want to store on it with Superbase.

You have to format a new blank disk before you can use it as a data disk with Superbase. But you only have to go through this disk formatting procedure the first time you use each new blank disk (take a look at Chapter 14 for "Backup" and "Newdisk".)

LOADING SUPERBASE USING A PREPARED DATA DISK

19. Now you need to load Superbase into your computer once again. So remove your newly formatted data disk from the drive.

20. Insert the Superbase program disk into the drive.

21. Key in:

```
LOAD"SB",8,1
```

22. Press RETURN.

23. You'll get a brief message telling you that the computer is searching, then you'll see the PRECISION SOFTWARE logo displayed. The screen will flash as Superbase is being loaded into your computer. The loading process will take about two minutes.

24. When it's finished, you'll get a message

```
Remove Program Disk
Insert Data Disk and Press Return
or
Press F1 to create Data Disk
```

25. This time remove the program disk from the drive and insert your newly formatted data disk again.

26. Press RETURN.

27. The screen will now display prompts concerned with setting up your printer.

    The first prompt asks you to enter your printer type. If you have a Commodore printer, press RETURN. Your next prompt concerns line feed so skip straight to point 29 on the next page.

Enter the number '1' if you know you've got an Epson printer, and '2' if you've got a Daisywheel printer. If you aren't sure whether your printer is the Matrix (Epson) or Daisywheel type, we recommend you to select Epson (1).

28. If you selected '1' or '2', you are now prompted for Serial/Centronics/RS232 and for ASCII/CBM:

ASCII/CBM

The first prompt ask you to enter ASCII or CBM code. This code refers to the way that information is encoded for transfer to and from the printer.

If you're not sure which to select, a useful guide is to select ASCII for a Centronics or RS232 printer, or select CBM code if you know you have a special Interface fitted.

SERIAL/CENTRONICS/RS232

Select Serial ('s') if your printer plugs into a DIN socket in the back of the computer or disk drive.

If not, and you have a Plus/4, you simply select RS232 ('r').

If you have a Commodore 64, and the printer is not connected serially, we recommend that you consult your printer/interface documentation before answering the prompt.

29. Line feed On/Off

Most printers automatically do a line feed after a carriage return, but Superbase allows you to control line feed whether or not your printer has this facility.

There are four possible combinations:

Superbase line feed (set up by your response to the prompt)		Printer Line Feed (depends on printer)
1	ON	ON
2	ON	OFF
3	OFF	ON
4	OFF	OFF

Combinations 1 and 4 are wrong. 1 will produce double line feed like double spaced text. 4 will result in all information being on one line.

HIT RETURN ONLY!

30. Continuous print on/off

Select '1' to set continuous print off, so that Superbase pauses at the end of each printed page. Select '0' to set continuous print on.

31. Note: If you have selected RS232 you'll now be prompted to enter 'x' and 'y' values. You'll need to refer to your printer manual and consult Appendix C before answering this prompt.

32. Now if you are using an audio cassette switch it back on where you left off and continue with the audio tutorial. Otherwise, turn to Tutorial One.

TUTORIAL ONE

1.1 INTRODUCTION

Welcome to Superbase Starter, the complete database for Commodore computers from Precision Software. What follows is a transcript of the Superbase Audio Training Cassette which is available to you on Registration. The cassette covers the first two of the three tutorials. Tutorial Three, which is to be found only in the manual, goes a stage further, and covers some of the more advanced facilities of Superbase. By the time you finish all three tutorials, you should have a good understanding of how a database system actually works and be ready to set up your own system.

These tutorial sessions will take you through the basics of Superbase. Each tutorial takes you through the construction and development of an actual data file. You'll learn to use Superbase to store information, retrieve information, update it, print it and much more besides.

The best way to learn anything is to try it out for yourself, preferably with an expert to help you. That's the idea behind these tutorials. Basically you'll be guided through Superbase while you drive the computer. Don't worry, you won't break anything and you won't cause a disaster if you press the wrong button.

You'll be told exactly WHAT to do and WHEN to do it, so just follow the instructions. You'll find I'll be prompting you to do various things, for example, press a key, or enter some information. So, try things out for yourself as we go along. The Superbase functions have been designed to make them easy to use. You only need to press a few keys to start up the system, select the options and make a permanent record of your information. Remember you're in control, so work at your own pace and take as long as you need.

In these tutorials we're going to concentrate on the things you'll need to use Superbase on a day to day basis. At the end of the tutorial, you'll be able to explore all of Superbase's facilities for yourself.

1.1.1 GETTING YOUR COMPUTER SYSTEM UP AND RUNNING

The first thing to do is to check your computer's ready. Make sure all the components of your system are connected up properly and that they are switched on. If you're not sure how to do that, check with your Commodore User Manual.

If you have a printer, this should also be linked up and switched on. Again, consult your User Manual.

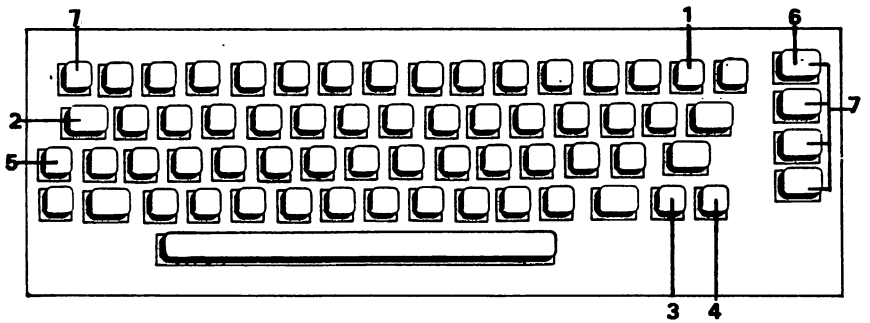
1.1.2 SOME OF THE KEYS YOU'LL BE USING

Before we start Superbase, let's have a quick look at your keyboard.

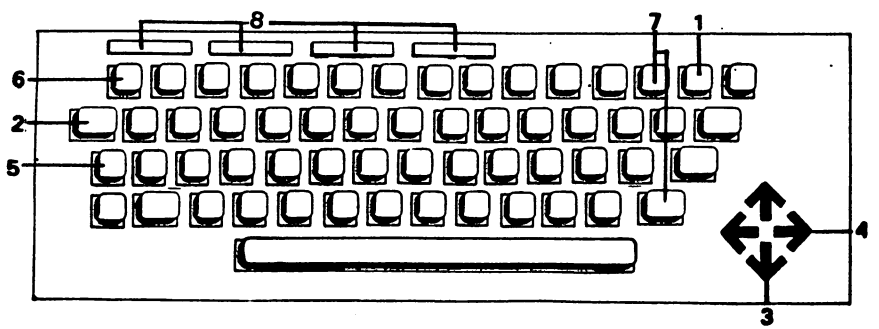
THE KEYBOARDS

The keyboards vary slightly on the Commodore 64 and Plus/4. Take a look at the diagrams below and make sure that you understand how to locate and operate all the special keys, especially the eight function keys.

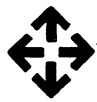
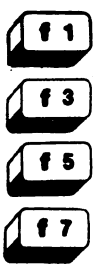
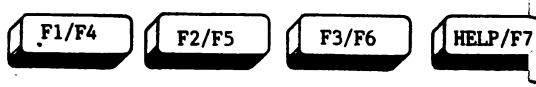
The Commodore 64



The Commodore Plus/4



KEYBOARD DIFFERENCES

DIFFERENCES	COMMODORE 64	COMMODORE PLUS/4
1 Legend		
2 Legend		
3 Legend		
4 Legend		
5 Legend		
6 Superbase Command Key		
7 Recall Key		
8 Function Keys:		

During this session, you'll be using all the ordinary keys together with:

The FUNCTION keys
The CURSOR MOVEMENT keys
The RETURN key
The SHIFT keys
And the INST/DEL key

If you can't locate any of these, take another look at the diagram provided.

THE SHIFT LOCK KEY

Find the key marked 'SHIFT LOCK' (it's on the left hand side of the keyboard). It's best to leave this key alone when you're using Superbase, as it can affect the way Superbase works if you leave it locked on by mistake. In general, try to use the ordinary SHIFT keys rather than SHIFT LOCK when you want to type a capital letter.

THE FUNCTION KEYS

Take a look at the pad of four keys known as the 'Function Keys'. They're marked with an 'f'.

Each one is assigned a job or in Superbase terms an 'OPTION', so that you can tell your computer to do a specific task by simply pressing the relevant function key, instead of having to press several keys to reach the same end. You'll be using these function keys a lot with Superbase.

Although there are only four separate function keys, each one doubles up giving a total of EIGHT. As you can see, each one has two options on it. You use the Shift key to get the other function on each key. For instance, if you were to press 'f1' on its own you'd operate function one, but if you 'shifted' the same key, you'd get the other function. Again you'll see how to use these in a minute.

1.1.3 LOADING SUPERBASE AND CREATING A DATA DISK

Before we go any further, we need to set up a disk for storing information or 'data'. Superbase is on one disk (the 'program disk'), but we want to store information on a separate disk (a data disk).

The instructions for loading Superbase and creating a data disk begin on page T-3. Remember, if you make any typing errors while you're following these instructions, use the **INST/DEL** key to correct your errors.

1.1.4 WHAT IS A DATABASE?

We're ready to start using Superbase. First let me explain some of the terms we'll be using. To begin with, what is a 'Database'?

Well if you like, it's an electronic filing cabinet! And just as in an ordinary filing cabinet, the information is stored in batches called 'files', and you can think of Superbase as being an office containing a number of electronic filing cabinets.

So you have a number of FILES in a number of DATABASES within Superbase. And you can have as many DATABASES as you want.

Superbase will allow you to hold up to fifteen files in each database you create. And each of the files is made up of separate bits of information known as RECORDS. For example, you may have a file containing names of companies. In that case each company name would be one RECORD. (But don't worry about remembering all these terms right now, they'll make more sense when we come to use them.)

1.2 CREATING A DATABASE AND A FILE

Now let's have a go at using Superbase to create a file for holding the names and addresses of your friends and business contacts.

You should see a message at the top of the screen which reads:

mode : processing

1.2.1 GIVING THE DATABASE A NAME

You get a message asking you to ENTER A DATABASE NAME. We are going to set up a database called 'TRAINING', so key in the word 'TRAINING' (in upper or lower case) now. Remember, if you make a typing error, use the INST/DEL key to put it right. And then press RETURN.

You should see a message which says **'Database does Not exist: Create it?** Well you do want to create it, so press the letter 'Y'.

You're now in your first database. The next thing you must do (as the prompt says), is to enter a name for the file you're about to create.

Note: Double quotes and spaces should not be used in database names and filenames.

1.2.2 GIVING THE FILE A NAME

This one's for names and addresses, so we'll call it:

addresses

Key that in and press RETURN.

The next prompt is telling you this file does NOT already exist and it's asking if you want to use this name, 'addresses' to create a new file. Well you do, so press the letter 'Y' to answer 'Yes'.

After a few moments, you get a message which reads:

mode : Format

The rest of the screen goes blank.

1.2.3 THE FORMAT MODE

Remember, we want to create a file to hold names and addresses, and we want them in an organised format. That's exactly what you do in the FORMAT MODE. You start with a blank screen and draw an empty form with spaces for the information you want to store. If you like, it's a template for the records you'll be storing later.

Let's start designing the layout of our first file.

1.2.4 DESIGNING THE LAYOUT OF THE FILE

This file's going to hold names and addresses of friends and business contacts. For friends we'll keep a record of their birthdays and for business contacts, a record of their profession.

We're going to split each part of the name and address into separate entries or 'FIELDS', as they're known. We'll have a separate field for 'Surname', a separate field for 'Firstname' and so on. You'll see what I mean if we have a go setting up some fields.

SETTING UP THE FIRST FIELD

SETTING FIELDNAMES

Look at the screen and you'll see the cursor; that's the small flashing square which marks where you are on the screen. Use the cursor movement keys to move the cursor down one line and then to the right one space,

And now key in the first fieldname, which is:

Surname

To finish setting up this field, you have to tell Superbase how much space you're going to allocate for 'Surname', in other words, you have to set the 'field length'.

To set the field lengths you use function key number 1, that's 'f1'. So first move the cursor one space to the right (that's where we want the field to begin), and the press the function key marked 'f1'. The word 'mode' at the top of the screen now flashes to tell you that Superbase is ready to set the field.

SETTING FIELD TYPES

We can set up various types of fields; text fields, date fields, numeric fields and so on, all of which I'll explain as we go along.

Right now we're going to make this 'Surname' field the 'Key' field. To do this, press the letter 'K' once.

And you get a prompt asking you to 'Set Key'. Superbase is asking you to set the field length. You'll also see a small rectangular marker which tells you where the 'Surname' field will start.

SETTING FIELD LENGTHS

On the right-hand side of the message area you'll see the number 1. This indicates the length of the field at the present moment. As you increase the length of the field so this number increases.

Not many people have surnames more than 15 letters long, so move the cursor across to the right until the indicator reads '15'. If you go too far across, simply move the cursor back until it's in the right place.

If your field length indicator now reads '15', press RETURN.

You'll now see a square marker appear. This marks the end of the 'Surname' field.

1.2.5 A SUMMARY OF THE FIELD SETTING PROCEDURE

You'll be repeating this procedure for setting up fields time and time again, so let me summarise it for you:

STEP 1. Key in the name of the field.
STEP 2. Move the cursor to where you want it to start.
STEP 3. Mark the start of the field by pressing 'f1'.
STEP 4. Set the type of field.
STEP 5. Move your cursor to where you want the field to end, i.e. set its length.
STEP 6. Press RETURN.

CORRECTING ERRORS WHEN SETTING FIELDS

If you make a mistake setting up a field, you can easily erase it after you've pressed RETURN. You place the cursor on either of the field markers, then press 'f1' and the letter 'E' for 'Erase'. The field will then disappear and you can start again.

SETTING UP THE SECOND FIELD

Next we'll create a field for first names. So move the cursor down two lines. And now back to the left until it's in line with the 'S' of 'Surname'. And key in the word:

Firstname

This time we're going to make it a 'Text' field, which as you'll see later has a different use to a 'Key' field.

Move the cursor to the right one space. Now as you did for the 'Surname' field, press the 'f1' key. But this time, press the letter 'T' to tell Superbase you want this to be a 'Text' field.

You'll see that this field is marked with a different marker, so you can tell the difference between field types.

We want this field to be 18 characters long, so move the cursor across until the indicator reads '18' and now press RETURN.

Ok you've set your first two fields, for 'Surname' and 'Firstname'. Next we'll set the address fields. Move the cursor down two lines and across until it's situated below the letter 'F' of 'Firstname'.

SETTING UP THE ADDRESS FIELDS

We'll split each address into four separate fields, that's address line 1, address line 2, address line 3, and address line 4. You could call them anything you like, for instance, Street, Town, County, Postcode, whatever you prefer.

Let's key in our first address field. Key in:

address1

Again we want the address lines to be text fields, so move the cursor along one space press the 'f1' key and then letter 'T'. Not many address lines are more than 24 letters long, so we'll set all four address fields at 24 letters long, starting with this one. Have a go at this one on your own.

Now move the cursor down one line and across until it's under the 'a' of 'address1'. Then key in:

address2

Then move one space to the right and press 'f1', followed by the letter 'T'. Then set the field length on your own, to 24 again.

Now I want you to set the next two address fields on your own and make them each 24 letters long.

1.2.6 A SUMMARY SO FAR

You've finished setting up the fields for the names and addresses of your friends and business contacts and you made all of them 'Text' fields, except for the 'Surname' field which you made a 'Key' field.

1.3 FRIEND OR BUSINESS CONTACT?

Next, you need some way of noting whether each person is a business contact or a personal friend, so we'll set up a field one character long into which you can enter a 'B' for Business or a 'P' for Personal.

Move your cursor down two lines and position it below the first 's' of address line 4.

Now type in:

B/P

That's 'B' for Business and 'P' for Personal. Now move the cursor to the right one space and on your own, mark the field, set it as another 'Text' field, one character long.

Just to remind ourselves what 'B/P' stands for in future, let's just make a note to the right of the field so we don't forget. Move the cursor to the right three spaces and type in:

Business/Personal

1.3.1 SETTING FIELDS FOR BIRTHDAYS AND PROFESSIONS

You're going to be recording the names of your friends, so it would be useful to also keep a record of their birthdays. So let's now set up a field for birthdays.

Move the cursor down three lines and position it below the letter 'a' of address4. Now type in the word 'Birthday', then one space, then press 'f1' again.

This time we're not setting a text field, we're setting a DATE field, so watch the cursor as you press 'D' for 'Date', press 'D' now. You'll see the cursor has jumped across the screen seven characters, that's because Superbase automatically gives you seven characters for your date field. Now press RETURN.

There's only one more field to set up now in your name and address file. This field will keep a note of what profession each of your business contacts is in. So let's call this field 'Profession' and make it another 'Text' field. Start by moving the cursor until it's positioned two lines below the letter 'B' of 'Birthday'.

Now key in the word 'Profession' and then set this as a 'Text' field, 15 characters long.

That's it, you've finished setting up all the fields, so the next thing to do is to save this format on disk.

1.4 SAVING THE FORM LAYOUT ON DISK

So far the form you've designed is stored in the computer, but you'd lose it if you switched the computer off. So you need to store it permanently on disk. Your data disk should still be in the disk drive, so press 'f1', and then the key marked RUN/STOP.

Superbase now works its way down your form and changes the field markers to 'greater than' and 'less than' signs (> and <).

1.5 USING THE MENUS

You should have a message on your screen which reads:

mode : Menu

Every time you create a new file, Superbase automatically brings up a FORMAT option so you can design the format for the new file. But every time you call up a file that's already been used, you'll be automatically put into the MENU mode.

There are two menus available, MENU 1 and MENU 2. They both list the various things you can do with the file you're working on. Right now, you should be looking at MENU 1. To see MENU 2, simply press RETURN once and then have a look at it to see the difference.

You'll see a list of 'f' keys down the screen, these refer to the function keys on your keyboard. Each one gives you a different option, for example option 'f2' says 'FORMAT'. You'd use this one if you wanted to design another format.

1.6 ENTERING NAMES AND ADDRESSES

We want to enter some names and addresses into our name and address file so we need MENU 1. Press RETURN again to get back to MENU 1 and we need to use the Enter option, so press 'f1'.

The screen displays the heading:

mode : Entry

Superbase is waiting for you to enter your data into the form you've just designed. But before you do that, I'd like to tell you about "reserved characters." These are symbols which have a special meaning to Superbase. So you can't use them as part of your data. These reserved characters are listed in Chapter 5.

Now, let's enter some data. Your cursor is flashing at the start of the 'Surname' field. And if you look in the top right corner of the message area, you'll see:

1 k

This tells you you're now in field number one and the letter 'K' tells you it's a 'KEY' field.

ENTERING THE SURNAME AND FIRSTNAME

We'll imagine you have a friend called John Baker, whose name and address you want to put in the file. Key in his surname, 'Baker' and press RETURN.

The cursor jumps down to the beginning of the next field, the 'Firstname' field. Here key in 'John' and press RETURN. The cursor moves to the 'address1' field.

You'll find that the cursor will move about quite freely within the fields, but will not move anywhere outside.

Try it. Press the upward cursor movement key just once and you'll see the cursor moves back up to the previous field, NOT into the spaces between the two fields.

ENTERING THE ADDRESS

Press RETURN just once to move the cursor back to the 'address1' field. Then key in: 20 Rose Terrace and press RETURN.

Now type the town as 'Woking'. And press RETURN. Now type the final part of John Baker's address, the code, 'WR2 6TJ', and press RETURN.

There's no address line 4 for Mr Baker's address, but this one will come in handy in future for people with longer addresses. We can skip it now by pressing RETURN.

MAKING AN ENTRY IN THE B/P FIELD

Next the Business or Personal field. John Baker is a personal friend of yours, so key in the letter 'P' and press RETURN.

ENTERING THE BIRTHDAY

Now you need to fill in the 'Birthday' field. Remember, we set this one up as a DATE field. And with Superbase, you always have to enter dates in a particular form, either the DAY of the month, a three letter abbreviation of the MONTH and the last two digits of the YEAR, or if you prefer, you can put MONTH, DAY, YEAR. Try entering a date. Key in:

12jul54 or jul1254

And press RETURN.

The message area now displays 'MON' (short for MONDAY). Superbase is telling you which day of the week John Baker was born.

We don't want to fill in the profession field for John Baker, so that completes your first record. All you need to do is to save your work.

1.6.1 STORING THE RECORD

Press RETURN to skip the 'Profession' field and Superbase asks you to press RETURN to store. Press RETURN.

Superbase now invites you to enter another record. Well, we DO want to enter another, so do as the message tells you, and press the space bar just once.

1.6.2 ENTERING FOUR MORE EXAMPLE RECORDS

At the end of Part 1 of the written tutorial, you'll find four more example records which I want you to enter into your name and address file on your own. Enter the four records now.

After you've pressed RETURN to store the last of the four records, your screen will be prompting you to press the space bar to enter another. But we don't want to enter any more, so press RETURN to get back to MENU 1.

1.7 SUPERBASE COMMANDS

Before we take a look at some of the other options on the menus, I want to tell you about Superbase Commands.

Superbase can be controlled in two ways, either by using the menus or by using commands. In other words you can either use the menus and the function keys to get to certain options OR you can key in the commands on the command line.

Try it. Instead of pressing the 'f1' key to use the Enter option, just key in the word 'enter', in lower case. You'll see it appear on the command line at the top of the screen. Now press RETURN, and you'll see you're in ENTRY mode. You can get at any of the menu options in this way, by simply keying them in on the command line and pressing RETURN.

1.7.1 DESELECTING AN OPTION

But we don't want to enter any more records right now. To get rid of this option, first press 'f1', then the letter 'Q' for 'quit'. And you're back at MENU 1. There are other ways of quitting options that you'll find out about in Tutorial 3.

1.8 A SUMMARY SO FAR

Up to this point, you've designed the format of your name and address file, you've entered a number of records and saved them on disk, you've seen how to use the menus and options, and you've had a go at entering commands on the command line.

1.9 VIEWING THE RECORDS YOU'VE STORED

Now you'll want to view the names and addresses you've stored. Look at the menu and you'll see the SELECT option so press 'f2'.

1.9.1 THE SELECT MENU

You'll now see one of Superbase's 'SUB-MENUS'. This one's called the SELECT menu, and it lists eleven options. The SELECT menu offers you various ways of displaying the records in a file.

To start with, let's just 'browse' through the records in our file. It's like flicking through the pages of a name and address book. We'll turn to the first page.

If you look at the SELECT Menu on the screen now, you'll see an option called 'First', so press 'f6'.

You'll see the record for 'Julie Adams'. Although this was not the first record you entered, it's now the first in the file, because **Superbase sorts keyfields into alphabetical order**, and your keyfield was for 'Surname' so the name 'Adams' is now first in the file.

ONE LETTER ABBREVIATIONS OF THE SELECT COMMANDS

Across the top of the screen you'll see a row of letters 'n,l,p,f,k,c' etc; These are abbreviations for the commands you've just been looking at on the SELECT menu. These abbreviations are very logical. For instance, to view the next record, simply press the letter 'n' for 'Next', and you get the second record on the file, John Baker's.

Press 'n' again and you get George Collins' name and address. To go backwards through the file is just as easy. Press 'p' for 'Previous', and you get the previous records.

To get to the last record in the file, press the letter 'l' once. And here you are at the end of the file with Jeremy Smythe's record. You can prove it's the last record in the file by pressing the letter 'n' once more, and you'll see a blank record and a message on the screen telling you it's the end of the file.

Now press 'f' for 'First' to get to the first record.

Now I want you to practice browsing through the file using the one letter commands I've just shown you, (f,l,n,p) First, Last, Next, Previous.

When you've finished practicing, press RETURN just once to get back to the SELECT menu.

1.9.2 PICKING OUT RECORDS

Next we'll have a look at ways of picking out particular records, because if you're dealing with a much larger file, you won't want to browse through them all to find the one you want!

First, we'll try picking out records by particular key fields. We want the option which says 'Key' and it's function key number 1, so press 'f1'. Superbase asks you for the key field you're looking for. Let's imagine you want to find the address of Mr Smythe, so key in:

Smythe

Press RETURN and the record for Jeremy Smythe appears on the screen.

1.9.3 PARTIAL MATCHING

Now press RETURN to get back to the menu. You can often save time by typing in an abbreviated version of the key field entry you're after, you don't always have to type in the full key option. Press 'f1' again for the key option, and this time key in:

Smy

Those are the first three letters of SMYTHE. And press RETURN.

You'll still get Jeremy Smythe's record, even though you abbreviated his name.

You'll see a message on the screen telling you it's only a partial match. It's not the exact one you asked for, but it's the nearest one Superbase could find. Now press RETURN to get back to the menu.

1.9.4 THE MATCH OPTION

Next, we'll have a look at one of Superbase's most powerful options, the MATCH option.

This allows you to call up a group of records which all have something in common, for instance you could call up (or 'Match') all those people whose first name was George, or maybe all those people who live in the same town.

SELECTING ALL THE FRIENDS IN THE FILE

We'll match all those people who are personal friends of yours and view their records. Press 'm' or 'f7' now to get the 'Match' option and you'll get a blank record and a message prompting you to 'Select Match Data'.

So you must tell Superbase what criterion it must base its selection of records on. There are many ways of doing this and you'll find a list of them in Chapter 6 of your manual.

For now, we want to match all those people who are personal friends. Move the cursor down to the 'B/P' field and key in a 'P' for Personal.

This is the only criterion we're going to give Superbase to make its selection on, so press SHIFT and the RETURN key together. This tells Superbase to start searching through the records. Superbase now searches for all those people with a 'P' in the 'B/P' field.

After a few seconds, Superbase displays the first of the records it's found that matches the criterion, that of Julie Adams. If you look in the 'B/P' field, you'll see a letter 'P' to signify this person is a personal friend.

VIEWING THE NEXT RECORD

To view the next record that matches this criterion, simply press the letter 'm' for 'Match' and you get the next personal friend, John Baker. I want you to carry on pressing the letter 'm' to check that Superbase has found all the relevant records.

You ALWAYS have to go through all the relevant records in the file to finish the matching process, but it's a bit slow having to look at each one in turn to get to the end. But you can end the

matching process quickly by simply pressing 'l' for 'Last'. This will display the last record of the file.

Now press RETURN to get back to the SELECT menu. You'll use the 'Match' option a lot in future, so we'll try a few more ways of using it.

Let's find out which of the people in our file is a doctor by profession. If you think you know how to do it, have a go now on your own. If you're not sure, then read on.

To find the doctor in our file, press the 'f7' key to get the match option. Then move the cursor to the profession field and key in the word 'Doctor'. Then press SHIFT and RETURN together to start the search. Superbase finds the first doctor, Paul Evans, in the file and displays the record on the screen.

To check that there are no more doctors in the file, simply press the letter 'm' to continue the search for doctors. There are no more doctors, and Superbase displays a blank screen. Now press RETURN to get back to the Select menu.

Next we'll try using the match option in a slightly different way. We'll find those records which DO NOT contain a particular field. For instance, imagine you wanted to pick out all your friends who live OUTSIDE 'Reading'. Try it.

Press 'f7' to get the match option. In all the addresses in our file, the town or city, in this case 'Reading', will appear in the third or fourth address line. So move the cursor down to address line 3 and key in :

#Reading

Now do the same in address line 4. The hash symbol tells Superbase you want to find all those addresses which DO NOT contain the word 'Reading' in address line 3 or 4.

Remember we're looking for all your 'Friends' who live outside Reading, so next we must tell Superbase to only find personal friends, in other words, those records with a letter 'P' in the 'B/P' field.

Move down to the 'B/P' field and as we did before, key in the letter 'P', to tell Superbase to find personal friends only. Then press SHIFT and RETURN together as usual and Superbase begins its search.

Superbase finds the first record that matches our criteria, it's John Baker's record. Now press 'm' once again to find the next matching record in the file. Superbase can't find anymore, and gives you a blank screen. Your name and address file is only a small one but if you needed to search through a larger file the MATCH Option would come in very useful.

We've finished with this now, so press '1' to get to the last record in the file. Then press RETURN to get back to the SELECT MENU and RETURN again to MENU 1.

1.10 EXITING FROM SUPERBASE

We've finished with Superbase for the moment, so try exiting from the program. Press RETURN to get to Menu 2. Then select the Quit option, 'f7'. You will be prompted 'Are You Sure?'. Press the letter 'Y' to continue.

Your screen now shows the Commodore display. If you want to take a break, take the disk out of the disk drive and switch off your computer. But just before you do that, let's just check what you've done so far.

1.11 A SUMMARY OF TUTORIAL ONE

You've created a file and designed its format. You've entered records into the file, and you've seen how to browse through those records and pick out particular ones with the Key and Match Options. You've seen how you can control Superbase with commands or by using the options from the menus and sub-menus.

In Tutorial Two we're going to leave our name and address file and create a brand new file called 'Invoices', so that you can try out some of the other things you can do with Superbase.

EXAMPLE RECORDS FOR YOUR NAME AND ADDRESS FILE - TUTORIAL ONE

Here are four more example records for you to enter into your name and address file. Enter them in any order and Superbase will sort and store them in alphabetical order of the surnames.

Start the tape again when you've entered all four records.

Note. It is important that you enter all four records as we shall be using them later in the tutorial.

Adams, Julie
783 Hilton Road
Whitley Wood
Reading
RDG GT1
Personal - 12may60

Evans, Paul
22 St John's Road
Malvern
Worcester
WR12 2HA
Business - doctor

Collins, George
34 High Street
Caversham
Reading
RDG 8JS
Personal - 1jan61

Smythe, Jeremy
Mansion House
Hilltops
Worcester
WH1 7TY
Business - MP

TUTORIAL TWO

2.1 INTRODUCTION

At the end of the first session, we closed down Superbase with the quit command and we switched the computer off. So before we start the second session, make sure your computer's switched on.

2.1.1 LOADING SUPERBASE

Once your computer's switched on, you need to load Superbase again. I'd like you to do this on your own using the instructions from Tutorial Introduction. Find the section headed 'Loading Superbase Using a Prepared Data Disk' and follow the instructions from step 19 to step 32. You should end up with the screen display of the following prompt:

ENTER A DATABASE NAME

Now key in:

TRAINING

And press RETURN.

You'll now see a list of all files in this database. It's called a 'DATABASE CATALOG' and we'll come back to it in a minute. For now, press RETURN to get to MENU 1.

During this session, we're going to use Superbase to create a file called 'Invoices'.

2.2 THE HELP FACILITY

First, let's look at Superbase's HELP facility. There's a HELP option on both Menu 1 and Menu 2 and as the name suggests, this facility is designed to help you out should you forget what the various menu options do. Have a look at one of them.

Press 'f8' or 'HELP'. You use this key for Help Screens on both menus.

At the top of the screen, Superbase is asking which Help screen you require. See what it says about ENTER option, that's the one we've been using. Key in the word 'ENTER' and press RETURN.

You'll now see a 'Help Screen'. This one describes how to use the ENTER option. The instructions at the top of the screen tell you how to view the next screenful of information about the ENTER option, so follow the instructions while you read the screen.

When you've seen all the available screens about the ENTER option, press RETURN and you should now be back at the menu. That's a help screen, and of course, there's a help screen for each of the options on both menus. So in future if you're not sure about one of the options, call up the help screen.

2.3 THE DATABASE CATALOG

Make sure you have Menu 2 on your screen, the one that begins with 'f1 File'. If you haven't got this on the screen, then press RETURN.

We're going to create a new file, so we'll use the file option, Press 'f1' and your screen displays a list of all the files held in the database you set up right at the beginning of the first session. Remember, you called your first database 'TRAINING'. The list you now see is called a 'DATABASE CATALOG'. As you see this Database catalog includes your file, your name and address file called 'addresses'.

You'll notice the catalog also gives you the number of records held in each file. Your name and address file should contain five.

2.4 CREATING A NEW FILE

Now I want you to key in the name of our new file. Key in:

invoices

Now press RETURN. Superbase asks if you want to create a new file. You do, so press the letter 'Y' for Yes.

You're in the FORMAT option, as we were at the beginning of the last session. Again, we must design the format for our new file.

We'll imagine you're running a small company selling stationery, and you want to set up a file to hold details of all invoices your company has sent out.

2.5 SETTING THE FIELDS

Move your cursor down two lines and then right two spaces. Now in capital letters, key in:

INVOICE NUMBER

Make sure you turn SHIFT off for the space in between 'INVOICE' and 'NUMBER'. If you don't, you'll get an unwanted character between the two words.

Make sure SHIFT is off again, the move one space and make this a Key field using 'f1' the letter 'K' for 'Key'. Watch the indicator in the top right corner of the screen and move the cursor along until it reads '6'. Then press RETURN to set the field length.

2.5.1 COPYING THE FORM DESIGN FROM THE TUTORIAL

Look in the back of Tutorial 2, and find the printed copy of the Invoice file you're now designing. It's headed:

INVOICES - FORM DESIGN

You'll see the printed copy tells you what type of field each field should be. Remember it's 'f1' and the letter 'T' for a 'Text' field, and 'f1' and the letter 'D' for a DATE field. The length of each field is also given. For the fields not marked, just key in the field name and we'll put in the field type and length later on.

When you've finished, you should have nine field names altogether, and four of them should have fields set up: 'INVOICE NUMBER', 'Customer', 'Date', and 'Goods'.

2.6 SOME NEW FIELD TYPES

Up to now, you've only tried setting up 'Key', 'Text' and 'Date' fields. In this file you're going to set up three different types of field.

The first field, 'INVOICE NUMBER' is a 'Key' field so that in future you can easily pick out any record you want simply by quoting the Invoice Number.

Below that are fields for the 'Customer', the 'Date' the invoice was sent, and, further down, the 'Goods' field is to hold a description of what was sold.

SETTING A NUMERIC FIELD

The next field is 'Quantity' and it'll hold the number of items purchased. As this is for holding a number, we'll set it as a 'Numeric' field. First move the cursor one space after the word 'Quantity'.

Press 'f1' to set the field, then the letter 'N' for 'Numeric'. You'll notice Superbase has marked this field with a plus sign and a hash sign. The plus reminds you it's a NUMERIC field and the hash tells you that at the moment there's only room for one digit.

SETTING DECIMAL PLACES

In the top right-hand corner of the screen, the field length indicator reads 1,0. This means that the moment there's room for only one digit before the decimal point and none after it. But we want there to be enough room for three digits.

You need to make extra room. So move the cursor two spaces to the right and the indicator should read 3,0. Now press RETURN. You've increased the length to hold three digits.

The next field down is the 'Unit-price' field. This one will hold the price per unit of the goods bought.

This one will also need to be a 'Numeric' field, so move the cursor until it's positioned one space after 'Unit-price', and as before, press the 'f1' key, then the letter 'N'.

As this field will be holding amounts of money, it should be formatted for Dollars and Cents or Pounds and Pence. We'll format it so it will hold three digits before the decimal point, and two digits after. Move the cursor two spaces and you'll see the field length indicator reads 3,0. For the decimal point, press '.' then move the cursor another two places to the right. The field length indicator should now read 3,2. That's the format you want, three digits before the point and two after, so press RETURN.

SETTING A RESULT FIELD

The 'Total-price' will be the result of multiplying 'Quantity' by the 'Unit-price'.

That makes the 'Total-price' field a 'Result' field, so move the cursor one space after the words 'Total-price'. Then press the 'f1' key and then the letter 'R' to make it a 'Result' field.

This field is also going to hold an amount of money so we'll make room for six digits before the point and two after it. So move the cursor along five spaces, key in a full-stop, then move the cursor along another two spaces and press RETURN.

SETTING A FIELD AS A CONSTANT

The next field we must set up is the 'Tax' field. So move the cursor one space after the word 'Tax'. The rate of Tax will be the same on all our invoices so we can set this field as a CONSTANT. Press 'f1', then the letter 'C' for CONSTANT.

Now move the cursor along until the indicator reads 5. We need to allow 5 spaces including decimals. Now press RETURN. We'll imagine the rate of TAX is 15% and as a reminder, we can type this onto the screen next to the field.

Move the cursor along two spaces and key in '15%'. That completes the 'TAX' field so move on to the last field, the 'Amount Due' field. This will be a RESULT field to hold the result of the Total-price plus 15% TAX.

So set it up as a 'Result' field. Move the cursor down so that it's positioned one space after the word 'Due' and then on your own, set this field as a 'Result' field with room for seven digits before the decimal point and two after.

2.7 IMPROVING THE FORMAT

You've now entered all the field types and lengths needed for your invoice file. You are almost ready to save what you've done so far. But just before we do that, I want to show you a few of Superbase's features which will help to improve the look of your form layout.

2.7.1 INVERTING ONE LINE OF LETTERING

First I'm going to show you a way of 'Inverting' the lettering.

Start by moving the cursor onto the letter 'C' of the word 'Customer'. Then press 'f1' and then the letter 'I'.

That 'I' stands for 'Invert', and that's just what it's done to the 'Customer' line. Instead of having dark lettering on a light background, you now have light lettering on a dark background (or vice versa). To get the screen back to normal, simply repeat the process. Try it now, press 'f1' and the letter 'I'.

2.7.2 INVERTING EVERYTHING ON THE SCREEN

Now we'll invert the WHOLE screen. Simply press 'f1', then the letter 'S', and everything's now inverted. To return the screen to normal, simply repeat the command.

2.7.3 CHANGING THE COLOURS OF YOUR SCREEN

If you're using a colour screen, we'll try changing the colours. It's easy, just hold the CONTROL key, and at the same time, press the number '2' key a few times.

As you see, the colour of the background changes each time you press number '2'. The number '1' and '3' keys change the colour of other parts of the screen in the same way. So it's the CONTROL key and either 1, 2, or 3. Have a go at changing colours now on your own until you get a combination you like.

2.7.4 ADDING COLOUR TO FIELDS AND FIELDNAMES

Next we'll see how to change the colour of any lettering on the screen, such as fieldnames. It's easy. Just move the cursor onto the letter 'G' of 'Goods'. Then press 'F1' and 'A'. You are prompted with 'Add which colour?'. To select a colour, hold down the CONTROL key and press a numeric key from '1' to '8'. As you will see, when you move your cursor in any direction over the remaining letters in 'goods', the cursor 'colours them in'.

You can change colour as often as you like, and you can move your cursor in any direction using the cursor movement keys. To stop the cursor adding colour, simply press any key other than a cursor movement key.

You may also add colour to a field. Move your cursor to the start of the 'Goods' field and select a new colour. Now move your cursor across the field. The field doesn't appear to change colour. But, as you'll see later on, when information is entered into the field, it will be displayed in colour.

2.8 A SUMMARY SO FAR

You've entered all the fieldnames and field lengths needed for your invoices file. You've inverted the lettering on a single line with 'f1 I' and on the whole screen witn 'f1 S'. Finally you had a go at changing the colours on the screen.

2.9 SAVING YOUR WORK

Now you're ready to save what you've done so far. Press 'f1', then the key marked 'RUN/STOP'.

2.10 ENTERING CALCULATIONS INTO THE FIELDS

Now you must finish designing this form by entering calculations into some of the fields. Superbase will later use these calculations to automatically work out the totals on your invoices for you.

THE TOTAL-PRICE FIELD

Superbase is prompting you to 'Enter Calculation' and the 'Total-price' field markers are highlighted. So this is the first field that needs to contain a calculation. This calculation will be 'Quantity' multiplied by the 'Unit-price'.

Whenever you refer to a fieldname in a calculation or in a command, you must put square brackets around the field name in question. Right now we're going to multiply the contents of the 'Quantity' field, so key in:

[quantity]*[unit-price]

Press RETURN and that's finished this first calculation.

THE TAX FIELD

You'll now see that the 'Tax' field is highlighted. Superbase is prompting you to enter a calculation into this field. The 'Tax' in your case is fifteen percent, so key in the number 15 (you don't have to put the percentage sign, Superbase will treat it as a percentage). And press RETURN.

THE AMOUNT FIELD

Superbase now asks for a calculation to go in the 'Amount Due' field. This will be the Total-price plus 15% Tax, so key in:

[tax]/100 *[total-price]+[total-price]

That completes the calculation in the 'Amount Due' field. Now press RETURN.

There are no more fields which need calculations, so you've finished designing the form, and your work is automatically saved.

2.11 ENTERING RECORDS INTO THE INVOICE FILE

You can now start entering some records into your newly created Invoice file, and as before, you start by pressing 'f1' just once to get the ENTER option from the menu.

Notice that the 'Tax' field is already filled in. That's because you set it as a CONSTANT at 15% for every record you enter. Now enter the first record.

Make this invoice number 100. Key in:

100

And press RETURN. Then key in the customer's name. Key in:

Senders

And press RETURN. Next the date. Key in:

9sep83

And press RETURN. Next the 'Goods' field. Key in the goods as:

packets of envelopes

(Notice that this field is displayed in the colour you added earlier, if any.) And press RETURN. In the 'Quantity' field, enter the figure 20 and press RETURN.

For 'Unit-price', imagine that one packet of envelopes costs 99 pence, so key in the figure 0.99, using a period as the decimal point. Then press RETURN. You'll see that Superbase has automatically calculated the 'Total-price' and the 'Amount Due' so this invoice is finished.

SAVING THE RECORD

You now need to save this record. You could just press RETURN to take the cursor down to the last field and then press RETURN again. But there's a quick way of saving a record wherever you are within the form, (as long as you've made an entry in the key field). You simply hold down the SHIFT KEY and press RETURN. Try it you get the message prompting you to press RETURN to store, so do as the prompt says.

2.11.1 ENTERING MORE RECORDS FROM THE TUTORIAL

As you did with the name and address file, have a go on your own at entering some more example records. You'll find these records at the back of Tutorial 2.

When you've entered the last record, the one numbered 104, press RETURN instead of the space bar, and Superbase will return you to MENU 1.

2.12 THE CALC OPTION

Look down this menu and you'll see the option called CALC. CALC is very useful for performing all kinds of calculations. Here's an example. Select the CALC option by pressing 'f5' from MENU 1. And key in the following calculation:

676*2.3

That means 676 times 2.3. Now press RETURN to get your answer that's 1554.80. So you can use CALC as a calculator any time you like from the menu. Now press RETURN again to get back to MENU 1.

USING CALC TO UPDATE AN INVOICE

You can use CALC to change the contents of any field, but before you can do that, you have to get the relevant record into the computer's memory. We want to use CALC to update Invoice number 100, so get invoice 100 into memory.

First press the 'f2' key for the SELECT option, then 'f6' to get the 'First' record into the computer's memory. This first record is the one you want to perform the calculation on, so let's look at it to see what needs changing.

You'll see this record details a quantity of 20 packets of envelopes. We'll imagine you made a mistake and the customer really purchased 30 packets of envelopes. This is where the CALC option comes in very handy, try it.

Press RETURN to get back to the SELECT menu, and then RETURN again to get back to MENU 1. (Don't worry about the record you selected, it's still in the computer's memory.) Press 'f5' for the CALC option and you'll get a message prompting you to enter the calculation required.

We want the field called 'Quantity' to equal 30 instead of 20. So key in:

```
[quantity]=30
```

Remember, the square brackets tell Superbase 'Quantity' is the field we want the calculation to work on. Now press RETURN.

You won't see much happen, so use the SELECT option to check that Superbase has carried out the calculation. Press 'f2' for the SELECT option, then the letter 'c' to get the current record on the screen, that's the one you were last working on. You'll see that invoice number 100 now has a quantity of 30.

2.12.1 THE STORE COMMAND

CALC does not save the record permanently unless you use a command called 'Store', try it now. Press RETURN twice to get back to the MENU 1 and type in the word "store" and you'll see it appear on the Command Line. Finally, to activate the STORE command, press RETURN.

Superbase proceeds to overwrite the original record of Invoice 100 and replaces it with your amended version. Just to prove that Superbase has saved a copy of the amended invoice, have a look at it. Press the 'f2' key for SELECT and then the letter 'f' for 'First', and the amended invoice 100 appears on the screen.

You've seen only two uses of the CALC option, but you'll discover further uses if you look in your Manual later on.

There's a simpler way to update records using the letter 'r' for REPLACE on the select Menu. This command is further explained in Chapter 6 of the Reference Section.

2.13 THE BATCH OPTION

Now press RETURN twice to get back to MENU 1. Then press RETURN once again to get to MENU 2, and have a look for the BATCH option.

CALC is fine if you only want to perform calculations on one record at a time, but what happens if you want to change a value on more than one record in a file. Well that's where the BATCH option can help. Here's how it works.

Press the 'f3' key, that's the BATCH option. You are prompted with:

all/from "list" (item list....)

The first part of this prompt is asking which records you want the calculations you're about to enter to be performed on.

You can tell Superbase to operate on 'all' the records in the file or just on those 'from' a separate list of records you've previously created and stored using the FIND option. You'll see how to create one of these lists using the FIND option later on. Right now we'll get the BATCH option to operate on 'All' the records in this file.

USING BATCH TO REDUCE PRICES BY 10%

Imagine you decide to reduce all your prices by 10%. So in each record in the file, you'll have to find 10% of the 'Unit-price' and then deduct that amount.

You key in the calculations in exactly the same way as with the CALC option. Key in:

all [unit-price]=[unit-price]-0.1*[unit-price]

Your calculation will overflow the first line and continues on the next line down, this is perfectly normal.

The calculation is saying, take the 'Unit-price' and find 10% of it, then subtract that value from the present 'Unit-price' and then put the answer back into the 'Unit-price' field. Now press RETURN.

Superbase takes a while to work its way through all the records and when it's finished, MENU 1 appears back on the screen.

CHECKING THAT THE BATCH CALCULATION HAS WORKED

Superbase has made the BATCH calculation, so check that it's done as you asked. First call up the SELECT option, then press the letter 'f' for 'First'. If you now look at the 'Unit-price' field on this first invoice, you'll see it's been reduced by 10% and now reads 0.89, that's 10% less than the original 'Unit-price' of 0.99. Use the letter 'n' for 'Next', to look through the records and you'll see that each 'Unit-price' has been reduced in the same way. And of course, Superbase has recalculated all the 'Total-prices' and 'Amounts Due'.

The BATCH option differs from CALC in that it automatically saves each record that's amended, so you don't have to tell Superbase to store each one separately. Now get back to MENU 1 by pressing RETURN twice.

2.14 SOME WAYS OF SELECTING RECORDS FROM THE FILE

You've already seen how to SELECT records from a file and display them on the screen by using the MATCH option. But Superbase has some other ways of selecting records. First, there's the FIND option.

2.14.1 THE FIND OPTION

Look at the menu and you'll see its function key number 3. The FIND option selects records in the same way as the MATCH option, but when you use FIND, Superbase keeps a list of the records you've selected and stores the list on your data disk for future use, for example, when you're printing or doing batch calculations. Try it now, press 'f3'.

You're going to search for all those records where the Amount Due is more than 25 pounds.

TELLING SUPERBASE WHAT TO SEARCH FOR

Your screen should now be displaying a blank record. Superbase is waiting for you to key in the criteria on which to make its selection of records. Move the cursor down to the 'Amount Due' field and key in:

```
>25
```

And press RETURN. As Superbase works its way through the records it'll display each key field on the screen. It then compiles all those invoices owing more than 25 Pounds into a separate list. Superbase stores the list on disk and then returns you to MENU 1.

2.14.2 NAMING THE LIST

Superbase automatically gives all lists of records the name "hlist", unless you tell it otherwise. So it's a good idea to give each list you create a different name, then Superbase won't keep overwriting the previous list. But DON'T give a list the same name as a file or you'll cause an error.

You'll find the procedure for changing names of lists in Chapter 7 of the Reference Section. That's something else you can try out on your own later.

2.14.3 VIEWING THE RECORDS IN THE LIST - THE OUTPUT OPTION

Now you need to be able to have a look at the records on the list. You can either display the records on the screen or you can get a print out on your printer. Either way you use the same option, the OUTPUT option. So press the 'f4' key to get to the OUTPUT option. You'll get the prompt which reads:

all/from "list" (item list...)

Superbase is asking you whether you want to display 'All' the records in the file or just those 'From' a selected list. We want to have a look at the records on our 'hlist', so key in:

from "hlist"

And press RETURN.

You'll see the records displayed across the screen, but this display doesn't include fieldnames, and the information wraps around onto the next line. Superbase allows you to change the way the records appear on the screen. Try it.

2.14.4 CHANGING THE DISPLAY - DOWN AND ACROSS

First press RETURN to get back to MENU 1. Then key in the word 'down' and press RETURN. The next time you use the OUTPUT option, this 'down' command will display the fieldnames and their contents down the screen rather than across. As before, press the 'f4' key to get the OUTPUT option. Then key in:

from"hlist"

Press RETURN and this time the records are displayed one at a time and you'll see they're a lot easier to read.

To view the next record on the list simply press RETURN. Have a go on your own at looking through the rest of the records and you'll end up back at the menu.

Just now, you typed in the word 'down' to change the way Superbase displays the information (in Superbase terms, its 'Output Format'). That new setting, 'down', will stay in force until you tell it otherwise. When you DO want to change it back, you simply key in the word 'across'. So you can set the format to 'down' or 'across'.

2.14.5 PRINT AND DISPLAY OPTIONS

So far you've used the screen to display information, but if you have a printer, you can get a printed output. You simply select the PRINT option from Menu 2. Then, the next time you OUTPUT any information, it will be sent to the printer. When you want to switch output back to the screen, simply select the DISPLAY option from Menu 2. Let's try that now.

If you have a printer make sure it's connected properly and that it has paper in it. Now, if you want a printed copy of the record, select the PRINT Option, that's 'f5' from Menu 2.

Make sure you have Menu 1 on the screen, then press 'f4' to select the 'Output' option in the usual way. Now key in the following instruction:

```
from "hlist"
```

Press RETURN and you'll get a print out of the records from your list. If you don't, check your printer set-up.

To switch output back to the screen, simply select the DISPLAY Option, that's 'f4', from Menu 2. Then repeat the 'Output from "hlist"' command, to view the records.

When you output information, particularly to the printer, you may wish to tidy up the presentation. Superbase has some special characters which do this when inserted into the output command line. These OUTPUT commands are described in Tutorial 3.

2.15 A FINAL SUMMARY

During this Tutorial, you've seen how to create databases and files, you've used the FORMAT option to design layouts and you've seen how to store records. You've recalled records and printed them out, and you've had a go at performing calculations.

We didn't have time to cover every single Superbase facility, there are a few Menu options and some commands we haven't covered. But you should now have enough knowledge to use Superbase on a day to day basis AND use your Manual to explore the full power of Superbase. Once you're confident with the material you've covered so far, move on to Tutorial 3.

You can now go back over any of the areas you're not sure of and have another go. But if you've finished, quit Superbase by pressing 'f7' from Menu 2. You will be asked 'Are You Sure', so answer 'Y'. After a few seconds your computer will return to the operating system so that you can remove your Superbase disk and switch off your computer.

Don't forget to fill in and send your Precision Software Registration Certificate which you'll find in the front of your Superbase Manual. You'll then be able to get details of special Superbase packages for the business, home and professional user.

Precision Software has developed a range of templates, know as 'Stepping Stones' for the most popular application areas. Examples include Inventory Control, Invoicing, Payroll, and various kinds of professional records. These are easily modified to suit your own business and will help you obtain the maximum benefit from Superbase as fast as possible.

Send off the order form, at the front of the manual, for more details, and consult the Upgrading Section in this manual.

INVOICES - FORM DESIGN - TUTORIAL TWO

Key in the invoice form as shown below. Remember, press 'f1' and then the appropriate letter for each field, i.e. 'K' for a key field, 'D' for a date field, 'T' for a text field. The length of each field is also given below.

Some of the fields below have not been given a field type and length, so for these fields, just key in the field title and we'll put the field types and length in later on.

You will notice that two of the fieldnames in our example have hyphens. This is because each fieldname must be unique. If you want to know more about 'fieldnames' look at Chapter 4 of the Reference Section.

When you've keyed in all fields, resume Tutorial 2 where you left off and start the tape again, if you are using one

****

INVOICE NUMBER	(Make this a KEY field, 6 characters long.)
Customer	(Make this a TEXT field 20 characters long.)
Date	(Make this a DATE field.)
Goods	(Make this a TEXT field 20 characters long.)
Quantity	
Unit-price	**Note:** The hyphen in 'Unit-price' and 'Total-price' is significant to make each fieldname unique. Without hyphens the fields become REPLICA fields with the name 'price'.
Total-price	
Tax	
Amount Due	

EXAMPLE RECORDS FOR YOUR INVOICES FILE - TUTORIAL TWO

Here are four more example records for you to enter into your invoices file. Enter them in any order and Superbase will sort and store them in numeric order of the invoice numbers.

Start the tape again when you've entered all four records. Enter them all, as we shall be using them later.

Note: dates can also be in the format 'sep1283'

Inv No:	101	Inv No:	103
Customer:	D. Signer	Customer:	I. Pearce
Inv date:	12sep83	Inv Date:	2nov83
Goods:	graph paper packs	Goods:	stapler
Quantity:	23	Quantity:	1
Unit-price:	2.75	Unit-price:	3.99

Inv No:	102	Inv No:	104
Customer:	H. Old	Customer:	R. Jones
Inv date:	20sep83	Inv date:	1nov83
Goods:	box paper clips	Goods:	A4 paper pads
Quantity:	34	Quantity:	100
Unit-price:	1.60	Unit-price:	3.99

TUTORIAL THREE

3 INTRODUCTION

This is a more advanced tutorial than the previous two, so you should be prepared to take more than one session to complete it. The tutorial begins with two sections on topics that everyone needs to know about: how to escape from functions, and the rules about changing disks, naming files, and backing up disks. Then we look again at the FORMAT and OUTPUT Options. The tutorial ends with a look at Superbase commands and applications.

Begin the tutorial by loading Superbase in the usual way. Insert your data disk, and select the 'TRAINING' database and then the 'invoices' file. Now work through the sections that follow. Some expect you to do some keying in, others are just for reading.

3.1 ESCAPING FROM COMMANDS

From time to time, everyone selects a command by mistake. You need to know how to get out of every command quickly. Simply hold down the CONTROL key and press 'Q'.

3.2 DISKS, DATABASES, FILES, AND LISTS

As you get more used to Superbase, you'll find that you want to set up several different databases. Probably you won't be able to keep all your data on one disk. This section explains the relationships between disks and databases and gives more information about files and lists.

3.2.1 THE DATABASE COMMAND

Whenever you change from one database to another, you MUST give the database command before selecting a file.

If you enter the name of a database that doesn't exist and if you keep responding 'n' to the **'Create it?'** prompt, you may get stuck in a 'loop'. Give the name of a known database, such as **'Training'**, to escape, or simply press CONTROL Q.

As with all menu options, you can give the **'database'** command on the Command line, as in:

database"training"

Finally, look at your disk directory from the MAINTAIN sub-menu. You'll see the database 'TRAINING' in upper case letters so you can tell it from other files.

DATABASE NAMES

A database name can be up to 16 characters long. Don't put any double quotes in the name. If you use numbers or colons (:), these will be displayed as special characters in the disk directory. See below and Chapter 13 for more information.

DATABASE COPYING

You can make a backup of a disk with a database on it. But you can't COPY a database with the file **'copy'** command. Data transfer between databases is done with the **'export'** and **'import'** commands. See Chapter 14.

3.2.2 DISKS AND DATABASES

You must give the **'database'** command whenever you change disks.

To change from a database on one drive to a database on the other, for example from 0 to 1, give the database command in the form

database "test",8,1

The '8' is the 'device number' of a floppy disk unit, and the '1' signifies the drive number.

You can have as many databases on a disk as will fit. But you cannot have a database continuing from one disk to another. If your data needs to be divided between disks, you'll have to set up more than one database.

Running out of disk space can cause serious problems, so keep a watchful eye on the amount of disk space you have left. Use 'f5' Directory on the Maintain menu. The number of blocks free is shown at the end of the directory. Make sure that the number of blocks free is at least 80-100 blocks. There is a utility for dividing databases, see Appendix E.

3.2.3 FILENAMES / RECOVERING A LOST FILE

The actual data in a database is stored in the **database file.** This is quite separate from a file format, which is an ordinary disk files. Among the advantages of this system is the ability to COPY a file format ('file definition' is another common term) and use it in more than one database.

You need to know that the file format can be lost by accident. This happens if you use the name of an existing file when specifying a key list or a data file created with **'export'** or **'output to'**.

RECOVERING A LOST FILE

Recovering is quite easy. First give the key list or data file another name - use the file **'rename'** command from **MAINTAIN OTHER.** (see Chapter 14 of the Reference Section) Then use FILE and FORMAT to set up the lost file format exactly as it was, under its original name. You'll find that you can get at your data.

PRINTING YOUR FILE FORMAT

This should help you see why it's a good idea to keep printed copies of all file formats. Print them with this command line:

print:maintain status

Finally, remember that database filenames can be up to 10 characters long. If you make one longer it will be cut short.

3.2.4 KEY LISTS / DISK FILES

These are external to the database like file formats.

A **KEY LIST** is a list of some or all of the key fields in a database file. Key lists are a very important part of the system, helping you to work with selected groups of records in many different ways. They are created by FIND. The functions that can use key lists are:

SELECT FROM OUTPUT BATCH EXPORT FROM

Note: SORT and REPORT also use key lists. They are utility programs which you can use with Superbase. See **Upgrading** Section for more details.

You can **ADD** to a key list. This is done by placing a comma and the letter 'a' after the name in FIND

find "newlist,a" where [Surname] is "=Jones"

DISK FILES are quite different from 'database files'. They consist of data copied from the database, and are created either by **'output to'** or **'export'**. They are usually intermediate files that will be used by another function such as **'import'**, or another program such as Easy Script or Superscript.

Disk files are plain sequential files, each line consisting of a number of characters (usually a field from a database file) followed by RETURN, usually with a RETURN on a line by itself separating the records.

If you give such a file a name beginning with 'h', such as "hdatafile", you can view its contents with the HELP Option.

Disk files and key lists may have up to 16 characters in their names.

Remember that if you don't explicitly name a key list, it will be named "hlist" by Superbase. But each new "hlist" overwrites the previous one.

3.2.5 BACKUP

Do disk backups regularly to protect your data. See Chapter 14 for details of how to make a backup copy of a data disk.

If you have a dual disk drive, use the dual drive option given at the beginning of the backup operation. This does not exit from Superbase. However, the single disk backup function clears Superbase itself out of the computer, so it's best to do backups at the END of each session.

3.3 CHANGING THE FILE FORMAT

While you're getting to know Superbase, you'll probably want to make changes to the file formats you set up. This is quite easy, but to avoid unnecessary mistakes we include here explanations of a number of aspects of formatting.

Before you change a format, print out the file status as described earlier in this tutorial.

To change an existing format, select the file with the FILE command, then press the 'f2' key on Menu 2 for the FORMAT Option. After a few seconds Superbase will display the fieldnames and markers as they were when the file was being set up.

3.3.1 CHANGING FIELDS

Full details of the rules for changing field types are given in Chapter 4 of the Reference Section. The main point is that you can only add or remove fields from the END of a format.

To change a field type, or set it as a FORCED FIELD, first erase it by positioning the cursor over either field marker and pressing 'f1' followed by 'E'. Now simply reposition the cursor where you want the new field to start, and set the field in the normal way.

FIELDNAMES

Fieldnames can also be changed. First position the cursor on the fieldname and press 'f1' followed by 'E' to erase it. Then simply type in the new name using SHIFT INST/DEL to insert extra space if necessary. But remember that fieldnames should be unique, unless you want a piece of data to appear more than once in a record: such fields are called REPLICA fields.

Fieldnames can be up to 12 characters long, counting leftwards from the first space to the left of the field name. For example, 'Amount Due' will actually have the fieldname of 'Due'.

3.3.2 USING NUMBERS AS KEYS

Superbase key fields are text fields. You can put numbers into a key field, but each digit will be treated as a separate character when it comes to storing the record in order. This means that records with the keys '1', '2', '10', '110', and '200' would be stored in the order

1 10 110 2 200

The solution is to type in enough leading zeros to make all keys the same length:

Maximum 9999	Maximum 999
0001	001
0002	002
0010	010
0110	110
0200	200

3.3.3 MULTIPLE SCREENS

Superbase records can include up to two separate screens. So far in the tutorials, we have been working with single screen records, but we shall now add an extra screen to the invoices file.

REDEFINING THE FILE FORMAT

To do this we will have to edit the screen format again, so press RETURN to get Menu 2 and then press 'f2' to select the FORMAT option.

OBTAINING AN EXTRA SCREEN

Once you have the Invoice Format on the screen, press 'f1' and then the '+' key. The message 'Forward Screen' will indicate that you have moved forward to a new screen. This is how you obtain an extra page for your records.

The '+' command can also be used in the SELECT Option. The key '-' is used for returning to the previous screen.

TEXT FIELD

On line 2 of the new screen, type the fieldname 'Paid', move the cursor along a couple of spaces and set a TEXT FIELD by pressing 'f1' followed by 'T'. Make the field three characters long to allow you to enter 'yes' and 'no', and then set the end of the field by pressing RETURN. Then press 'f1' followed by RUN/STOP to finish the format, as you have done before. Check the results with the SELECT Option, using '+' and '-' to move from screen to screen.

3.4 OUTPUT / WORD PROCESSING LINK

You've already seen how to use the OUTPUT command to produce printed or displayed lists of selected items from your data. In this section we go over the different forms of output and the output formatting commands. Then we look at how to produce a file from the database for use in word processing.

3.4.1 OUTPUT COMMAND

OUTPUT can be combined with the following options:

```
all       or    from "list"
across    or    down
```

Here are some examples using the single field [customer]:

```
output all across [customer]
output all down [customer]
output from "hlist" down [customer]
output from "newlist" across [customer]
```

These are full Command lines. In practice you won't need all this detail every time, since some items remain set after being included. These are the 'down' or 'across' selection, and you can give the initial output command with the 'f4' function key (on Menu 1), following it with the rest of the command on the command line.

3.4.2 OUTPUT FORMAT COMMANDS

These are the '@' and '&' signs, used before fieldnames to position and control the number of spaces output. The numbers can of course be varied.

@10 [customer] displays the contents of the field at column 10.

@10,4 [customer] displays the contents of the field at column 10, row 4, each item on a new page in screen.

@0 positions the cursor at line 1, column 1, without clearing the screen.

@5,0 causes a carriage return to column 5. Use **@1,0** to print a blank line.

& [customer] removes all trailing spaces from a text item.

&5 [customer] cuts the text item short to 5 characters.

&4,2 [unit-price] puts a number into the form of 4 digits before and 2 after the decimal point. Rounding is automatic. If insufficient places are allowed, '#' signs are displayed to indicate overflow.

If your printer allows underlining, these commands can be used witn 'Output':

@-[customer] **@-** switches underlining on for the fieldname 'customer' and then off again.

@+ [customer] switches underlining on for the next text item only.

Here is an example of a fully formatted output command on the command line:

output print all across @10,5@-&12[customer]@25&5,2[unit-price]@-

Try this for yourself, and then vary the row, column, and formatting values to see the effects. See Chapter 9 for more details.

3.4.3 OUTPUT TO DISK FOR WORD PROCESSING

If you want to obtain a list of, for example, name and address data to be used for printing standard letters, you use the OUTPUT TO command. This is described in full in Chapter 9, but see overleaf for the sequence of operations.

1. Unless you want data from all records, use **'find'** to produce the list of selected records you want to output.

2. Use **'output to'** to create a disk file containing the actual data.

3. Quit from Superbase and load Easy Script or Superscript.

4. Load or type the standard letter.

5. Output the letter, specifying the 'F' option for a fill file. When prompted, give the filename specified at step 2 above.

3.5 COMMANDS

We have explained that Superbase has a dual control structure, that it is both Menu-driven and Command-driven. You will now have had experience of both kinds of control. In fact, you can get at all of Superbase's options and facilities without the use of the MENUS at all. Anything that you type on the lines at the top of the screen is a command. You shouldn't use capitals in the command words themselves, except when abbreviating as explained below.

A Command line always begins with a Primary Command such as those which appear on Menu 1 and Menu 2, and is followed by the Secondary Commands and expressions associated with it. For example, from either Menu, type the Command Line 'output all the records' and press RETURN. This has exactly the same effect as pressing 'f4' to obtain the OUTPUT Option and then responding 'all the records' to the prompt.

3.5.1 ABBREVIATING THE COMMAND LINE

In the above example, the words 'the' and 'records' and the spaces are not actually needed for Superbase to understand your Command Line but serve simply to make the syntax more natural. You could have entered the last Command Line simply as 'Outputall' if you had wanted to.

You could even abbreviate further to the first letter of the command with the second letter SHIFTED as in 'oUaL' or 'oUfR"hlist"[goods][unit-price]'.

The rule is that any command word can be reduced to the shortest possible unique form of the command, with a minimum length of 2 characters, with the last character SHIFTED.

You may want to try to obtain the results you achieved earlier via the Menus by using command lines instead. Try 'file "invoices"' then 'select first'.

3.5.2 COMMAND LINES WITH MORE THAN 1 COMMAND

A Command Line may include more than one Primary Command if they are all in different CLAUSES separated by colons.

For example, this was how we suggested you print out a copy of your file status: 'print:maintain status'.

Up to 79 characters are available for multiple commands.

CALC in particular often requires you to use multiple commands. You can use:

```
calc [unit-price]=500;[quantity]=25
```

(note the compulsory semicolon) to change more than one field at once (use 'display' if you want to see the results). But if you refer to a field more than once, including references in a result field formula, you must use colons to separate the commands:

```
Calc [unit-price]=500;[quantity]=25:calc[total-price]*1.1:
calc [total-price]
```

The reason we cannot display these fields in a single CALC Command line itself is that field references within a single command are always to the original value of the field. Only by typing a full command line with colons to separate the individual commands to modify and then to display a field (or its derived result fields) can you achieve both modification and display in one operation.

3.5.3 REPEATING COMMANDS WITH THE 'RECALL' KEY AND STORING THEM

To recall the last Command Line entered, we use the 'recall' key. On the Commodore 64 this is the left arrow key, located at the top left of the keyboard. On the Plus/4 you hold down the SHIFT and '=' keys. The Command Line will be displayed at the top of the screen, either to be executed again (press RETURN) or to be modified (type modifications).

If you don't want to execute it but want to go back to the menu, insert 'rem' at the beginning of the line.

For a simple example, type the command:

```
display "Customer is: "[customer]
```

and press RETURN. After the display, press the recall key. The command re-appears. Press RETURN again to execute it. You can repeat this a few times.

3.5.4 RUNNING TOTALS / USE OF VARIABLES

Superbase uses variables in the same way as BASIC. You can set a string variable by placing a '$' after it, as in

```
a$ b$ day$ name$
```

String variables hold alphanumeric text characters. Numeric variables have no dollar sign, and hold actual numbers:

```
t x product amt
```

the value of a variable changes as a Command executes. Among other things, string variables make it possible to execute program lines created in a loop, or repetition, thus saving much memory space in the computer with full Superbase (see **Upgrading** Section). To understand this subject fully, study your Commodore manual, or other books on BASIC programming.

In Superbase, a common use of a variable is in a RUNNING TOTAL batch operation. First, set the variable that will accumulate the total to zero:

```
calc t=0
```

Press RETURN. Nothing is displayed, but 't' is now set to zero. Then give the batch command:

```
batch all the records t =t + [due]; "total due is: ";t
```

Press RETURN. This command goes through all the records in the "invoices" file, adding the contents of the [due] field to 't' and displaying 't' as it goes ('t' must appear at the end of the command if you want to display it).

When you're back at the menu, type the command:

```
display t
```

and press RETURN. The final value of 't' will be shown.

For details about valid variable names, see Appendix A.

3.5.5 APPLICATION PROGRAMS

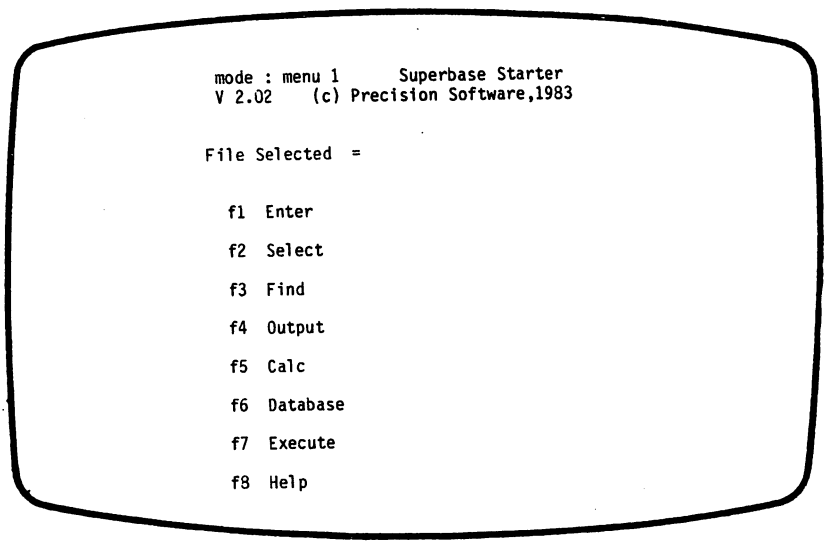
An example of an applications program is the "labels" program that comes free on your disk. This lets you print labels in up to 4 columns. You can try it on ordinary paper with your "addresses" file. See Chapter 15 and 'Help' for guidance.

1 THE MAIN MENU - MENU 1

1.1 USING MENU 1

Superbase combines great sophistication with simplicity of operation. By means of the various Menus, you can access all of the options provided in an easy and natural manner.

MENU 1 is your entry point into Superbase's most often used facilities, each of which is described briefly below beside the Function key used to obtain it.



1.2 THE OPTIONS

ENTER This is the option used to ENTER information into your files. Deselect with 'f1' followed by 'Q'. See Chapter 5.

SELECT The SELECT Option is used to find and display any record stored in the database. It has been given a Menu of its own from which you can choose a wide range of facilities. Deselect with RETURN. See Chapter 6.

FIND The FIND Option is used to find records matching a particular set of criteria. It stores a list of the keys of these records to be used by other options such as BATCH and OUTPUT. Deselect with 'f1' followed by 'Q'. See Chapter 7.

OUTPUT The OUTPUT Option is used to display or print information from all records or a previously selected list of records. Text as well as the contents of fields can be output and BASIC variables and calculations included. Deselect with RETURN. See Chapter 9.

CALC The CALC or CALCULATE Option is used to evaluate and/or display any expression. The full range of BASIC functions including trigonometrical functions can be performed. Results can be stored in fields or BASIC variables or simply displayed. Deselect with RETURN. See Chapter 11.

DATABASE The DATABASE Option allows you to select a database or create one if the database you select doesn't already exist. Deselect by entering an existing database name. See Chapter 13.

EXECUTE The EXECUTE Option allows you to run programs previously designed with full SUPERBASE. See **Upgrading** Section. These programs can automatically perform whole sequences of operations on your files. Whole jobs can be carried out at the touch of a button. Deselect with RETURN. See Chapter 15.

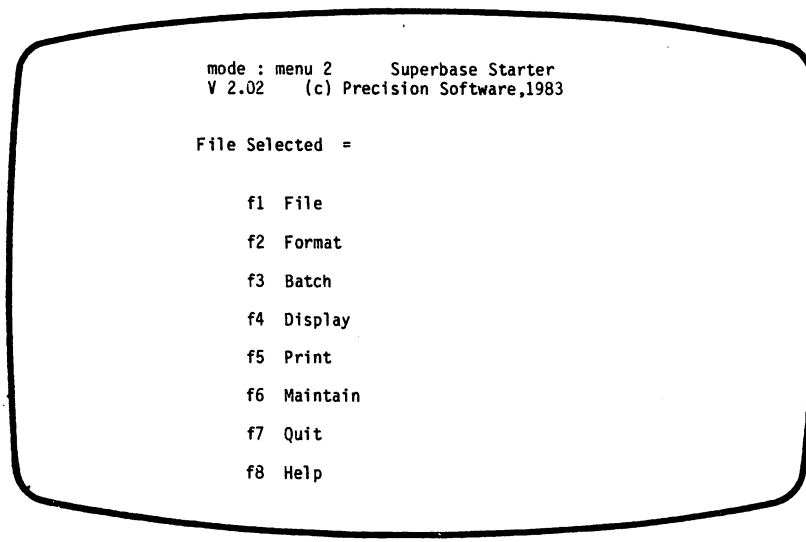
HELP The HELP Option, available from both menus is used to display a HELP SCREEN designed to give reference information and memory joggers for all of the major facilities offered by Superbase. Deselect with RETURN. See Chapter 17.

2 THE SECONDARY MENU - MENU 2

2.1 USING MENU 2

Menu 2 provides a range of further options, mainly those capable of having most impact on the system. These options are also obtained by means of the Function Keys on the right of the keyboard.

Menu 2 is obtained simply by pressing RETURN from Menu 1.



2.2 THE OPTIONS

FILE The FILE Option is used to change the current file you are working with or to create an entirely new file in the database. Up to fifteen files can be created for each database. Deselect with RETURN. See Chapter 10.

FORMAT The **FORMAT** Option is used to define the screen layout of a new file and to revise the screen layout of the current file. Each file may have up to two screens formatted for each of its records. Deselect with 'f1' followed by 'Q'. See Chapter 4.

BATCH The **BATCH** Option is used to perform calculations using information from all or selected records in the current file. This is the option you use to carry out UPDATING operations on your files. Deselect with RETURN. See Chapter 12.

DISPLAY The **DISPLAY** Option is used to switch the direction of output from the printer to the screen. Deselect with the PRINT option. See Chapter 8.

PRINT The **PRINT** Option is used to switch the direction of output from the screen to the printer. Deselect with the DISPLAY option. See Chapter 8.

MAINTAIN The **MAINTAIN** Option provides you with a further menu of options to enable you to carry out various utility functions on your files including the EXPORT and IMPORT of data to and from other programs. Deselect with RETURN. See Chapter 14.

QUIT The **QUIT** Option allows you to exit Superbase, and returns your computer to Commodore Basic. Deselect with 'N' when prompted. See Chapter 16.

HELP Available from both Main Menus, the **HELP** Option is used to display a HELP SCREEN designed to give reference information and memory joggers for all of the major facilities offered by Superbase. Deselect with RETURN. See Chapter 17.

3 COMMAND LINES

3.1 USING COMMANDS

Although Superbase allows the user to control its many facilities by means of the two Main Menus, it is also possible to bypass the menu system of control and to enter all Superbase commands directly.

Any of the commands included on the Main Menus can be entered by typing the command from the keyboard together with a number of supplementary commands provided for the advanced user. These are listed overleaf. As commands are entered in this way, you will see them appear in the command area at the top of the screen.

Commands can either be entered individually or joined together with separating colons into a more complex COMMAND LINE.

3.1.1 ENTERING COMMAND LINES

Commands must be typed in lower case (small) letters only, except for the last letter when abbreviating (see Chapter 9).

From either of the Main Menus you can simply type a Command Line such as:

```
select next:display [Surname]
```

which would obtain the next record in the file and display one field from it, or:

```
find "chase-list" where [due] is ">100":output print
the records from "chase-list"
```

which would print out the records of customers who owe you more than £100.

For the more experienced user of Superbase this method of control is a faster way of using Superbase's facilities since several functions can be carried out consecutively, with no further intervention.

3.2 REPEATING COMMANDS

Whenever you execute a Command Line in this way, you can recall it without typing it in again with the left-arrow key on the Commodore 64 and the Shift and the '=' keys on the Commodore Plus/4.

This will result in the Command Line last entered being displayed at the top of the screen, ready for you to execute it again, by pressing RETURN, or for you to modify it.

3.3 COMMANDS AVAILABLE

ACROSS	Sets the OUTPUT to ACROSS the page or screen.
ALL	Used with OUTPUT or BATCH to signify that ALL records in the file are to be used.
DOWN	Sets the OUTPUT to DOWN the page or screen.
FROM	Specifies which key list is to be used.
LMARG	Sets left margin of OUTPUT (maximum value = 250).
LOAD	Loads a Superbase program from disk.
PLEN	Sets length of page for printed output.
RESTART	Reinstates current database and file after system errors.
RMARG	Sets right margin of output (minimum value = 20, maximum value = 255)
SAVE	Saves a Superbase program onto disk.
SPACE	Sets number of spaces between lines in OUTPUT.
STORE	Makes permanent any changes to a record made by CALC.
TLEN	Sets number of lines of list to be printed on a page (minimum = 3, maximum = 255)
WAIT	Used in a command line to allow a pause until a key is pressed.
WHERE...IS	Used together during FIND and SELECT MATCH to specify the criterion for the Match. 'WHERE' specifies the field, and 'IS' the values it must contain for the record to be selected.

Any of the Menu options could also have been included in this list, and can be typed in on the command line. However, if you are new to Superbase, we recommend that you use the menu system of control until you are familiar with the individual commands.

Note: There are certain reserved commands which you must not type on the command line. These commands will be available if you upgrade to Superbase. They are listed in the **Upgrading** Section.

3.4 THE SYNTAX OF COMMAND LINES

A Command Line consists of a number of CLAUSES, each separated by a colon. Each clause consists of a PRIMARY COMMAND followed by one or more SECONDARY COMMANDS.

The Primary Commands are commands such as those whose names appear on the two Main Menus:

ENTER, SELECT, FIND, OUTPUT, CALC, DATABASE, EXECUTE, HELP, FILE, FORMAT, BATCH, DISPLAY, PRINT, MAINTAIN and QUIT.

The Secondary Commands are commands that must follow other commands and cannot be executed on their own, such as those which appear on sub-menus. They differ according to which Primary Command you are using, but examples are as follows:

WHERE...IS: Used with FIND as in:

```
find "h2list" where [County] is "=Devon"
```

FROM: Used with OUTPUT as in:

```
output the records from "h2list"

sort the records from "h2list" on [due]
```

ALL: Also used with OUTPUT as in:

```
output all the records
```

Each of the above Command Lines consist of only a single clause. But several clauses can be strung together separated by colons as follows:

```
find "h2list" where [County] is "=Devon":output
from "h2list"
```

3.5 FILENAMES IN COMMAND LINES

Many commands, when typed in full onto the command line or operated via system prompts, require filenames. Some commands require you to enter filenames enclosed in double quotation marks, other do not.

Any command involving the words 'to' or 'from' requires quotes around the filename. Any filename that includes a Superbase command such as "**list**name" or "data**enter**" must also be inside quote marks. Note that in the following command:

```
find "listname" where [city] is "=New York"
```

an error would be flagged in the absence of quotation marks because Superbase would interpret 'list' as a command rather than as part of a filename.

4 FORMAT

4.1 THE FORMAT OPTION

Superbase stores information in files of records. A file may be a collection of invoices or business cards, or perhaps a collection of recipes for meals, depending on how the file has been set up by means of the FORMAT option.

Each of the individual invoices or business cards or recipes is stored on a separate record, which is put into the file by the use of the ENTER option (see Chapter 5).

Before the records can be entered, however, the FORMAT option must be used to design the layout of the records and to determine the type of information they are to contain. The FORMAT option can also be used to change the layout of existing records. If you have created a record format and wish to change it, skip to **'Editing on Existing Format'** later in this chapter.

Use the 'Maintain Status' Option after selecting 'Print' to obtain a printout of your file layouts. This can be useful if you need to reformat a file.

4.1.1 OBTAINING THE FORMAT OPTION

To obtain the FORMAT option, press the 'f2' key from Menu 2. You should see a blank screen with the words 'MODE : FORMAT' in the message area at the top left of the screen.

The one exception to this is that Superbase automatically puts you in FORMAT mode whenever you set up a new file.

4.2 DESIGNING THE RECORD LAYOUT

The screen is the 'blank page' on which your record layout will be designed. Each record can have up to two such screens, which can have a different layout and contain different information.

A record layout consists of two basic types of item: FIELDS, the blank slots where items of information will be entered, and DESCRIPTIVE TEXT.

FIELDS

The maximum number of characters per record is 1107. This includes every character visible between field start and end markers for text, constant, key, numeric, and result fields; maximum of 5 characters for date and calendar fields; and a field separator between every 2 fields (i.e. the total number of fields minus 1). Note that a decimal point counts as 1 character, and every numeric and result field has an additional character reserved for the sign. Sign and decimal place character positions are visible between field markers and are counted as part of the field length.

You should avoid quitting from a completely blank format. If you do this, you won't be able to get at the format. To overcome the problem, enter another database, select the blank file format and put in at least one field. Quit, then delete the file as described in Chapter 6.

DESCRIPTIVE TEXT

You may type any descriptive text onto the screen, the most important being FIELDNAMES. These are the names you decide to give to the fields, such as 'address1' or 'Surname,' which help make clear what the information in the fields is supposed to be. Other types of descriptive text include lines, borders, or text such as 'Business/Personal' which you typed to the right of the 'B/P' field in your 'address' file. Apart from FIELDNAMES themselves, up to 1000 characters of descriptive text is allowed.

FIELDNAMES

These FIELDNAMES are of vital importance since they are the means by which Superbase keeps track of where the data belonging to the file is to be displayed.

More importantly, the fieldnames are your means of referring to the information held in the fields throughout the file.

The fieldname can be of any length up to twelve characters and is always the **last piece of descriptive text to the left of the field**, regardless of how many spaces there are between the field and its name. Fieldnames must be on the same line as the field start marker.

The name must all be on one line and must not contain any double quotes. If you were to type a fieldname containing spaces, such as 'TOTAL PRICE', Superbase would take 'PRICE' as the fieldname since it would be the last word to the left of the field. 'TOTAL' would be just a piece of descriptive text. To make 'TOTAL PRICE' different from 'PRICE' insert a hyphen between TOTAL and PRICE.

Superbase will also ignore the case that the fieldname is typed in. That is to say that 'ADDRESS' will be treated as the same as 'address' or 'Address'.

4.2.1 FIELD TYPES

There are nine types of fields, each corresponding to a different type of information you may wish to store in your records.

FORCED FIELDS

A FORCED field differs from a normal field in that, during use of the ENTER option, you are forced to enter information in a FORCED field, you may not leave it empty.

Any field can be a FORCED field, but the KEY field is ALWAYS a FORCED field.

KEY FIELDS

These are the same as TEXT fields except that they can be used to locate the record quickly in a key search (see Chapter 6), and to keep the records sorted in alphabetical order. Every record must contain a KEY field, which can be anywhere on either screen of the record. KEY fields are always FORCED fields, so they cannot be left empty. A KEY can be up to 30 characters but we recommend short keys for maximum efficiency.

TEXT FIELDS

TEXT fields are used for storing items of information like names, addresses or phone numbers, which consist of strings of letters or numbers mixed with letters or other characters such as hyphens.

Examples would be '21 Highview Avenue' or '01-654 8989'.

NUMERIC FIELDS

NUMERIC fields are for storing numeric information such as prices, or other quantities of any sort, and will not accept non-numerical characters.

Examples are '12.75' or '2'.

DATE FIELDS

These are for storing dates. They have a fixed length of seven characters; two each for the year and the day and three for the month. Dates must be entered in the form '10Jul84' or 'Jul1084' (either capitals or lower case). Superbase will calculate the day of the week from the date, and display it in the message area at the top of the screen. Dates are valid within the range 1 January 1900 and 31 December 1999.

A DATE field can, however, be set to be eleven characters long so that the day of the week can

be displayed in the field itself. In such a case you would enter the date as above, and leave the day of the week for Superbase to calculate and display automatically.

CONSTANT FIELDS

CONSTANT fields are used for holding information which is the same throughout the file of records. An example would be a field for storing the TAX rate in a file such as the invoices file in Tutorial Two, or a field for storing 'pi' or some other constant in a scientifically oriented application. The initial value to be held in a **CONSTANT** field is set during the formatting process and this will appear as a default value in each record during data entry.

If the value in the **CONSTANT** field is altered by reformatting the file, then all subsequently created records will display the new value as a default, leaving the old value unchanged in previously existing records. Thus if there were a change of tax rate then new records would contain the new tax rate but records entered while the old rate was in effect would continue to display the original value. To change the constant field in old records use the BATCH option.

When entering data the **CONSTANT** field can be overwritten for the current record.

RESULT FIELDS

These are NUMERIC fields which are to contain a value dependent on the value of the contents of other NUMERIC fields within the record. A formula such as '[PRICE]*[MARGIN]' is specified, where the square brackets with names enclosed denote the fields referred to by those names. The '*' signifies that we want the contents of these two fields to be multiplied together. In such a case the result field would contain the marked-up value for the product.

Superbase will automatically calculate the value to be stored in a **RESULT** field. If the values in the fields specified in the formula are altered, Superbase will readjust the value it holds in the **RESULT** field.

You may use any constant or BASIC function in your formula, and by using parentheses the formula can be made more complex (e.g. '([PRICE]*0.15) + [PRICE]' which would increase the price by 15%). Square brackets around field names as in the above example signify the contents of that field.

Note that fieldnames must be complete. Up to 79 characters excluding spaces can be used to describe the calculation as it is entered at the top of the screen (the last example above uses 22 characters). Fieldnames used in a calculation can be anywhere in the record and on any screen. Moreover, **RESULT** fields can make use of other **RESULT** fields, so if 79 characters is insufficient, intermediate **RESULT** fields can be created on the screen that is not normally viewed.

It is important to bear in mind that you may even use the names of non-numeric fields in a calculation, in which case Superbase will pick up the first item of numeric information in those fields. In a TEXT Field containing the information ' 2 8amp Fuses ' for example, the value '2' would be picked up in a calculation which refers to the contents of that field, as it would if 'Fuses, 2' were contained in the field. If the field contained '8amp fuses, 2' however, the value of the field would be taken as '8'.

It is not until after you have finished designing your record layout and have selected the 'End Format and Store' option that you will be asked to enter the formulae for your RESULT fields.

CALENDAR FIELDS

CALENDAR Fields store dates like DATE fields, but are also like RESULT fields in that what they contain depends on calculations carried out on other dates within the record.

For example, a CALENDAR date is produced if you tell Superbase to add 30 days to the date of an invoice to give the due date for payment.

They could be used for the automatic calculation of regular appointments or of a deadline which is a fixed number of days from another date in the record.

REPLICA FIELDS

You may use the same fieldname more than once in the same record layout. If you do so, the contents of the first occurrence of the field will be duplicated in all subsequent occurrences of the field. Occurrences after the first cannot be edited. Moreover, the length of the field, and consequently the number of characters displayed, may be varied for each copy. This allows you to display only a limited portion of the field contents; but you must always display from the first character rightwards.

4.3 SETTING THE FIELDS

The previous section described each of the field types and what they are for. In the sections that follow, you will be shown how to set fields of each of these types in your record layouts.

You will see that to set the start of any of the fields, you use the 'f1' key followed by the first letter of the field type to be set (e.g 'f1' and 'T' for a Text field).

You will notice that each field type has a different field-start symbol, but there are only two field-end symbols.

If the stripes run diagonally from bottom left to top right, then the field-end marker signifies the end of a normal field. But if the stripes run diagonally bottom right to top left, then the field-end marker signifies the end of a FORCED FIELD.

When the cursor is placed over either the field-start or field-end marker, the field type is indicated at the top of the screen.

4.3.1 SETTING A FORCED FIELD

Any field may be set as a **FORCED** field simply by pressing SHIFT/RETURN instead of RETURN when setting the end of the field. This will force the user to enter data into the field before continuing to enter data into subsequent fields. Very useful where a field contains vital information which might otherwise be left out.

Note that **KEY** fields are always **FORCED** fields. When setting a KEY field, you may press either RETURN or SHIFT/RETURN to set the end of the field. **CONSTANT** fields are not forced, but are automatically filled with the constant value when records are being added to the file.

4.3.2 SETTING A KEY FIELD

Having typed a fieldname such as 'NAME' you may set the start of a **KEY** field by pressing the 'f1' key followed by the 'K' key.

The message 'Set Key' will appear in the message area at the top left of the screen and a small rectangle will appear just before the flashing cursor. You will also see the number '1' in the right hand message area at the top of the screen.

The small rectangle signifies the position where the **KEY** Field starts and the number signifies the current length of the field.

After choosing the length of the field (perhaps 15 to allow for names up to fifteen characters long), press the cursor right key at the bottom right of the keyboard, to move the cursor along to the end of the key field. The maximum length of a key field is 30 characters.

> **Note: The key should be as short as possible while allowing each key to be unique. The shorter your keys the faster your record access times will be, and the less disk space will be occupied by the file index.**

You will notice that as the cursor moves along the line, the number in the right-hand message area will increase to show you the current length of the field.

You may also use the cursor left key to reduce the length of the field.

Once the field is the size you require (check the length count) press the RETURN key to set the end of the field.

Note that field lengths can be easily changed at any time without loss of data, so choosing a field length at this point does not limit you in any way. However, once information has been entered into the Key field, it should not be shortened to less than the maximum used length in any record. REPLACING a record that has had its Key field shortened so that it becomes the same as another record might result in damage to your records.

A Key field is always a Forced field.

4.3.3 SETTING A TEXT FIELD

To set a TEXT field press the 'f1' key followed by the 'T' key.

You will see another field-start marker appear on the screen, this time a small square. The message 'Set Text' will be displayed in the left-hand message area, and the number '1' on the right to indicate the field length.

Use the cursor right key again to set the length that you require. Check the number of characters with the counter in the right-hand message area and press RETURN to set the end of the field. The maximum length of a Text field is 255 characters, so the field start and end markers may be on different lines. But you cannot start a field on one screen and end it on the next.

4.3.4 SETTING A DATE FIELD

A DATE field can be set by positioning the cursor where you want the date to be shown on the record and pressing the 'f1' key followed by the 'D' key.

The word 'Date' will appear in the left-hand message area and the cursor will jump to the end of the field.

Unlike other fields mentioned above, the DATE field will be set to a fixed length of seven characters. This is the minimum length for a date field, unless you use the INSERT key to extend it to eleven characters. The automatic calculation of the day of the week can then be displayed in the field. Date fields are stored in numeric form using up to a maximum of 5 characters.

4.3.5 SETTING A NUMERIC FIELD

A NUMERIC field, e.g. one that is to contain information as to the price of an item, can be set by pressing the 'f1' key followed by the 'N' key.

The message 'Set Numeric' will appear in the message area. The field-start symbol is immediately followed by '+#' symbols. The '+' marks the position of the plus or minus sign.

This time there will be two numbers separated by a comma in the right-hand message area. The first represents the number of digits before the decimal point, the second represents the number of digits after the decimal point.

A NUMERIC field may contain up to a maximum of nine digits. There may be up to nine before and up to four after the decimal point. A numeric field that is to contain financial information such as a price will normally have anything up to seven digits before and two digits after the decimal point. Numbers are rounded automatically when necessary, but it should be noted that the results of rounding can be unpredictable when very large numbers are involved, due to limitations in the computer's way of doing arithmetic. However, only very small fractions are involved.

Note that although a NUMERIC field contains a sign for plus or minus (for profit or loss for example), it will not contain a currency sign such as '$' or '£'. The currency sign can be included with the descriptive text immediately before the start of the field.

4.3.6 SETTING A RESULT FIELD

To set a RESULT field press the 'f1' key followed by the 'R' key. You will see the message 'Set Result' in the message area at the top of the screen. The format of a Result field is like that of a Numeric field.

A RESULT field is set in the same way as a NUMERIC field. The formula for the Result field is specified at the end of the FORMAT operation.

A combined maximum of 16 RESULT, CONSTANT, and CALENDAR fields may be used in a record format. When setting a calculation, you cannot refer to the field itself.

4.3.7 SETTING A CONSTANT FIELD

You can set a **CONSTANT** field by pressing the 'f1' key followed by the 'C' key. The message 'Set Constant' will be displayed at the top of the screen and you may use the cursor control keys to set the size of the field in the same way as for a TEXT field. The maximum size of a Constant field is 30 characters. The contents of the Constant field are specified at the end of the FORMAT operation.

4.3.8 SETTING A CALENDAR FIELD

Set a **CALENDAR** field by pressing 'f1' followed by SHIFT 'C' key. Apart from the message 'Set Calendar' the process is the same as that for setting a DATE field above. The formula for the Calendar field is specified at the end of the FORMAT operation.

4.4 FURTHER FORMAT COMMANDS

There are a number of further commands which you can use while creating a record format. They can be used to increase the number of screens in the record, enhance the appearance of the records and make them more intelligible.

FORMATTING ADDITIONAL SCREENS

When you have finished formatting your current screen you can obtain the next blank screen to format by pressing the 'f1' key followed by the '+' key. Up to two screens are available for each record layout.

RETURNING TO THE PREVIOUS SCREEN

If you are formatting a multiple screen record layout you can return to the previous screen by pressing the 'f1' key followed by the '-' key.

ERASING A LINE OF DESCRIPTIVE TEXT

A whole line of text can be erased by positioning the cursor anywhere on the line to be blanked otner than on a field marker, and pressing the 'f1' key followed by the 'E' key.

Used in this way, the ERASE command will only erase lines of descriptive text such as fieldnames and other text entered onto the screen during formatting.

ERASING A FIELD

If you want to remove a field from the record, you must position the cursor over the field-start marker or the field-end marker before pressing the 'f1' key followed by the 'E' key.

Used in this way, the ERASE command will only erase the field, NOT the descriptive text.

DELETING A LINE

This command differs from the ERASE command. The latter will replace an original line of descriptive text with a blank line, whereas the DELETE command will remove it from the record altogether, moving all subsequent lines up to fill the gap.

Note that you cannot use this command to delete lines which have fields on them. This is to ensure that you do not remove fields accidentally.

Just press the 'f1' key followed by the 'INST/DEL' key at the top right of the keyboard.

INSERTING A LINE

Similarly, a new line can be inserted into the record, moving all subsequent lines down to make room.

Position the cursor at the start of the line before which you want the new line to appear, and press the 'f1' key followed by the 'INST/DEL' key with the 'SHIFT' key held down.

INVERTING A LINE

You can invert a line of the record so that it appears light on dark rather than dark on light (or vice versa). This has the effect of highlighting the line you have inverted.

Position the cursor on the line to be inverted and press the 'f1' key followed by the 'I' key.

INVERTING PART OF A LINE

Use this command when you want to invert only a few words on a line.

Position the cursor to the start of the word or space that you want to invert. Then press the CONTROL and '9' keys to turn invert mode on. Then retype the text or spaces that you want to invert.

Press the CONTROL and 'O' keys to turn invert mode off.

INVERTING THE SCREEN

If you prefer, you may invert the whole screen so that the entire record appears light on dark (or vice versa).

Press the 'f1' key followed by the 'S' key.

You may reverse the effect of either Invert Screen or Invert Line by repeating the command.

CHANGING THE COLOUR OF THE SCREEN

If you are using a colour screen, these commands will allow you to change the colours displayed. Instead of having to do this each time you load a file, you can change the colours in format mode so that they will be stored as part of your layout. Then, each time you select a file it will be displayed in colour.

Changes the colour of all the text on the screen, rather like changing the colour of the 'ink'. Sixteen colours are available by repeating the command.

Changes the colour of the background, rather like changing the colour of the

'paper'. Sixteen colours are available by repeating the command.

Changes the colour of the screen border. Sixteen colours are available by repeating the command.

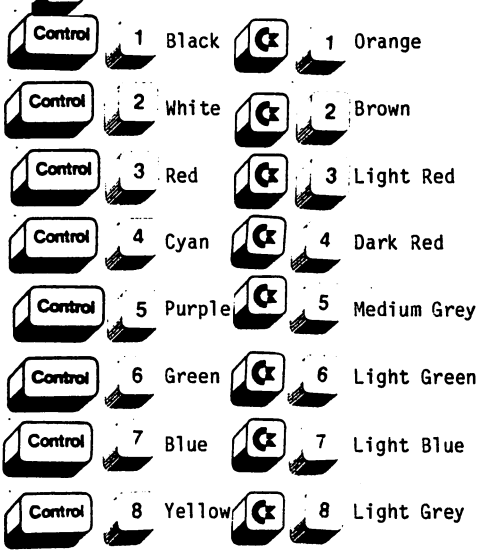
Removes colour. That is, it reverts the whole screen to its normal (monochrome) colours.

'Reverts' screen to original colour. That is, to the screen colours with which the record was formatted.

ADDING COLOUR

This command should be used with the CHANGE COLOUR command as a 'finishing touch', it allows you to add colour to selected characters on the screen.

Position your cursor where you wish to add colour. Press the 'f1' key followed by the 'A' key. You will then be asked 'Add which colour'. Sixteen colours are available. Select one by pressing a numeric key and the CONTROL or COMMODORE keys in the following combinations.



As you move your cursor, any text it passes over will change colour. This is rather like changing the colour of your 'ink'. However, if you add colour to inverted text, the colour of the 'paper' changes without affecting the colour of the text. To deselect the colour, press any key other than cursor movement keys.

As well as brightening up the layout of your records, you can use the ADD COLOUR command to "hide" selected information. Position your cursor, then simply 'add' the colour of the screen background to the field you want to hide. Although it will appear to vanish from the screen, you can view it by pressing the CONTROL and '2' keys to change the background colour. To make it disappear again, press the CONTROL and '2' keys again until the background reverts to its original colour.

You can also use the command to produce coloured borders. Simply draw your borders (using 'f1 B') and ADD colour to them.

Note that if you wish to use a DAMS interface, or other interface requiring memory, you may do so, but the 'added' colours will not be displayed.

DRAWING A BORDER

You may wish to draw a box around the record or to draw a divider between two parts of the record. Press the 'f1' key followed by the 'B' key. You will then be asked 'Border Character?'.

Pressing a key at this point will enable you to draw repeated characters of a particular kind simply by using the cursor movement keys.

The cursor will leave in its wake a stream of characters of the type you have chosen, until a key other than a cursor movement key is pressed.

Note that many of the graphics symbols on the front of the keys are available if you hold down the 'SHIFT' or 'CBM' key while selecting the character to be repeated, but you cannot use the symbols used by Superbase as field-start or field-end markers.

Try experimenting with different keys until you find the symbol you wish to use.

To erase a border that has been created in this way, simply select the BORDER option again but choose the space character as the border character and draw a border of spaces.

SCREEN DUMP

You can obtain a paper printout of the screen at any time by holding down the CONTROL key while pressing the 'P' key.

QUIT FORMAT

If you wish to escape from the Format Option at any point and return to Menu 1, you can do so by pressing the 'f1' key followed by the 'Q' key.

You may wish to do this if you have entered the Format Option by mistake. Any changes made prior to this command will not be saved.

CLEAR FORMAT

If you are totally dissatisfied with the format you have designed, you can clear the screen to start again by pressing the 'f1' key and then the 'Clear/Home' key at the top right of the keyboard.

Note that only the current screen is cleared if you are working with a multi-screen file.

This is another key which requires the SHIFT key to be held down.

END FORMAT AND STORE

When you have finished formatting your record you can store the screen layout by pressing the 'f1' key followed by the 'STOP' key.

You will notice each of the field-start and field-end markers being replaced by angle brackets.

If you have included **RESULT** or **CALENDAR** fields in your record format then you will be asked:

'Enter Calculation?'

Type in the formula you require and press RETURN (see earlier in this Chapter for details of formulae in **RESULT** fields).

You will also be asked to specify the contents of any **CONSTANT** fields at this point.

4.5 EDITING AN EXISTING RECORD FORMAT

If at any time you wish to change the format of one of your files you may do so without losing any data. You should always print a STATUS on the file before embarking on a file reformat operation. Select PRINT, that's 'f5' from Menu 2, followed by MAINTAIN, that's 'f6' from Menu 2, then select 'Status' from Maintain sub-menu.

FIELDS MAY ONLY BE REMOVED FROM OR ADDED TO THE END OF THE RECORD.

You can change the length of the fields or change the descriptive text. If you change a fieldname you must make sure that any references to the field are also changed. Although field types may be changed, this should be done with caution as you may inadvertently cause damage to your data.

From Menu 2, obtain the FORMAT option by using the 'f2' key.

Move through the existing record format using the INST/DEL key to insert or remove spaces inside field markers. Add lines, borders, etc. as required. Change field types with the following rules and guidelines in mind.

1 If a date or calendar field is converted to a non-date or calendar field, the date that was in it will be displayed as a number.

2 If you change a field to become a result or calendar field, the formula for the next following result or calendar field will be displayed for editing at the end of the operation. You must overtype the display with the new formula, and re-enter the old formula into the proper result field.

3 If you change a text field to a numeric field then any text data in that field will be lost when the field is subsequently edited.

4 If you specify another field as the key field, the current key will be re-assigned to that field and whatever was in that field will be lost. This procedure is NOT recommended!

5 If you change a replica (i.e. copied) field to a unique field, you will create a new field. This will not affect the order of fields within the record. The new field will have no data in it. Likewise, converting unique fields to replica fields is permissible, but will result in the data from the original of the replica being displayed in that field.

Full examples of setting up record layouts are given in Tutorials One and Two.

4.6 TRANSFERRING AN EXISTING RECORD FORMAT BETWEEN DATABASES

If you wish to create a file format in either the current or another Superbase database that is the same or nearly the same as an existing one, there is an easy way of doing so.

Use the MAINTAIN OTHER Option then enter the command 'COPY' to copy the file format information to a file with a new name (see Chapter 14). The records themselves cannot be copied as they are stored in the Database file itself, which is listed in the disk directory in upper case letters. Once you have created the new format file, you can enter its name after selecting the FILE Option, either in the current or the new database.

4.7 SUMMARY

The Format Option is used to set up screen layouts for the records in a file, or to modify already existing screen layouts.

You can obtain the FORMAT option to revise a screen layout by pressing the 'f2' key from Menu 2.

You are automatically put into the FORMAT option whenever you select an as yet non-existent file from the Database Catalog, either at start-up or while using the FILE option.

Sets a **Key** Field.

Sets a **Text** field.

Sets a **Date** field.

Sets a **Numeric** field.

Sets a **Result** field.

Sets a **Constant** field.

Sets a Calendar field.

Gives you the next screen to format for this file (up to two, numbered 0 to 1).

Takes you back to the previous screen.

Erases a line of descriptive text where the cursor is currently positioned.

Erases the field which has the cursor positioned over its field-start or field-end marker.

Deletes the line the cursor is currently on and moves up the subsequent text to fill the gap left behind.

Inserts a line just before the current cursor position and pushes the subsequent text down to make room.

Inverts the line of the screen where the cursor is currently positioned.

Switches invert mode on.

Switches invert mode off.

Inverts the whole screen.

Changes colour of text on whole screen.

Changes colour of backgro::nd on whole screen.

Changes colour of screen border.

Reverts colour to monochrome.

Reverts screen to original colour.

Enables cursor movement keys to add colour to characters on the screen.

Enables the cursor movement keys to be used to draw a line or border of characters of your choice.

Causes whatever is currently on the screen to be printed out.

Enables you to quit the Format option and return to Menu 1. The Format is abandoned.

Clears the whole format on the current screen to enable you to start again.

Ends the formatting process, asks for calculations and constants, and stores the record format.

5 ENTER

5.1 ENTERING INFORMATION

Once you have formatted a file (See Chapter 4), you can enter information into it.

With the ENTER option, you fill in a blank record with the information you want to keep, then add that filled-in record to the file.

5.1.1 OBTAINING THE ENTER OPTION

From Menu 1 press the 'f1' key.

You should see the blank record from the file selected appear on the screen.

Superbase uses the message area at the top of the screen to tell you:

MODE: ENTER	That you are in the ENTER option
#1 k	That the field of the record you are about to enter information into is the first field, and is a KEY FIELD.

Note that the first field of the record need not have been a KEY FIELD. Every record must contain a key field but it can be in any position in the record.

You are now ready to fill in each item with the desired information. All characters are valid except double quotation marks ("). However, we recommend that you don't enter any of the following characters as they are Superbase Matching commands: = # * > < / & ?

5.1.2 FILLING IN THE BLANK RECORD

The following control keys allow you to move the cursor so that you can enter information where you want:

or

Moves cursor to the right unless it is at the end of the field, in which case it moves the cursor to the next field.

Moves the cursor to the left unless the cursor is at the beginning of the field, in which case it moves the cursor to the previous field.

Moves the cursor directly to the next field, changing screen if necessary.

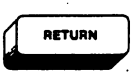
Moves the cursor directly to the previous field, changing screen if necessary.

Sends the cursor to the first field in the default screen. Any of the four screens can be set as the default screen by typing 'Screen n' from the Main Menu, where n is the number of the screen wanted as the default screen. This screen will be the first to be displayed when ENTER is selected.

Clears all of the fields in the record and sends the cursor to the first field of the default screen.

Enables you to exit from the ENTRY option without any information being stored. This is useful if you have selected the ENTRY option by mistake.

Dumps the current screen to the printer to provide you with a hard-copy print out of the screen layout or the record you are currently entering.



Moves the cursor directly to the next field unless the cursor is in the last field of the last screen, in which case it displays 'Press Return to Store' in the message area. Pressing RETURN again at this point stores the record, along with the information you have entered, into the file.

Displays Press 'Return to Store' in the message area. Pressing RETURN will then store the record in the file. This command can be entered wherever the cursor is at the time. Cancel it by pressing any key other than RETURN.

Note: If the KEY FIELD contains information identical to that in an already existing record, the message 'Key Already Exists' will be displayed in the message area together with 'Press Return to Continue'. The record you have just defined will NOT be stored. You will remain in the ENTER option so that you can type a new key.

To change an existing record you should use the REPLACE function of the SELECT option (See Chapter 6).

5.1.3 FORCED FIELDS

If the cursor is in a field which has been set up as a FORCED FIELD (see Chapter 4), you will be prevented from storing the record until some information has been typed in all FORCED FIELDS.

The message 'Forced Field: Please Enter Data' will be displayed in the message area at the top of the screen and the cursor is placed in the first FORCED FIELD.

5.1.4 DATE FIELDS

In a field which was defined as a DATE Field during record formatting (see Chapter 4), Superbase will only accept entries of the form '18oct83' or 'oct1883' (upper or lower case). Superbase accepts single character dates so it is unnecessary to enter 04oct83, as 4oct83 will be accepted.

Attempting to enter a sequence of characters of any other kind will result in the message 'Invalid Date' being displayed in the message area, and the cursor will be prevented from moving to another field until a valid date has been entered.

Once a valid date has been entered, Superbase will calculate which day of the week corresponds to that date and will display that day in the message area at the top left centre of the screen.

If the DATE Field is long enough (11 or more characters) Superbase will also display the day of the week in the field itself.

To enter a date a designated number of days forward, merely add days to the date and Superbase will calculate the valid date. For example, if the date is '12Jan' and you require 20 days on, type in '32Jan', and '1 Feb' is displayed.

Full examples of the use of the ENTER Option are given in Tutorials One and Two.

5.1.5 ADDING, REPLACING OR DELETING RECORDS

ADD, REPLACE, and DELETE commands are provided on the SELECT sub-menus to facilitate data entry and record modification following record selection. See Chapter 6.

5.1.6 MODIFYING NUMERIC FIELDS

There is an easy way of entering multiples of numbers into NUMERIC Fields. Suppose you know that your customer has bought 17 items at £37.95. First enter 37.95 into the NUMERIC Field. Then place the cursor at the beginning of the field and type in '17*' and press RETURN. The value stored in the field will be the result of multiplying 37.95 by 17.

You may modify NUMERIC Fields in this way using any of the arithmetic operators; '+', '-', '*' or '/' provided a space is available in the field for the additional character.

You cannot insert operators if the field is full.

If you want the number and operator to be after the field contents, as in '/6', you can use the DELETE key to pull the field contents over to the left so that you can fit in your number and operator.

This facility for modifying the contents of a NUMERIC Field is also available with the ADD and REPLACE Options in the SELECT Option.

6 SELECT

6.1 SELECTING A RECORD

The SELECT Option provides you with a number of ways of obtaining particular records from your file.

Note that records are stored in the file alphabetically according to the contents of the KEY Field of each record (see Chapter 4). Numbers are treated as coming 'alphabetically' before letters.

6.1.1 OBTAINING THE SELECT OPTION

To obtain the SELECT Option from Menu 1, use the 'f2' key.

You should now see a further Menu, the SELECT Menu, with a number of sub-options listed on the screen. To return to this Menu after a SELECT operation, press RETURN. Press RETURN again for Menu 1.

```
mode :  Select Menu

 f1  Key
 f2  Current
 f3  Next
 f4  Last
 f5  Previous
 f6  First
 f7  Match
 f8  Output
 A   Add
 R   Replace
 D   Delete
```

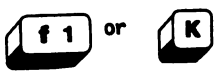
6.2 THE SELECT OPTION CONTROL KEYS

The various choices available to you at this point, and the control keys used to obtain them, are as follows. From the SELECT Menu or from any SELECT option use the function key selection or the initial character of the SELECT option.

THE '+' AND '-' KEYS

Use '+' and '-' or cursor up/down keys to display adjacent screens (the number of the last screen used becomes the default until changed again). These keys are available whenever a record is displayed.

6.2.1 KEY



This command enables you to search your file for a record with particular information in the KEY Field. On selection you will be asked: 'Key?'

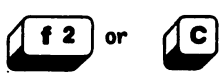
Type in the information you think is held in the KEY Field of the record you want and press RETURN. You may enter the full or partial contents of a Key Field for a full or partial match.

Superbase will then display either the record whose key matches your entry exactly, or the record that contains the nearest key to the characters entered.

If a record is found with a key that starts with the same characters as those you entered, but has more characters, then the message 'Partial Match' will be displayed.

If no record has a KEY starting with your specified characters, then the message 'Key Not Found' will be displayed together with the record which has the alphabetically closest KEY.

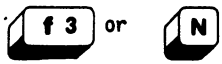
6.2.2 CURRENT



This command obtains the record you are currently working on in this file.

Superbase will remember the CURRENT record for up to the last three files used. If there is no current record, you will see the 'End of File' message and a blank screen.

6.2.3 NEXT

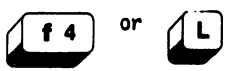


If you have just been using a record or have just viewed a record using one of the other commands, this command obtains the NEXT record in the file.

This will be the record which follows alphabetically according to the key field. Use 'M' to obtain next 'Matching' record (see MATCH below).

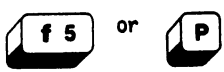
If you have not yet accessed any records in this file, then attempting to use 'Next' will give you the first record in the file.

6.2.4 LAST



This command obtains the LAST record in the file. In a file of invoices with the invoice number as the key, the LAST command would display the invoice with the highest number. This would be the most recent invoice stored. This command is used to terminate a MATCH.

6.2.5 PREVIOUS



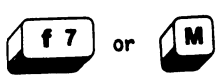
After viewing a record you may wish to see the PREVIOUS record in the file, in which case use this command.

6.2.6 FIRST

Use this command to obtain the FIRST record in your file.

6.2.7 MATCH

The MATCH Command provides you with a slower but much more flexible method of searching your file for particular records.



You may use this option to view selected records based on a wide range of criteria in any field or combination of fields.

SUMMARY OF SELECTION CRITERIA

Note that "text" can be letters or dates, as appropriate.

Exact match	"=text"	"=number"
Sliding match within field	"text"	
Exact exclusive match (not equal to)	"#text"	"#number"
Sliding match from field onwards	"text-"	
Terminate the sliding match	"*"	
Match greater than field content	">text"	">number"
Match less than field content	"<text"	"<number"
Match alternatives	"t1/2/etc"	"n1/n2/etc"
Match range of values	">t1&<t2"	">n1&<n2"
Match partial text	"=text*"	
Match with 'wild' character	"=text??"	
Request match in command area	"<-" (back-arrow)	

You can specify that the records selected have particular values in specified fields, or that they have that value in a field within a particular range of fields. You should not use the characters = # - * > < ? / ← or & as part of field contents if you wish to use them for matching, because they will be interpreted literally as operators by the match function.

Text for matching may be in upper or lower case, as the system does not differentiate.

You can also specify that a particular field, or one of a range of fields holds, a value within certain limits, such as between 100 and 500.

Facilities such as these, alone or in combination, ensure that even in a file of thousands of records, you can select any particular record or group of records you want with ease.

RECORD TEMPLATE

On entering the MATCH option you will be asked: 'Select Match Data'. Superbase will display a blank record on the screen with the cursor in the first field. This is the 'Record Template' into which you enter the criteria to be matched during the search.

Using the cursor movement keys and RETURN to move from field to field, you may now enter the specification that will determine which record or records are to be selected and displayed.

ENTERING CRITERIA FOR MATCHING

Each field may either be left blank or may have some characters (numbers, letters, or other characters) typed into it. These characters are called the CRITERION for that field. The criterion typed into a field will consist of a string of characters (e.g. 'London') optionally preceded by an operator (e.g. '=London'). The operators available are '=' (equal to), '<' (less than), '>' (greater than) and '#' (not equal to).

If no operator is provided, SUPERBASE will simply look for the string of characters ANYWHERE in the specified field. This is called a SLIDING MATCH and is detailed below.

If a field is not left blank, then the specification entered into it will be compared with the contents of each record. Only those records which match that specification will be selected.

For example, If '=Jones' is typed into the 'Customer' field of an Invoice record, then only those Invoice records pertaining to Jones will be selected.

Similarly, if the specification consists of '=Jones' in the 'Customer' field and '>500' in the 'Amount Due' field then only those of Jones's invoices for more than £500 will be selected.

STARTING THE SEARCH

Once you have finished entering your specifications into the fields you can store the match criteria and start the search by holding down SHIFT and pressing RETURN. If the cursor is in the last field of the record, then just RETURN will do.

The first such record will be displayed, and any others can be obtained by pressing 'M' for 'Match' repeatedly. Each time 'M' is pressed, the next record in the file which matches the specification will be displayed.

INTERRUPTING AND RESUMING THE SEARCH

When a matched record is displayed, you may interrupt the display by pressing 'P' for 'Previous' or 'N' for 'Next'. This will display the record that precedes or follows according to the alphabetical order of the key fields, whether or not it matches your specification.

Pressing the 'M' key again will resume the display of records matching the specified criteria. In this way, you can view the records selected by your 'Match' criteria, and pause occasionally to browse through neighbouring records in the file.

You may even use the ADD, REPLACE or DELETE commands to modify the file and then continue viewing the selected records where you left off.

ENDING THE SEARCH

To cancel the current MATCH operation, in order to set up new match criteria, use the LAST command to jump to the end of the file. You may then use MATCH to enter new specifications.

SLIDING MATCH

You may search for a string of characters anywhere in a field by omitting the '=' symbol or other operator in the match specification.

This is known as a 'Sliding Match'.

Whereas '=Desk' would only select records with precisely the word 'Desk' in the appropriate field, 'Desk' would also select records with 'Large Desk', 'Pine-desk', 'desktop' and so on in the specified field.

You can also combine a sliding match criterion with other criteria using operators such as '#', '=' or '>'.

FIELD-INDEPENDENT MATCHES

Another facility offered by the MATCH Option is a field-independent match.

Place the cursor in any field and type the specification followed by a hyphen (e.g. 'London-' or '50-'). The records selected will be those with the specified criterion occurring in any subsequent field.

As described above, the field-independent match will look for your specified criterion in all of the fields including and following the field where the specification was entered. It is also possible to restrict the range of fields to be included by typing the FIELD-INDEPENDENT MATCH DELIMITER symbol '*'. This will exclude the field it occurs in and all subsequent fields from the fields to be searched, thus speeding up the search. Also, if you place a field-independent match in field 1 and an exact match in field 4, the search will be cancelled for fields after the exact match.

This facility may also be combined with other types of match criteria. Other criteria must be before the field-independent match and after the delimiter '*'.

THE 'AND' OPERATOR AND THE 'OR' OPERATOR

You may also use the operator '&' (AND) to specify a range of values, and the operator '/' (OR) to specify more than one possible criterion within a given field.

For instance, the specification '=London/=Reading' would select those records with EITHER 'London' OR 'Reading' appearing in the chosen field.

Similarly, the specification '>100&<150' would select only those records with a value in the given field above 100 AND below 150.

PATTERN MATCHING

Pattern matching may also be used within a 'Match' specification. The '*' symbol indicates that any string of characters beginning with the characters preceding it will be accepted. Pattern matching characters should be used in conjunction with the '=' operator, as sliding matches are available for wider ranging matches.

Thus '=Sm*' would select any record with 'Smith', 'Smythe', 'Smullyan' etc. appearing in the chosen field.

Note that the '*' symbol can only be put after a string of characters and must have no other characters following it.

Similarly the '?' symbol can be used as a 'wildcard' character so that 'Hutch?ns' would select both 'Hutchens' and 'Hutchins'.

These pattern matching symbols are very useful if you cannot remember how a name is spelled, or if you suspect that it was spelled incorrectly on entry, but they are also useful if you want to ignore characters in a string for the purposes of the match.

USING THE BACK ARROW

If you wish to enter a criterion that is longer than the space allowed for it on the screen, such as the specification of combinations and alternatives, the back-arrow '<-' provides a way of doing so. To obtain a back arrow on a Plus/4 keyboard, press the SHIFT and = keys.

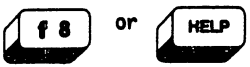
Instead of entering the specification, place a back-arrow in the first character position of the field. Press RETURN and continue with the other criteria if any.

When you have finished specifying criteria in the record template, Superbase will prompt you in the command area to enter the criterion for the field with the back-arrow in it. Only when all such fields have had their specifications entered will the search begin.

MATCH SUMMARY

These various types of Match Criteria, used individually or in combination, add up to a powerful facility for selecting records from your files. You will see in Chapter 7 that groups of records selected in this way can be indexed by a list called a KEY LIST which can be stored for future use.

6.2.8 OUTPUT



The OUTPUT command available from the SELECT Option provides a display of the fieldnames and field contents of the CURRENT record, either on the screen or to the printer. To output to the screen use 'display' and to output to the printer use 'print'.

The contents of the record are displayed across the page. The full field sizes are used and information wraps over onto following lines.

You can also change the format of the output from ACROSS TO DOWN by typing 'down' from either Main Menu. The two commands can be typed in together as in 'display down' to display each field on a new line.

The fieldnames are displayed down the left-hand side of the screen if the display is DOWN and only if all fields are output, with the contents of each field to the right of the fieldname.

If you want the output to be directed to the printer instead of the screen you must first change the direction of output by typing 'print' from either Main Menu, or by selecting the PRINT option, 'f5,' from Menu 2.

Whichever of the commands 'display', 'print', 'down' or 'across' were last used will remain in effect until the converse commands are used.

6.2.9 ADD

The ADD command is for adding a new record based on an existing record. The new record must have a different key field and may also be changed in any other fields.

This is useful if you want to enter records which have much information in common with an existing record. It allows you to avoid typing all the information in again.

Using the KEY, NEXT, PREVIOUS or other command, select the record you wish to base the new record on and then use the ADD command to create it.

Note: The new record must have a different key field from the record on which it was based. If you have not changed the key field, Superbase will display the message 'Key Exists' and will return the cursor to the key field.

6.2.10 REPLACE

REPLACE is used to edit the records in your files. It is like the ADD command except that instead of producing a new record based on a record you have selected, it will instead replace the selected record with the modified version you have created.

Whereas the ADD command requires that the Key field is changed so that the new record can be distinguished from the record it was based on, the REPLACE command requires that the key field stores records in key order. If you modify the key, you effectively create a new record (see ADD, earlier in this Chapter). If you do this, you may then wish to delete the old record.

6.2.11 DELETE

This command is used to delete the record that is currently selected from the file.

You will be asked: 'Confirm Deleted Record' so that you can change your mind before any harm is done. Type 'N' for 'no' if you have made a mistake, otherwise type 'Y' for 'yes' and the record will be permanently removed from the file.

6.3 ALTERNATIVE WAYS TO EXECUTE THE SELECT COMMANDS

Note that each of these commands can also be chosen by typing the first letter of the command (e.g. for 'First' type 'F'). A list of these letters is provided in the message area above the main screen throughout the SELECT Option.

It is also possible to bypass the Select Menu by typing one or more of the Select commands directly from either of the Main Menus. The command line you type (e.g. 'Select First') will appear in the message area above the screen. Just press RETURN and the command line will be executed.

If you are selecting on more than one criterion, you must separate them with semicolons:

```
select match where [customer] is "=Jones";[goods] is "radio"
```

You can even join commands together, separating them with colons (':') to create longer commands such as:

```
select match where [Customer]is "=Jones":select  next:display [Customer]
```

Superbase will execute these commands one after the other without any pause between them. (See Chapter 3 for an explanation of the 'where' command.) If there is an error in your command line, Superbase will display an error message and stop. You can recall the line and make changes to it by pressing the recall key. More details about these COMMAND LINES, as they are called, are given in Chapter 3.

7 FIND

7.1 USING THE FIND OPTION

The FIND command enables you to set up a list of the KEYS of a selected group of records which can then be used with the OUTPUT, BATCH, SELECT and SELECT commands to access and process just those records on the list.

The process of specifying which records are to be included in the KEY LIST is exactly the same as in the MATCH command of the SELECT option (see Chapter 6).

7.1.1 OBTAINING THE FIND OPTION

To obtain the FIND option press the 'f3' key from Menu 1.

You will see a blank record screen as in the MATCH option, ready for you to enter the match criteria governing the selection of the records to be included in the list.

7.2 THE DEFAULT LIST

Once you have entered your match criteria as detailed in Chapter 6, the message 'Processing' will be displayed at the top of the screen while Superbase searches through the file for the records specified, adding the keys of all matching records to its KEY LIST. You will then be returned to Menu 1.

Unless you specify a name for the KEY LIST as will be detailed below, Superbase will give the list the default name "hlist". Like all lists, "hlist" is automatically stored on disk. Every time a new "hlist" is created, the old one is lost.

The reason for the leading 'h' is to allow you to display the list by using the HELP command. As explained in Chapter 17, all filenames preceded by an h' are treated as HELP SCREENS and so can be viewed by means of the HELP option.

To view the current "hlist", obtain the HELP option and type 'list' when asked to specify which help you require.

Whatever Key List you last created by the FIND command will remain the current "hlist" until you create another.

7.3 NAMING AND STORING A KEY LIST / APPENDING TO A LIST

Using the default Key List is convenient for constructing temporary lists of records for various purposes, but there will be many Key Lists that you will want to keep to use again and again.

You may, for example, want a permanent list of customers who have bought a particular product from you, or a list of products with a particular discount rate.

For purposes such as these, you need to be able to store a Key List on disk with the appropriate file. In order to do this, all that is required is to give your Key List a name other than "hlist". The maximum length of a list name is 16 characters.

From either Main Menu, type the COMMAND LINE **'find "listname"'**, where the listname can be any name not already used as the name of a Superbase file, and must be enclosed in double quotation marks.

Do not use the name of a database. If you use the name of an existing list or file, it will be overwritten by the new list.

To avoid confusion it is a good idea to call all of your Key Lists by a name ending in 'list'. Examples would be "update-list", "10%d-list" and so on.

APPENDING TO A LIST

To append to an existing list, use the form: **'find "update-list,a"'**. This is useful when you already have a list (e.g. last month's orders) and want to add to it without repeating the original processing.

After typing **'find "listname"'** from either Menu, you will be presented with the blank record template for entering your match criteria just as you are when you press 'f3' to obtain the FIND command from the list of options on Menu 1.

7.3.1 BYPASSING THE RECORD TEMPLATE

You can even bypass the record template altogether by entering your match criteria in a COMMAND LINE from either Menu. See Chapter 3 for further details of command lines.

In a FIND command line you can specify several match criteria one after the other, using the WHERE secondary command to indicate the start of the list of criteria sought for the record. Instead of placing the operator (if any) and text or number value inside the field angle brackets, you must place it inside double quotation marks. The rules for matching are the same as when using the record template.

You can, if you wish, place the back-arrow "<-" inside quotation marks instead of a value. This will produce prompts for any such fields before the search begins, which is useful when long strings of characters must be entered.

An example would be:

find "newlist" where [date] is ">01JAN84";[goods] is "<-"

This is an optional method of specifying the match criteria - you can always use the record template if you wish, but the Key List must be given its name by means of the direct command **'find "listname" etc'** if it is to be stored on disk.

Note that you must separate multiple search items with semicolons.

7.4 USING THE KEY LIST

Once a Key List has been created it can be put to use in a number of ways. You might want to obtain a printed copy from the records in the list. Either obtain the OUTPUT option (see Chapter 9) and in response to its prompt type **'the records from "listname"'** (don't forget that "listname" here can be "hlist" if you want), or you can type the following Command Line directly from one of the Main Menus:

output the records from "listname"

This is only one limited example of the use of a command using a Key List. Details of its use with the BATCH, SELECT and EXPORT commands are given in the Chapters relating to those options.

7.5 RENAMING "hlist"

Because the old "hlist" is overwritten every time a new default list is written, you will want to rename some "hlists" immediately after creation. Select the OTHER Option from the Maintain Menu, and type:

r0:newlistname=0:hlist

See Chapter 14.

8 DISPLAY AND PRINT

8.1 USING THE DISPLAY OPTION

The DISPLAY command is used to set the direction of output to the screen instead of the printer. It is used before the OUTPUT command (see Chapter 9) and remains in effect until the direction is reversed by the PRINT option. Use the DISPLAY option if you do not have a printer connected and you wish to view the output.

8.1.1 OBTAINING THE DISPLAY OPTION

To obtain the DISPLAY option, press the 'f4' key from Menu 2. The screen will return to Menu 1. Output will be to the screen until 'print' is selected.

8.2 USING THE PRINT OPTION

The PRINT option is the exact reverse of the DISPLAY option. It is used to switch output from the screen to the printer. Use this option only if you have a printer connected, or, when you output, an I/O error message will be displayed.

8.2.1 OBTAINING THE PRINT OPTION

To obtain the PRINT option, press the 'f5' key from Menu 2. The screen will return to Menu 1. Output will be to the printer until 'display' is selected.

8.3 PRINT AND DISPLAY ON THE COMMAND LINE

Like all other menu options, the 'PRINT' and 'DISPLAY' commands can be entered directly on the Command Line.

They can also be incorporated into an OUTPUT command. See Chapter 9.

9 OUTPUT TO SCREEN, PRINTER, OR WORD PROCESSING DISK FILE

9.1 OUTPUTTING INFORMATION FROM FILES

The OUTPUT option is used to display or print information from all or selected records in the current file. See **'Output To a File'**, later in this chapter, for information on files for use in word processing. Selected or all fields, descriptive text, calculations, and BASIC variables can be output. Special commands can be used to format the output fields. Output commands, like other Superbase commands, may be abbreviated.

9.1.1 OBTAINING THE OUTPUT OPTION

From Menu 1, press the 'f4' key. You will be prompted with:

'Enter: all/from "list" (item list....)'

You are being asked whether you want the output from ALL of the records or just those from a predefined KEY LIST, and which fields you want to output. The '(item list....)' signifies that field names and/or variables may be included in the command.

9.1.2 CHANGING THE DIRECTION OF OUTPUT

You can direct the results of your 'output' command to the screen, printer, or to a disk file. The disk file option 'OUTPUT TO' is discussed later in this chapter.

The commands for changing the direction of your output are 'display' and 'print'. These commands can be included as part of an OUTPUT command as in:

print all

9.1.3 USING OUTPUT WITH OR WITHOUT FUNCTION KEY

Like all primary commands, OUTPUT commands can be entered directly. Simply prefix the command with the word 'output' as in:

output all

The examples in this chapter usually assume that you have pressed a function key, so you may need to insert the word 'output' before they will work on the Command Line.

Note: If you use the 'Recall Key' to recall an OUTPUT command that was entered with a function key, you must insert the word 'output' to make it execute properly.

9.1.4 OUTPUT CONTROL COMMAND SUMMARY

This section provides an at-a-glance checklist of the various output secondary commands.

display	Directs output to screen. Can be Primary command. Remains in force until 'print' is used.
print	Directs output to printer. Can be Primary command. Remains in force until 'display' is used.
down	Fields shown each on a separate new line. Remains in force until 'across' is used.
across	Fields shown one after the other, overlapping onto new lines if necessary. Remains in force until 'down' is used.
all	Output includes all records in the currently selected file.
from "listname"	Output includes only those records whose keys appear in "listname". The list can be on a different drive form the database.
fill	Specifies standard format for disk file output.
to "filename"	Specifies name if a sequential disk file to contain output field contents. The file can be on a different drive form the database. Add '+' to the filename to append to an existing file.
[fieldname]	If one or more [fieldname] is included in the command, only the fieldnames defined are output.
"text"	Text may be output by inserting it within quotes in the output command.
&	Is the truncator command. See later in this chapter.
@	Is the position command. See later in this chapter.

9.2 DISPLAYING ALL RECORDS

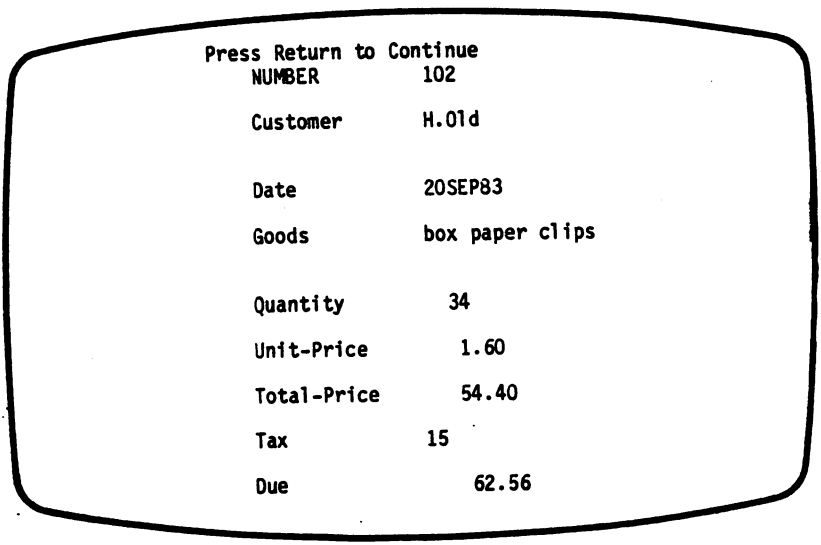
The simplest response to the output prompt is 'all'. Fieldnames followed by their contents are displayed one after another across the screen, with data wrapping over the ends of lines. Pressing RETURN displays the next screenful of records from the file. Display of records can continue until the end of the file is reached.

Responding to the output prompt with:

```
all the records down
```

will result in information from the first record in the file being displayed down the screen with the fieldnames on the left of the screen and the field contents to their right. The message 'Press Return to Continue' will be displayed on the command line.

Pressing RETURN results in a similar display of the next record in the file, record by record until the end of the file is reached. If you decide that you don't want to see all records after all, press 'RUN/STOP' to finish.



9.3 DISPLAYING FROM A KEY LIST

Alternatively you could respond to the prompt with:

```
the records from "listname"
```

where "listname" is the name of any KEY LIST you have created by means of the FIND command, including "hlist" (see Chapter 7). Note that "the records" is an optional element of the command, and is used to make it more intelligible to the user.

The display would be the same as with the 'all' command, but would be of only those records whose keys appear on the Key List you have specified.

9.4 OUTPUTTING SELECTED FIELDS

The commands above output information from all of the fields in each record. You can restrict the amount of information to be displayed or printed to one or more fields by responding to the output prompt:

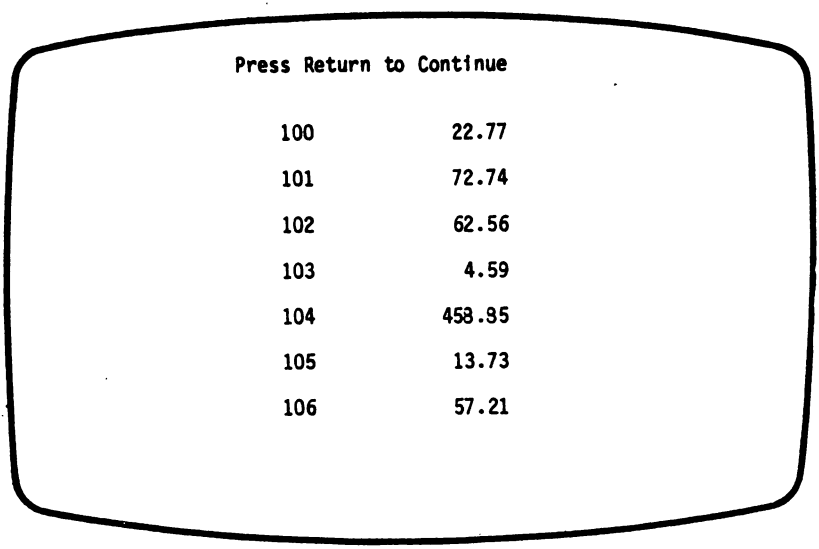
all the records [number]

or

all the records [number] [due]

or any combination of fields in the records, where each field name is enclosed in square brackets. Superbase automatically inserts a space between fields unless you use '+' to concatenate them, as in [number]+[customer].

The result is as in the following screen:



9.5 OUTPUT ACROSS OR DOWN

If your display is 'across' the screen, a space will be left between each selected field. If output is 'down' each selected field will be on a new line.

To display across respond to the prompt that follows 'f4' with:

```
across all the records [customer] [due]
```

After filling the screen with the information from each record displayed horizontally, the message 'End of Page' will appear at the top of the screen.

If more fields were displayed than could fit across the screen, the information would wrap around the edge of the screen. This can be avoided by use of the formatting commands detailed below.

To reverse the 'across' command you can use the 'down' command as in:

```
down all [customer] [goods] [due]
```

Just like the 'print' and 'display' commands whichever of the 'across' or 'down' commands was used last will remain in force until the converse command is used. The default on start-up is 'across'.

9.6 OUTPUTTING EXTRA TEXT WITH INFORMATION FROM RECORDS

You may also include strings of text with your output as in:

```
across all [number] "has paid" [due]
```

```
Press Return to Continue                    8

   100    has paid        22.77
   101    has paid        72.74
   102    has paid        62.56
   103    has paid         4.59
   104    has paid       458.85
   105    has paid        13.73
   106    has paid        57.21
```

Note that if the result of formulae and BASIC variables are to be output, they should not be enclosed in quotation marks like text strings.

9.7 OUTPUTTING CALCULATIONS ON INFORMATION IN FIELDS

The information displayed or printed need not be restricted to how it appears in the records, since you can specify calculations to be performed on the fields before they are displayed.

Suppose that you wanted to output a list of items showing a 10% price increase. You could respond to the output prompt with:

```
across all [goods] "New price is" 1.1*[unit-price]
```

Any calculation on the field contents can be used, including calculations using BASIC functions. More details on performing calculations on the fields is provided in the section on the CALC command in Chapter 11.

BASIC variables can also be output in addition to the fields, calculations and text strings discussed in this chapter. See Appendix A.

9.8 FORMATTING OUTPUT INFORMATION

Two commands are available to improve the appearance of the output on screen or in your printed copy: the TRUNCATOR COMMAND '&' and the POSITION COMMAND '@'.

9.8.1 TRUNCATING OUTPUT

Text fields will be printed or displayed with the length specified when the fields were set by means of the FORMAT Option (see Chapter 4), unless the TRUNCATOR COMMAND is used.

A text field such as 'goods' may have been set to eighteen characters long to allow for big product names. But most of the product names you are using may be smaller than eighteen characters long. This would mean that when they are output, extra spaces will be included after the product name, unnecessarily.

To avoid this, you can include the truncator symbol, '&' in your output command line as in:

```
across all &[goods] [unit-price]
```

This would chop off all of the trailing spaces from [goods].

It is also possible to truncate the output to a particular length. Typing a number after the truncator symbol will truncate the contents of the field concerned to the number of characters specified. For example

```
all &6[goods] [unit-price]
```

would output just the first six characters from the 'Item' field.

The contents of numeric fields can also be truncated, but two numbers separated by commas must be included after the truncator symbol, one for the number of digits before the decimal point and one for the number of digits after the decimal point. The default numeric format is 10 positions before and 2 after the decimal point.

You can mix truncation commands for text and numeric items, as each truncation command applies to the NEXT appropriate item.

Truncation forces rounding. If the field contains a number with more digits after the decimal point than specified by the truncator command the number will be rounded up. For instance, if the price of an item were '75.87' and the output specification were:

```
all [goods] &2,1[unit-price]
```

Then the price would be output as '75.9'.

You must take care, however, not to specify a truncation of a numeric field which has fewer digits BEFORE the decimal point than a number to be output. If you do, the number will be printed or displayed as a string of '#' symbols to indicate that the number overflowed the format you specified for it.

The command &0,x will suppress leading spaces in the next numeric item, causing left justification with one space for the sign (only the '-' sign is printed).

SUMMARY OF OUTPUT TRUNCATOR COMMANDS

&[field]	Remove trailing spaces from a text field.
&n[field]	Output 'n' characters of the text field defined.
&n,n[field]	Output numeric fields in decimal point format.
&0,n[field]	Output numeric fields left-justified with leading spaces suppressed.

9.8.2 POSITIONING OUTPUT

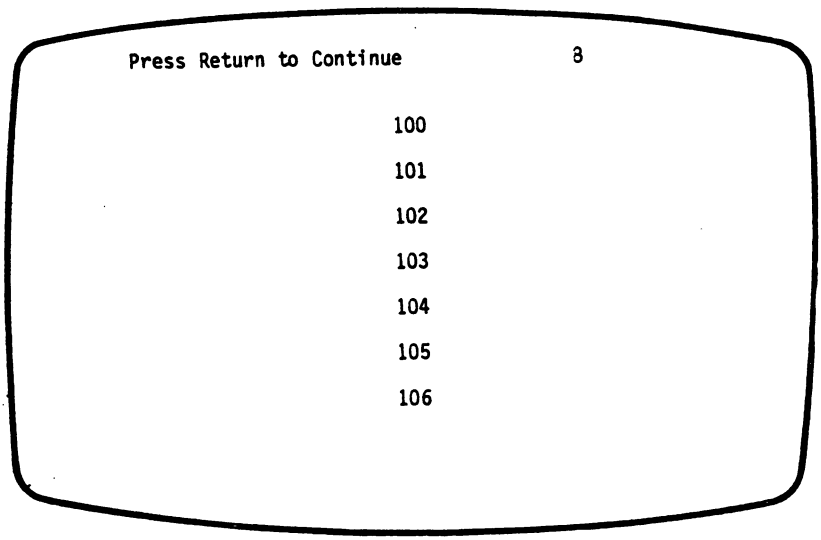
The second formatting command available for use with OUTPUT is the POSITION COMMAND.

This command is used to position your output on the screen or printed page and must have either one or two numbers following it, the first for the COLUMN and the second for the LINE.

For instance, the command

```
all the records @20[number]
```

will position the contents of the 'Number' field at column 20, halfway across the screen, as in the following diagram:



The command applies only to the NEXT item. Following items without their own positioning commands will appear in sequence either across or down as appropriate. To achieve column and line location use a command such as:

```
the records from "hlist" @10,15[customer]
```

which would position the output at column 10 and 15 lines down the screen.

Note that if you specify just a column number it is possible to display information from many records, one below the other starting at the same column, but if you specify both a column and a line number then only information from one record at a time can be displayed on the screen.

This is for the simple reason that two items of information can be in the same column by being one below the other, but cannot be in the same line AND column without one overwriting the other.

Two further forms of the command exist. The command @0 positions the cursor at line 1, column 1 of the current screen, without clearing the screen.

The command @x,0 will cause a carriage return to column x. Use @1,0 to force the printing of blank lines.

Used in combination with the other output formatting commands, the position command gives you enormous flexibility as to how your output should appear on either screen or printer.

SUMMARY OF OUTPUT POSITION COMMANDS

@n	Defines column position.
@n,n	Defines column and row position.
@0	Positions the cursor at column 1, line 1.
@n,0	Prints a blank line.
chr$(12)	Prints the 'clear screen' or 'new page' character (set a$=chr$(12) and output a$).
@-	Switches on printer underlining or screen reverse video. Repeat to switch off.
@+	Switches on underlining for next text item only.

9.9 ABBREVIATING OUTPUT COMMANDS

Various examples were given above of output commands using the words 'the' and 'records' as in:

```
down all the records [number]
```

and

```
across the records from "hlist" [customer]
```

In fact these two words, and also the spaces between words, are not needed at all by Superbase and are allowed merely to make the syntax more natural.

These commands could instead have been entered as:

```
downall[number]
```

and

```
acrossfrom"hlist"[customer]
```

We can even abbreviate further since all Superbase commands can be reduced to their shortest unique form, with a minimum of 2 letters. Usually you can type just the first letter followed by the second letter with the SHIFT key held down.

The previous two commands then become:

```
dOaL[number]
```

and

```
aCfR"hlist"[customer]
```

Once you are fully familiar with the commands you may wish to use these abbreviations to cut down the amount of typing required.

9.10 OUTPUT TO A FILE

Superbase is designed for integration with word processing packages, Easy Script or Superscript in particular. Integration is achieved by outputting data (in CBM ASCII code) from a Superbase file into a file that can be read in by the word processor. The command is entered on the command line in the usual way when the OUTPUT Option is selected from Menu 1. There are 2 forms of the command.

METHOD 1 : AS FOR NORMAL 'OUTPUT'

The first method outputs to a file exactly as to the screen or printer, following all truncation commands. If the output is DOWN, no fieldnames will be output, as they usually are with SELECT OUTPUT DOWN. If the output is ACROSS, field contents will be output one after the other on the same line, up to the maximum specified with the right margin setting command, RMARG. The command is:

```
across all to "addresses" [Surname] [address1] [address2]
```

This would produce a file called "addresses" containing the name and two lines of address from all the records in a Superbase file. Be sure that the filename you give is NOT that of an existing database file. Each field will appear on a separate line and each line will end with a carriage return character. A blank line with just a carriage return on it will be output between records.

A Key List may also be used:

```
across from "hlist" to "addresses" [Surname] [address1] [address2]
```

This would use the Key List "hlist" (usually obtained with a FIND operation) to produce a file called "addresses" containing the name and two lines of address from the selected records in a Superbase file. All three fields will appear on the same line with a space between fields, and each line will end with a carriage return character. A blank line with just a carriage return on it will be output between records.

METHOD 2 : USING AUXILIARY COMMAND 'FILL'

The other form of the command is especially designed for Easy Script or Superscript, and uses the additional command FILL:

```
all fill to "addresses" [Surname] [address1] [address2]
```

The use of 'fill' implies the following:

1. Output is 'down'.
2. Trailing spaces are truncated unless the '&' with a specific value is used.
3. Numbers have 1 leading space for the sign.
4. Numbers are left-justified.
5. Numbers have 2 digits after the decimal point, unless the '&x,y' formatting command specifies otherwise.
6. Each line has a carriage return at the end.
7. A blank line with just a carriage return is output between records as a record separator.

The last point means that you must insert one "dummy" variable block in your Easyscript document, to "trap" the extra blank line. The dummy block should appear in a comment line, anywhere after the last of the "active" blocks. Because it appears in a comment line, it is trapped and not printed.

A space is normally output after each field when more than 1 field appears on the same line. You can join field and text together with the '+' sign: "Mr "+[firstname]+[surname].

9.11 ENTERING OUTPUT COMMANDS IN A COMMAND LINE

As with all of the Superbase commands it is possible to bypass the Menu selection and type in your commands directly as a COMMAND LINE from either of the Main Menus. All you have to do is to prefix the commands with the Primary Command 'Output' as in:

```
output all the records [date][customer]
```

You can also combine output commands with others in the same Command Line such as:

```
find "hlist" where [due] is ">500" : output from "hlist"
 [customer];[number]
```

Further examples of using the Output command can be found in Tutorial Two and Three and more details about Command Lines can be found in Section 3.

9.12 CONTROLLING THE DISPLAY

To obtain more control over the display you can enter the print and display commands directly, in response to the output prompt.

Clear the screen with 'display chr$(147)'. Print at the home position with 'display @0', if you want to leave a screen intact but add data to it.

Use the semicolon at the end of a line to prevent a carriage return:

```
display [name];

display [customer]
```

This is also valid for printing.

9.13 USING 'OUTPUT TO' TO REORGANISE A DATABASE FILE

You can change the order in which fields are stored in a database file. The steps are as follows:

1. Set up a file format with the new order. You can omit fields or add extra fields as you wish. Ensure that the last field is a "dummy" text field -- this is to hold the blank line record separator.

2. Use 'output' to create a disk file, naming the fields in order of the format you have just created. For new blank fields, insert a variable, a$, that you have previously set to the value of a carriage return with 'calc a$=chr$(13)'.

3. Insure the new format is the selected file. Use the 'import' command (see Chapter 14) to bring the data from the disk to the new format.

4. If you want, delete the disk file and the records in the original database file.

5. Don't try to rename a database file within a database.

10 FILE

10.1 FILES AND DATABASES / CHANGING DISKS

Superbase organises your stored information in files of records, each of which has a different filename and may have a different record format.

These files are held in groups of fifteen and each such group is known as a database. Information may be exchanged between databases by using the OUTPUT TO, IMPORT and EXPORT Commands. **Never remove a disk and replace it with another without using the 'DATABASE' command.** The procedure is to return to Menu 1, change disks, and select the 'database' option. When prompted, enter the name of the new database. See also Chapter 13.

10.1.1 OBTAINING THE FILE OPTION

The FILE Option is used whenever you wish to change the file you are currently working with to another file in the database, or to create a new file.

From Menu 2 press the key marked 'f1'.

The message 'Mode: Enter Filename' will be displayed in the message area at the top of the screen and the main screen area will display a list of files available in the current database. Superbase will wait for you to type in the name of the file you wish to select, which may be either one of the existing files listed on the screen or the name of a new file that you want to set up.

New files may be added to the current database up to a maximum of fifteen files. Use letters, numbers and the full-stop, or period, only.

If you have selected an existing file, you will be returned to Menu 1. Notice that the 'File Selected' Indicator shows the name of the file you have chosen.

You may now use any option from the Menu, such as ENTER if you want to enter information into the file, or SELECT if you want to access a particular record.

If, on the other hand, you have selected a file that does not exist, the screen will clear and the following prompt will appear:

'File Does Not Exist: Create It?'

If you respond 'y', you will be placed in the FORMAT Option, ready to design the screen layout for the new file. If you respond 'n', you will be returned to Menu 1. The new filename will not show in the 'File Selected' Indicator until the format has been completed.

Directions on how to FORMAT a new file are given in Chapter 4.

10.2 CHANGING FILE BY DIRECT COMMAND

A new file may be selected using the 'file' command followed by the filename in quotes, as in:

```
file "invoices"
```

The above command avoids the standard 'Enter Filename' prompt.

11 CALCULATION

11.1 THE CALC OPTION

The CALC Option is provided to enable you to carry out calculations which can be on the information in the fields of your current record.

As well as normal arithmetic operations, the whole range of BASIC functions, including trigonometric functions and string functions, is available.

The results of your calculations can be stored in the fields of the record, stored in BASIC variables or simply displayed on the screen.

RESULT Fields and CALENDAR Fields cannot be altered by the CALC Command. KEY Fields can be set and the new record can be added to the file. See later in the chapter.

11.1.1 OBTAINING THE CALC OPTION

From Menu 1, press the 'f5' key. The message 'Enter Calculation' will be displayed at the top of the screen.

11.2 ENTERING CALCULATIONS

The simplest type of calculation you can enter is a straightforward expression such as '0.15*48.60'. This would display the result of the expression, namely '7.29'. Any such expression entered which does not include an '=' sign will cause the result of the expression to be displayed in this way.

Expressions can of course be a good deal more complex, such as 'cos(sin(9)/log(10))*2' and may include string functions such as 'left$([Name],3) to obtain just 3 characters of a field.

Using the '=' sign will cause whatever is to the left of the '=' sign to be assigned the value of whatever expression is to the right. For instance '[unit-price]=18.50' will assign the value 18.50 to the PRICE field in the current record. Similarly, '[Surname] ="Hodgkins"; [address1]= "35 Sunnyview Crescent"' will result in the 'Surname' and 'address1' fields being changed accordingly. Note that when assigning strings of text to non-numeric fields, the text assigned must be put in double quotes as above.

STORING CALCULATIONS

It is important to remember, however, that when the contents of fields are modified in this way, the modifications are only retained temporarily. You must issue the STORE command to tell Superbase that you want the modified version of the record to be stored on disk.

In fact without the STORE command, the modifications will only be retained until another record becomes the current record. This is useful since you may be modifying numeric fields just to see what effect the modification would have on the RESULT fields in the record. In this way, the CALC option provides you with a 'What if?' facility for exploring the effects of various changes such as changes of discount rate or tax rate.

The STORE command can be typed in when you have returned to the Main Menu after using the CALC option. Simply type 'Store' and press RETURN.

SEMICOLONS

Also note that CALC lines involving more than one calculation must have the individual calculations separated by semicolons.

11.2.1 STORING RESULTS IN BASIC VARIABLES

NUMERIC VARIABLES

Another possibility is to assign values to BASIC variables such as 'x=[unit-price]-[unit-price]*0.15', which would give 'x' the value of the price minus a fifteen percent discount. 'x' could then be used in further calculations either in the same CALC Command or later on in a new calculation.

This facility can be exploited in the BATCH option to produce running totals (see Chapter 12).

DISPLAY RESULT

Since any expression that does not include the '=' sign will display the result on screen, you can evaluate an expression and then display the result as in:

```
'x=[unit-price]-([unit-price]*0.15);x'.
```

Information to be displayed in this way should always be the last item in the CALC line. Only BASIC variables, not fields, can be displayed in this way.

TEXT VARIABLES

The examples above are both examples of assigning numeric results to variables. It is also possible to assign strings of TEXT to variables, but care must be taken that TEXT VARIABLES are used for

this purpose as in:

```
x$="1 Portable TV"
```

A text variable differs from a NUMERIC VARIABLE in that it always ends with a '$' sign as in 'a$', 'a1$' and 'x$'.

11.3 ENTERING CALCULATIONS AS COMMAND LINES

As with other Superbase commands, you can type a CALC command in directly from either Main Menu (see Chapter 3). Just type in a CALC line as above but with the Primary Command 'CALC' preceding it as in:

```
Calc x=[unit-price]/2;y=[unit-price]/3;x;y
```

which would display one half and one third of the 'unit-price' field in the current record.

Calculations can be combined with other Superbase commands as in:

```
select match where [customer] is "=Robins":calc x=[Due]* 1.1;
[Due]=[Due]+x;x:store
```

Note the use of the STORE command here to make the modification to Robins' record permanent.

Remember to separate the various Command Clauses by colons and the various calculations within the CALC Command Clause by semicolons.

If you modify a field with CALC and wish to display it subsequently, you must use a further CALC clause to do so. This is because all references to a field within the same clause will use the original value ('value' here meaning both text and number value) of the field. However, you can assign the value of a modified field to a BASIC variable and display that all in one command.

11.4 ENTERING A NEW RECORD WITH THE CALC COMMAND

Since CALC can be used to set the contents of fields, it can be used to enter a new record into the file. To do this however, you must first CLEAR the current record by issuing the CLEAR command and you must end by storing the new record with the STORE command. It is also mandatory to enter a KEY in the KEY Field. You cannot CALC a RESULT or a CALENDAR field, only the fields that they are derived from. Nor can you CALC a replica field. You can, however, CALC a CONSTANT field.

If there are any errors in the CALC commands, the STORE command will not work, so you cannot create invalid records.

12 BATCH

12.1 THE BATCH OPTION

The BATCH option, like the CALC option, is for carrying out calculations on the information in your files. But whereas the CALC option performs calculations on the fields in the CURRENT record, the BATCH option carries out calculations on the fields in ALL of records in a file, or on a predefined selection of records using a KEY LIST (for details about setting up a Key List see Chapter 7).

This ability to perform operations on selected fields of records throughout the file makes UPDATING your files a simple, automatic process.

12.1.1 OBTAINING THE BATCH OPTION

To obtain the BATCH option from Menu 2, press the 'f3' key.

12.2 PERFORMING CALCULATIONS ON ALL RECORDS OR SELECTED RECORDS

When you enter the BATCH option you will be prompted with:

'Enter: all/from "list" (item list....)'

If you type 'All' before the calculations you specify, they will be performed throughout the file. If you type 'From "listname"' then they will only be performed on the records specified in the Key List you have named. The '(item list....)' signifies that field-names and/or variables may be included in the command.

The calculations themselves are entered in exactly the same way as in the CALC option detailed in the last section. You do not have to use the STORE command to make modifications to fields in the records permanent. The BATCH command automatically stores the modified records for you.

An example of using BATCH to update a file such as the "invoices" file from Tutorial Two is as follows:

from "price list" [unit-price]=[unit-price]*1.1

12.3 CALCULATING TOTALS

The BATCH option can also be used to display running totals of fields in the records. Suppose you wanted to total the amount outstanding on all invoices in the Customer Invoice File. The BATCH command for this would be:

```
all x=x+[due];x
```

Here the BASIC variable, 'x', is being used as an ACCUMULATING variable. SUPERBASE will go through all the records in the file, adding the value in the OUTSTANDING field to the previous value of 'x' and displaying the result. In this way 'x' will accumulate the values in the OUTSTANDING field for each record. Note that the variable should be set to a value of zero before you begin, with a command of the form 'calc x=0'.

12.4 USING THE BATCH COMMAND IN A COMMAND LINE

Like all of the other Primary Commands, BATCH commands can be entered directly from either of the Main Menus. Simply prefix the command with the word 'Batch' as in:

```
batch all x=x+[due];x
```

The BATCH command can also be combined with other commands to form a more complex Command Line as in:

```
find "hlist" where [goods] is "Radio";[Quantity] is ">10":
batch from "hlist" [unit-price]=[unit-price]-0.1*[unit-price]
```

This Command Line would find all the invoices for more than ten radios and reduce the unit price by 10%.

Remember to separate multiple items with semicolons, as in CALC.

13 DATABASE

Files in Superbase are organized into groups of 15 files. Each such group is known as a database.

13.1 THE DATABASE OPTION

The DATABASE option allows you to select an existing database to work in, or to create a new database. **It is important that you ALWAYS use this option whenever you change disk** to prevent permanent loss of data.

13.1.1 OBTAINING THE DATABASE OPTION

To obtain the DATABASE option from Menu 1, press the 'f6' key. You will be prompted 'Enter Database Name'.

13.1.2 SELECTING AN EXISTING DATABASE

If you type in the name of an existing database and press RETURN, you will enter that database, but with no file selected. Menu 1 will be displayed. See Chapter 10 for how to select a file.

SELECTING THE DIRECTORY

If you wish to select an existing database and want to know which ones are available on the current disk, enter the dollar character, $, followed by RETURN. Superbase will display the disk directory. Database names one those displayed in upper case, for instance TRAINING. At the end of the directory, press RETURN and the prompt 'Enter Database Name' will reappear. You can respond in three ways:

1. Enter the name of an existing database, one that was listed in the directory.
2. Change disks and re-enter '$' to obtain the directory of the new disk.
3. Enter a new name to create a database.

13.1.3 CREATING A DATABASE

If you enter a valid name for a new Database you will be prompted 'Database does Not exist: Create it?'. If you press 'N' the original prompt 'Enter Database Name' will reappear. If you press 'Y' the database will be created and added to your disk directory, but will not contain any files.

When entering the name of a database, there are certain rules you must follow:

The name you choose can have a maximum of sixteen characters. These characters must not include double quotes, numbers or the '$' character.

Never duplicate the name of a database. If you use the name of an existing file or list it will be overwritten.

13.2 TRANSFERRING DATA BETWEEN DATABASES

Although Superbase allows you to make a backup of a disk containing a database, you cannot simply copy a database. To exchange information between databases, use the IMPORT and EXPORT commands available from the Maintain Menu, or the OUTPUT TO command.

13.2.1 IMPORT

The IMPORT command transfers all information from a sequential file to a Superbase file. See Chapter 14 for more details.

13.2.2 EXPORT

The EXPORT command transfers all fields of all records from a Superbase file to a sequential file on disk. This file can then be imported to another database.

To export every field from a selected list of records, first create a key list (using FIND), then use EXPORT FROM. See Chapter 14

13.2.3 OUTPUT TO

The OUTPUT TO command transfers selected fields of all records from a Superbase file to a sequential file on disk.

To transfer selected fields from a selected list of records, use OUTPUT FROM...TO.... See Chapter 9 for more details.

14 MAINTAIN

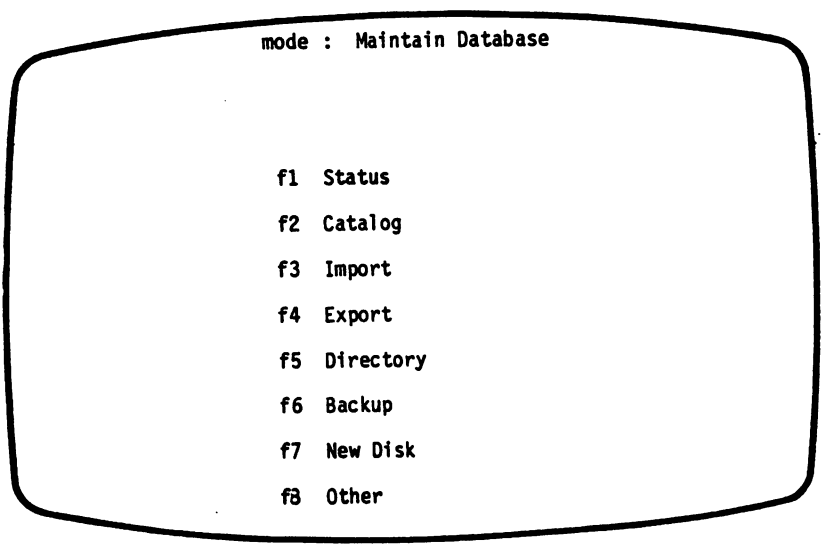
14.1 THE MAINTAIN OPTION

The Maintain Option provides a series of utilities for performing various operations on your databases. It allows you to obtain either a list of the fields in your current file together with their types and lengths, or a list of all the files in the current database. It also enables you to transfer data to and from an external program, and to carry out various disk commands including a single-drive backup, a disk formatting command, and a disk directory command.

14.1.1 OBTAINING THE MAINTAIN OPTION

From Menu 2 press the 'f6' key.

You should see a further menu screen. This is the 'Maintain' Menu.



THE MAINTAIN MENU

The Maintain Menu offers eight sub-options each of which is detailed below alongside the function keys required to obtain them. Certain items are covered more fully, later in this chapter.

STATUS

This option provides a list on the screen of each of the fields of the current file along with their field-types and their lengths. The output may be directed to the printer.

CATALOG

A list of all of the files in the current database can be obtained with this option. This database **CATALOG** is the same as that provided by the FILE Option (see Chapter 9) when you want to change the file you are working on. The output may be directed to the printer.

IMPORT

This option allows data from external programs to be read into Superbase. Deselect with RETURN.

This may be data from another Database Management System you wish to convert to Superbase or it may be data from a different type of program altogether. You can also re-import data that has been exported by Superbase as a means of transferring files from one of Superbase's databases to another.

For full details see later in this chapter.

EXPORT

The **EXPORT** Command is used to produce a SEQUENTIAL File of data from any Superbase file which can be kept as an ARCHIVE copy to be stored on disk or tape, or can be IMPORTED back into Superbase as a means of transferring data from one Superbase database to another. Deselect with RETURN.

These sequential files can also be used by external programs.

To output data to Easy Script or Superscript use the command OUTPUT TO. See Chapter 8.

For full details see later in this chapter.

DIRECTORY

A list of all programs and files on a disk can be generated by this option. The number of blocks free is also given.

This option allows you to make a back-up copy of your data disks. For full details see later in this chapter. Deselect by entering 'n' to the 'Are You Sure?' prompt.

Formatting a blank disk or a disk you wish to re-use can be done by means of this option. Deselect by entering 'n' to the 'Are You Sure?' prompt. In this way you can avoid having to leave Superbase to type in the Commodore disk formatting command.

Other Commodore disk commands can be executed by means of this option. Deselect with RETURN. Examples are renaming a file, copying a file and deleting files from the disk.

For full details see later in this chapter.

14.2 IMPORT AND EXPORT

The IMPORT and EXPORT commands transfer data between a Superbase file and a sequential file (Commodore ASCII format) on your disk. A sequential file is a sort of common currency in which information can be accepted by another program. To carry out IMPORT and EXPORT on a single drive both the Superbase file and the sequential file must be on the same disk. On a dual drive system, data can be transferred from one drive to another by addressing the appropriate drive eg. '1:filename'.

14.2.1 IMPORT

The IMPORT command is used to transfer data from a sequential file on disk into a Superbase file. It has two primary purposes: to transfer data from an existing database or mail list into Superbase, and to transfer files across databases within Superbase itself.

In the first situation the sequential must be created in a form in which it can be read by Superbase. Superbase normally accepts a carriage return, chr$(13) at the end of each field and record. In some cases, conversion must be done prior to the IMPORT operation. For example, certain screen code files must be processed to remove double quotes, strip trailing spaces, and change the end of line marker, chr$(31), to a carriage return, chr$(13). Public domain software or the Superscript word processor on Commodore 2/3/4/8000 series and Commodore 64 may be used to create correct ASCII file format.

When transferring files between databases in Superbase, the file is first created as a SEQUENTIAL FILE with the EXPORT command.

On selecting IMPORT from the Maintain Menu you will be prompted with 'Enter Import Filename'. If you have a single drive and are importing a sequential file in which the fields of data are just separated by 'RETURN's, type just 'filename' and press RETURN. If you have a dual-drive system you can type '1:filename' to specify

that the source file is on a disk in drive one. If the source file had separators between its fields and records other than 'RETURN', you can also specify these on the Command Line from the Main Menu as in 'import "filename","/."' which specifies slashes between fields and full stops between records.

When transferring files from 4040 to 1541 format, use the BACKUP Option to read a 4040 disk and copy it to a 1541 disk. Use the same technique when transferring from 1541 to 4040.

Note. The disk error light (and tone if fitted) will signal extensively during the IMPORT operation. This does not normally signify an error.

14.2.2 EXPORT

The EXPORT command is used to create a sequential file version of the current file. The file created this way may then be read by other programs or used as 'archive' or long-term back up.

a disk file created by Superbase consists of items of information separated by markers. These are called "End of Field" and "End of Record" markers. They are used by the systems to determine where the end of a field or the end of a record occurs. Whenever EXPORT or IMPORT are used without defining end of field or end of record markers the system uses a RETURN (chr$(13)).

On selecting the EXPORT command you are prompted 'Enter Filename'. Enter the name you want for the EXPORT file. Used this way, EXPORT will export ALL of the fields from ALL of the records.

The way the EXPORT command works is as follows. First it opens a sequential file on the disk. It then writes into that file data from the first field of the first record of the current database file. It adds a RETURN after the first field as an 'End of Field' marker and does the same for each field in the record.

At the end of the first record it adds an 'End of Record' marker. Then selects the next record and repeats the procedure until the last record in the database file has been processed.

If you wish to separate fields and records with a character other than RETURN, the command must be on the Command Line in the form: export "filename","/". The fields in the example are separated by slashes and the records by periods (full stop). An ASCII code such as chr$(10), not inside quotes, may be used as a separator if you prefer. If you give your EXPORT file and 'h' prefix, then you will be able to call it up to see the contents by selecting the HELP option and entering the filename.

If you wish to EXPORT only some of the records in a file, first create a list with FIND and use the command EXPORT FROM on the Command Line in the form: Export from "listname" to "export filename".

14.2.3 QUICK GUIDE TO IMPORTING AND EXPORTING

As this topic is rather difficult to understand, we have provided a step by step guide to how to create a sequential file and import it.

HOW TO EXPORT

1. Select the file you wish to export.
2. Print out the Status of the file (from Maintain sub-menu) so that, if you later wish to import the data, you'll have the information you require at your fingertips.
3. Select 'Export' from the Maintain sub-menu.
4. You are prompted 'Enter Export Filename'. To export all records from the currently selected file, enter a unique name such as "transrec", and press RETURN.
5. Superbase exports the records one by one, and displays the number on the command line.
6. If Superbase finds a corrupt record, it displays the message 'Data Mismatch'. Press RETURN to bypass this record, so that the exported file contains only "clean" records, or press RUN/STOP to abort.
7. When exporting is complete, you are returned to the Maintain sub-menu.

HOW TO IMPORT

1. Select or create the file you wish to import data to.
2. Display the file Status and make sure that its format is compatible with that of the sequential file to be imported. It must have the same number of fields, in the same sequence and of the same type as those of the records to be imported. If not, select the format mode and amend.
3. Select 'import' from Maintain sub-menu.
4. You are prompted 'Enter Import Filename'. Enter the name of the sequential file you wish to import, in this case "transrec", and press RETURN.
5. Superbase will then import the data from the file on disk into the currently selected file.

14.4 BACKUP

The BACKUP Option allows you to make duplicate copies of a disk. All files on a disk are copied. BACKUP handles both single and dual disk drives. Please note that two single disk drives do not constitute a dual disk drive.

Owners of a CBM 2031 disk drive may use the single drive backup procedure provided a suitable interface is installed. The procedure will also work with drive 0 of a 4040, 8050 or 8250 dual drive unit.

Owners of a hard disk unit should use the EXPORT Option to create a backup data file on the hard disk, which may then be copied to floppy disk or tape using DOS utilities. Superbase file formats, text files, and lists may be copied freely.

Using BACKUP with a single drive requires the full computer memory, so Superbase will close down when the process is complete. Reload as normal if you wish to continue.

The disk to be copied is referred to as the SOURCE DISK, and the disk onto which the data is to be copied is referred to as the DESTINATION DISK.

When BACKUP is selected the first question asked is:

Single Drive? (y or n)

Respond 'y' or 'n' as appropriate.

14.4.1 SINGLE DRIVE BACKUP

The first screen prompt is:

Insert Blank Disk in Drive 0

Press Return to Continue

Insert the destination disk in drive 0 and press RETURN. The next prompt is:

All Data on Drive 0 Will Be Destroyed

Are You Sure?

This allows you to double-check that the disk you are using as the destination disk is the correct disk. It can be either a new disk from the box or an old disk that you want to re-use. When you are satisfied that the destination disk is correctly inserted, press 'Y'.

PREPARE DISK

The next prompt is:

Enter Disk Name, id

You must give your disk a name and identification code. The name can be any combination of up to 16 characters, including spaces but excluding the colon (:). We recommend that you use a meaningful name such as 'work disk'. The identification code must be 2 characters, such as 'aa'. Give every disk a different code,'ab','ac', etc.

Type the disk name and code, including a comma between them, and press RETURN. The message 'Processing' will be displayed while the disk is prepared for use.

INSERT SOURCE DISK

When the disk is ready, the flashing message 'Insert Source Disk' will appear. Remove the newly prepared disk, insert the source disk into the drive, and press RETURN.

The message 'Please Wait' appears with a line of dots following it. The line extends dot by dot as Superbase reads in the data to be copied.

INSERT DESTINATION DISK

When Superbase is ready, the flashing message 'Insert Destination Disk' will appear on the screen. Remove the source disk and insert the destination disk. Press RETURN. Again the message 'Please Wait' appears with a line of dots showing that Superbase is writing data onto the destination disk.

REPEATING THE CYCLE

If there is a lot of data to be copied, Superbase may require the process to be repeated, and several cycles may occur. The message 'Insert Source Disk' will appear again if the cycle must be repeated. In this case, go through the actions as before, starting at the INSERT SOURCE DISK paragraph.

14.4.2 CONCLUDING SINGLE DRIVE BACKUP

When all data has been copied, Superbase will close down, resetting the computer to the state it was in just after it was switched on. To continue using Superbase, reload it in the normal way.

14.4.3 DUAL DRIVE BACKUP

The first screen prompt is:

Insert Blank Disk in Drive 1

Press Return to Continue

Insert the destination disk in drive 1 and press RETURN. The next prompt is:

All Data on Drive 1 Will Be Destroyed

Are You Sure?

This allows you to double-check that the disk you are using as the destination disk is the correct disk. It can be either a new disk from the box or an old disk that you want to re-use.

When you are satisfied that the destination disk is correctly inserted, press 'Y'. Superbase will duplicate the disk on drive 0 onto the disk in drive 1.

For next (and final) prompt, see 'Prepare Disk' above.

14.5 NEW DISK

This option allows you to format a disk. A disk formatted with this process will be suitable for storing a database and the files, lists, and programs that go with it. However, the supplied HELP screens and the 'start' program will not be present. If you require a disk to have these on it, you should create a new disk with the facility available when Superbase is started up.

The process is like the first stage of the BACKUP process.

The first screen prompt is:

Insert Blank Disk in Drive 0

Press Return to Continue

Insert the destination disk in drive 0 and press RETURN. The next prompt is:

All Data on Drive 0 Will Be Destroyed

Are You Sure?

This allows you to double-check that the disk you are using as the destination disk is the correct disk. It can be either a new disk from the box or an old disk that you want to re-use. When you are satisfied that the destination disk is correctly inserted, press 'Y'.

The next prompt is:

Enter Disk Name, id

You must give your disk a name and identification code. The name can be any combination of up to 16 characters, including spaces but excluding the colon (:), the comma or any of the reserved characters listed in Chapter 5. A meaningful name such as 'work disk' is advised. The identification code must be 2 characters, such as 'aa'. Give every disk a different code,'ab','ac', etc.

Type the disk name and code, including a comma between them, and press RETURN. The message 'Processing' will be displayed while the disk is prepared for use. During the process the current database is deselected. To restart, type 'database' and press RETURN. Then enter the database name, without quotation marks.

14.6 USING THE DISK COMMANDS

The 'OTHER' option allows you to type in certain Commodore disk commands without exiting from Superbase. You may use the following disk commands:

Rename, Copy and Scratch - described below (not available from command line).
vn: Validate
$n View disk directory (pattern matching can be used)

For full information on these and other disk commands see the manual which comes with your Commodore disk drive.

Note that if you are using the 1541 single drive unit you should type '0' (in place of 'n') for the drive number.

The following Disk commands may not be used within Superbase:

in:	Initialize disk	
u:	Reset	
nn:	New	(See New Disk)
dn:	Duplicate	(See Back-up)

RENAME

The **RENAME** Command renames an existing file. The new name specified in the command must not already exist. If it does, 'FILE EXISTS' error message will be displayed. The format of RENAME is:

r0:newname=0:oldname

If you rename a database, it must be in UPPER CASE letters. **Do not rename a data file inside the database.** The database would not be able to identify the records belonging to that file. Be sure to rename Programs with a '.p' suffix, and HELP screens with 'h' as the first letter. These rules also apply to any renaming done with the COPY command.

COPY

The COPY Command allows you to create multiple copies of files (under different names if they are to be on the same disk). Do not attempt to make a copy of a database: the only way to do this is with the EXPORT and IMPORT commands. The format of COPY is:

```
c0:newname=0:oldname
```

SCRATCH

The SCRATCH command is for removing unwanted files from the disk. The format of SCRATCH is:

```
s0:filename
```

You will be asked 'Are You Sure?'.

SCRATCHING A DATABASE FILE

To delete a data file from the database you must first SELECT DELETE all the records in the file and then do an extra SELECT DELETE to delete the file. Then and only then delete the file definition using the SCRATCH command. A utility has been provided to do this, see Appendix E.

SCRATCHING A DATABASE

A database may be scratched from within Superbase. You must first scratch all the files from the database (as above) then use the scratch command again as in:

```
s0:DATABASENAME
```

You may wish to remove the TRAINING database from your disk and create an uncluttered source disk.

Note: Always ensure that you select a new database BEFORE you scratch one.

15 EXECUTE

15.1 THE EXECUTE OPTION

The purpose of the EXECUTE Option is to run Superbase Applications such as the 'Labels' program provided on your disk. A selection of other application programs available are given in the UPGRADING Section.

Programs can only be created using the full version of Superbase, but Superbase programs can be executed and run by Superbase Starter.

15.1.1 OBTAINING THE EXECUTE OPTION

To obtain the EXECUTE Option press the 'f7' key from the Main Menu.

15.2 EXECUTING A PROGRAM FROM DISK

There are two ways in which Superbase holds programs: on disk and in memory.

If you have no program in memory, and you wish to execute an applications program from disk, select EXECUTE. The Message 'Enter Program Name' will be displayed. Type in the name of the program required and press RETURN. Superbase will now load the program into memory and run it.

15.2.1 REMOVING THE CURRENT PROGRAM FROM MEMORY

The program in memory is called the current program. If you no longer want to use the current program but want to execute a different program from disk, you use the NEW command. Type this from either menu and it will remove the current program from memory. You can then select EXECUTE and enter the new program name you require.

15.3 EXECUTING THE CURRENT PROGRAM

If you wish to execute the current program, you simply select 'EXECUTE'. This time no prompt will be displayed. Superbase executes the program already in memory.

15.4 SAVING PROGRAMS ON DISK

If you want to save the current program on disk for future use you should use the 'SAVE' command.

From either Main Menu type 'save "progname"' and press RETURN. You can give a '1:' prefix to save on drive 1 of a dual drive unit. The Program will be saved permanently on disk under the name you have given it.

Note: When saving, you do not need to supply the '.p' suffix that Superbase uses to distinguish programs from other files.

You may wish to build a library of programs on a separate disk. If you exchange disks (while in the Main Menu) in order to load a Program, you should re-initialize the database from the Main Menu with the 'database' command.

15.5 OBTAINING A DIRECTORY OF PROGRAMS ON DISK

Once you have Programs stored on disk you can, use the DIRECTORY Option from the Maintain Menu to look at your programs. They are the ones with a '.p' suffix, such as "start.p" (You omit the '.p').

15.6 THE LABELS PROGRAM

On your training disk there is an application called 'Labels'. When executed this program prints multi-column labels.

15.6.1 USING THE LABELS PROGRAM

Select 'Execute' then simply type "Labels" and press RETURN. You will be asked whether you wish to design a new layout for your labels or use an existing one. If you want a new layout, you will be prompted for further information. Answer these prompts as appropriate. You will then be asked to select the file or list to print from, and your labels will be printed.

If you are using the Labels program for the first time, there is a layout provided for you, called 'Lstore' which can be used to print labels form your 'addresses' file. 'Lstore' can be erased from disk, or overwritten if you use the same name for a new layout. Refer to help screen for further guides.

15.6.2 HOW TO QUIT FROM THE LABELS PROGRAM

If you want to interrupt the program when it's still waiting for input simply press CONTROL Q. Otherwise press RUN/STOP.

16 QUIT

16.1 USING THE QUIT OPTION

The QUIT command allows you to exit Superbase. It closes all Superbase files and resets the computer for other uses. We recommend that you ALWAYS use this command before you close your system down to protect your data.

16.1.1 OBTAINING THE QUIT OPTION

To obtain the QUIT option, press the 'f7' key from menu 2. You will be prompted with 'Are You Sure?' Press 'Y' to proceed. The screen will now show the Commodore display and Superbase is no longer loaded. Any other response to the prompt will deselect the Quit option and return you to Menu 1.

17 HELP

17.1 HELP SCREENS

The HELP Option enables you to display special screens for advice on the use of Superbase facilities.

Superbase has a Help screen already provided for each of its major options.

The first line of the built in HELP SCREENS follows a standard pattern. On the left a reference is given to the User Manual for further details. On the right the name of the Help Screen is given in capitals followed by the page number you are viewing.

You may obtain a printed copy of any Help Screen by holding down the CONTROL key and pressing 'P'.

17.1.1 OBTAINING THE HELP OPTION

or


From either Menu 1 or 2, press the 'f8' key, or if you have a Commodore plus/4, the key marked 'HELP'.

You should see the message: 'Enter Which Help Required' in the message area at the top of the screen.

Type in the name of the option which you want advice about, e.g. 'file', and press RETURN. Do NOT type the 'h' that prefixes every Help text file.

You will see the Help Screen displayed line by line, and then the message 'End of Help, Press Any Key'.

When you are ready, press any key to return to the Main Menu.

1. UPGRADING TO SUPERBASE

As soon as you are familiar with Superbase Starter facilities, you may wish to consider upgrading to the full Superbase which is an even more powerful Database Management System.

1.1 ADDITIONAL FEATURES IN SUPERBASE

The full version of Superbase offers you the following additional functions:

PROGRAMMING CAPABILITY	You can use Commodore BASIC and any of the 90 Superbase commands, including the menu options, to produce more powerful programs. So you can build sophisticated applications tailor-made to suit your individual requirements. It is even possible to use the Memo Writer Option to set up user-defined Menus to give access to these programs in the same way that the Main Menus give access to the built-in options of Superbase.
REPORT GENERATOR	Superbase provides a full set of commands for producing printed reports based in column format and with headings, on the information in your files. Totals and subtotals can be calculated as required.
ADVANCED SORT FACILITY	The SORT option leaves your original file unchanged but allows you to create another file containing some or all of your records sorted by fields other than the key field.
MEMO WRITING FACILITY	Superbase allows you to create screens of information that can later be accessed. In particular you can modify or design your own HELP SCREENS and create Menus to access your own Superbase applications.
More CAPABILITY	Superbase allows the use of: * 4 screens * 127 fields per record * 32 calculations fields per record. * Duplicate keys
More COMMANDS	Superbase provides you with 35 extra commands (listed overleaf).

1.1.1 SUPERBASE RESERVED COMMANDS

ASK	DO	MENU	SET
BRKFF	DUMP	NMAT	SETLINK
BRKON	ELINK	PLUS	SORT
CHECK	ENDOFREPORT	PMAT	SUBTOTAL
CLEAR	EOF	PROG	TITLE
CONT	EOL	PROTECT	TOTAL
CONVERT	LFEED	PLINK	
DATE	LINK	REPORT	
DETAIL	MEMO	SCREEN	

These commands are available on Superbase only and should not be used on the command line in Superbase Starter.

1.1.2 BASIC COMMANDS PERMITTED IN SUPERBASE

Because Superbase incorporates many high-level commands, not all the standard BASIC commands are available. A list of valid commands follows.

PRIMARY

clr	goto	rem
data	it...then	restore
dim	list	return
for...next	load	run
end	new	save
get	on	step
gosub	read	stop

OPERATORS AND EXPRESSIONS

abs	int	right$
asc	left$	sin
atn	len	sqr
chr$	log	str$
cos	mid$	tan
exp	'pi'	val
fre		

2. UPGRADING WITH SINGLE UTILITIES

You may prefer to purchase first the utilities you need, before considering a complete upgrade to full Superbase. You should send away the order form at the end of this section for a full up-to-date list of utilities available. Below is a selection of those currently available.

MINI REPORT GENERATOR

This generator allows you to produce reports with Superbase Starter. It is different from the one provided with the Superbase upgrade.

SORT UTILITY

This allows records to be sorted by fields other than key fields. It has the same function as the SORT option provided with the Superbase upgrade.

3. STEPPING STONES

If you want to obtain the maximum benefit from Superbase Starter as soon as you buy it, you should consider one or more of Superbase's applications, for home and business use.

These are called 'Stepping Stones' as they are applications 'starter packs'. Each Stepping Stone contains a ready-made format for a particular application (for instance Sales Day Book) which you can edit to suit your requirement. This format comes with dummy data and programs to produce reports on the data, that you can adapt using upgraded Superbase.

4. HOMEBASE APPLICATIONS

These databases have been designed for the serious home user. Each Homebase pack contains a number of formatted files, ready for you to enter information. In addition to these files, each pack contains a number of reports that will produce printed output about your data, or, if you prefer, a screen display. There are four application packs available:

Homebase 1

Contains files for birthdays, freezer contents, and sports results. Produces reports on presents given, birthdays, birthday card reminders, shopping lists, home games, and many others.

Homebase 2

Contains files for book catalog, diets, and TV programmes. Produces reports on author details, calories per day, films, and many others.

Homebase 3

Contains files for record collections, holidays, and sports stars. Produces reports on records, holidays, sporting achievements, and many others.

Homebase 4

Contains files for addresses, gardening, and milk orders. Produces reports on telephone lists, seasons for planting, accounts, weekly costs, and many others.

4. HOW TO OBTAIN YOUR UPGRADE

To order any of these upgrades, or to request further information, fill in and return the detachable order form at the end of this section.

TECHNICAL APPENDIX

The Technical Appendix provides information for the general user. The three sections are (1) Maximum System Values; (2) Data Storage; (3) Variable and Fieldname Rules.

Note: "Unlimited" in the descriptions below implies limited by disk storage constraints only.

MAXIMUM SYSTEM VALUES

Database Level	Database Name:	16 characters
	Databases:	unlimited number
	Files in a database:	15
	Programs in a database:	unlimited
	Key Lists in a database:	unlimited
	Memo files in a database:	unlimited
File Level	Filenames:	16 characters (key list, memo) 14 characters (program) 10 characters (data)
	Records in a file:	unlimited
	Linked files at one time:	1
	Key List length:	unlimited (may be appended)
Record Level	Fields:	64, including key
	Descriptive text in file definition:	1000 characters
	Key - anywhere in record:	1 field
	Combined result, calendar and constant fields:	16 fields
	Record length:	1107 characters
	Screens:	2
	Calculations:	79 characters expanded, 30 characters compressed (Field names take 2 characters. Functions including '(' and ')' take 1. Spaces do not count).
Field Level	Field name length:	12 characters
	Key:	30 characters
	Text:	255 characters
	Numeric:	9 digits, up to 4 after decimal point, plus 1 sign character position
	Date:	7 or 11 chars. - 1Jan1900 - 31Dec1999
	Calendar:	7 or 11 characters
	Constant:	30 characters
	Result:	as numeric
Miscellaneous	Command line:	79 characters
	Screen width:	40 characters
	Screen length:	23 lines
	Printer columns:	255

DATA STORAGE

When calculating **maximum** stored record length, follow these rules:

1. Count every character position visible between field angle brackets for text, key, numeric, result, and constant fields. Allow 5 characters for each date or calendar field. Replica fields do not count.

2. Add 1 byte for field separators (i.e. number of fields minus one). Replica fields do count. Separator is chr$(96).

3. Field names and descriptive text do not count.

4. Trailing spaces and numeric zeros are not stored. Nor are leading spaces.

5. Add 1 record separator chr$(0) per record.

6. Floating point storage, which requires minimum 5 bytes per number, is not used, allowing more economical storage of integers < 10000.

7. Database files are linked into the main disk directory allowing the use of the disk VALIDATE command from outside Superbase.

When calculating file length, follow these rules:

1. Minimum data area is 128 bytes per record, 5 bytes of which is required by the system, leaving 123 bytes for data. If more than 123 bytes are used in a record then a further 128 bytes will be assigned. This is a design feature that optimises record access times and efficient dynamic disk space allocation.

2. File indexes are stored as 1 key per record (trailing spaces removed) plus 3 bytes. Index size varies according to the length of the key (the shorter the better) and the number of blocks in use. Blocking factor (average percentage of index block in use) is approximately 65%. As the index grows it creates a multi-level tree structure with higher levels pointing to index blocks instead of data areas as in the bottom level (B+ tree type).

3. Database files and data will be stored on the same drive. File definitions should be stored on the same drive as the database but could be accessed from another drive. Key lists, help screens, programs, import/export files, and 'output to' files may be stored on either drive (use the '1:' prefix if necessary). Output to a named list, program, memo or export file will overwrite any existing file of the same name.

4. Data is stored from and including track 2 of the disk. 5k is therefore reserved for non-database storage. Directory areas of the disk will be avoided.

VARIABLE AND FIELDNAME RULES

Fieldnames may be up to 12 characters long, with no spaces. The characters (!), (#) and (") are not allowed.

BASIC variable names may be any length, but only the first 2 characters are significant, i.e. 'elephants$' is the same as 'elegant$'.

The permitted character range is a to z together with 0 to 9 but the first character may not be a number.

No part of a variable name may contain a BASIC or a Superbase command. Examples of illegal names are:

do$	newvalue$
do%	link$
screen$	date$
total	

ERROR MESSAGES

Note: ERROR LIGHT Superbase uses the error channel extensively when allocating disk space. Error light flashing during disk write operations does not normally indicate disk errors.

ALREADY LINKED

A LINK command has been issued while a link is already in progress.

COMMAND SEQUENCE ERROR

You have entered a Command Line having a Command in the wrong position.

DATA MISMATCH

System error or hardware failure. Can be caused by failure to use 'database' command after changing disks. Enter 'database' RETURN and carry on. If this fails, export all files, create a new database using same file definitions and import the data.

DATABASE NOT FOUND

The DATABASE you have selected is not on the current disk.

DATABASE NOT SELECTED

Commands have been issued that require access to a DATABASE when none is selected.

DISK ERROR MESSAGES

Standard COMMODORE disk error messages are displayed on the STATUS LINE, or the top line of the screen. See your disk drive manual for further details.

Certain errors are also detected by Superbase because of device malfunction. These are input/output errors and are displayed as:

I/O Error No.		
	0	Routine terminated by the STOP key
	1	Too many open files
	2	File already open
	3	File not open
	4	File not found
	5	Device not present
	6	File is not an input file
	7	File is not an output file
	8	File name is missing
	9	Illegal device number

EQUATION ERROR

You are either attempting to assign a value to a field of the wrong type to accept that value (e.g. attempting to assign a string of TEXT to a NUMERIC field), or else you have missed out an 'IS' or '=' where there should be one.

FIELD NAME OR BRACKETS ERROR

Your Command Line either refers to a non-existent field or you have typed an uneven number of brackets in the Command Line.

FIELD TOO LONG

You have entered a calculation which assigns a string too large for the field you have assigned it to.

FILE DEFINITION INVALID

The FILE command has attempted to load a file definition and accessed an invalid file. This error can occur if the file definition is overwritten by a key list of the same name. To recover, reformat the file using 'FORMAT'.

FILE DELETED

You have issued a SELECT DELETE command to a file with no records, which has caused the Database to delete the file. See the RESTART command.

FILE NOT FOUND

The FILE you have selected is not on the current disk.

FILE NOT SELECTED

You have attempted to issue a command requiring use of a file before selecting a file.

FMS COMMAND ERROR

The File Manager has detected an invalid command due to system or hardware error. Reload Superbase if you cannot continue work.

FORCED FIELD: PLEASE ENTER DATA

You are attempting to store a record/leave a KEY FIELD or another field, that has been set as a FORCED FIELD empty of information.

FULL DISK

There is no more space available on the disk you are using.

INDEX MISMATCH

System error or hardware failure. Can be caused by failure to use 'database' command after changing disks. Enter 'database' RETURN and carry on. If this fails, export all files, create a new database using same file definitions and import the data.

INSIDE FIELD: CAN'T SET

You are attempting to set a field in a position already occupied by another field.

INVALID COMMAND PARAMETER

You have issued a command with a parameter too large, too small, or of the wrong type.

INVALID DATE

You have attempted to enter into a DATE FIELD information not of the form '05may83' or 'may0583'.

INVALID DIRECT COMMAND

You have issued a command which is either a command only for use within a PROGRAM or COMMAND LINE or is totally foreign to Superbase.

INVALID FMS PARAMETER

You have tried to access a record by using an INVALID KEY. Can be caused by editing a KEY LIST or using an invalid or corrupt KEY LIST.

INVALID LINK FILE

You have attempted to LINK to a non-existent file or to a file in a different DATABASE.

INVALID NUMERIC RESULT

You have either assigned a value too large or of the wrong type to a numeric field by means of an ASK or CALC command, or the result of your using one of these commands has caused a RESULT field to assume a value of the wrong type or too large for its format.

INVALID SCREEN NUMBER

You are trying to go to a screen which has not been formatted for the current file, or to format a screen when the current file has already a full complement of four screens.

KEY ALREADY EXISTS

You are trying to ENTER a record with a KEY which already exists on another record.

KEY FIELD NOT DEFINED

You have tried to format a RECORD LAYOUT without including a KEY FIELD.

LINE NOT FOUND

You have issued a GOTO command to a Program Line that does not exist.

NO FIELD DEFINED

You have attempted to format a RECORD LAYOUT without any fields at all.

NO HELP AVAILABLE

You have requested a HELP SCREEN that does not exist. Remember, you should not type the 'h' that prefixes the Help text file.

NO PROGRAM PRESENT

You have issued an EXECUTE command when there is no Program resident in memo.

NOT A DATABASE FILE

You have attempted to select a database with a filename which is that of a file other than a database file.

NOT A PROGRAM FILE

You have specified a filename in a LOAD or EXECUTE command which is not the name of a PROGRAM but of some other file.

OUT OF MEMORY

Your computer has run out of free memory space.

RECORD TOO LONG

You have tried to format a record larger than the permitted size (for limitations on record sizes see the TECHNICAL SUMMARY).

SEMICOLON MISSING ERROR

You have omitted a semicolon between calculations in a CALC command.

SYNTAX ERROR

Incorrect use of Superbase and/or BASIC commands or functions.

TOO MANY COMMENTS

You have attempted to FORMAT a RECORD LAYOUT containing too much DESCRIPTIVE TEXT (for limitations on amounts of descriptive text see The TECHNICAL APPENDICES)

TOO MANY FIELDS

You have attempted to FORMAT a RECORD LAYOUT containing too many fields (for limitations on numbers of fields see The TECHNICAL APPENDIX.

TOO MANY FILES

You have tried to create more than the maximum fifteen files for a given database.

PRINTERS

USING A DAMS INTERFACE

Please note that if you are using an interface that requires memory, such as DAMS, the colours that you add to your format will not be displayed.

CHANGING SUPERBASE TO SUIT YOUR PRINTER

Superbase works with many different types of printers. The most common of these can be set-up by answering the 'Printer Set-up' prompts when you load Superbase. However, if you have an unusual printer you can easily change the settings to suit your own printer. Use the pdef and pdev commands, discussed below, on the command line.

PDEF - PRINTER DEFINITION

SYNTAX: pdef <number>

DEFAULT: 0

PURPOSE: To set the printer type to be used.

EXAMPLES:

pdef 0 CBM Dot Matrix: sends CBM ASCII code with a cursor down character at the start of each line to produce lower case letters. Graphics not available.

pdef 1 Epson MX80 type: sends true ASCII.

pdef 2 Daisywheel type: e.g. Diablo, Qume, etc., sends true ASCII.

pdef 5 Epson MX80 type: sends CBM ASCII.

pdef 6 Daisywheel type: e.g. CBM 6400, sends CBM ASCII.

Low cost daisywheel type printers should work with either 2 or 6. RS232 interface and/or printer buffer may be necessary. For non-CBM dot matrix printers, select 1 if you want Superbase to convert to true ASCII, or 5 if you are using an interface device to convert.

PDEV - PRINTER DEVICE NUMBER

SYNTAX: pdev <parameter1> <parameter2><parameter3>

DEFAULTS: 4,7,0, (for 1515/1525/MPS 801 printers)

PURPOSE: To set parameter 1 to device number, and if necessary parameters 2 and 3 to require values.

COMMENTS: pdev x,y,z sends to the secondary address specified in y, and so should be able to set up printers not encompassed below.

EXAMPLES: This table illustrates appropriate pdev values:

	IEEE	RS232	CENTRONICS
64	4,7,0/4,255,4 (a)	2,8,0 (b)	0 (c)
Plus/4	4,7,0/4,255,4 (a)	2,8,0 (b)	-

(a) 4,7,0 for printer requiring no interface.
4,255,0 for printers requiring interface,
e.g. 3022, 4022, 8023, 6400.
(b) Check 'RS232' for values.
(c) Connected to user port.

SUPERBASE AND THE COMMODORE 1520 PRINTER PLOTTER

The 1520 printer plotter requires instructions to be sent from BASIC **before** Superbase is loaded.

Type in the following instruction:

open4,6:open6,6,6:print#4:print#6,1:close4:close6

Check that you've typed this in accurately, and press RETURN. The printer will then be set-up, and you can now load Superbase Starter in the normal way.

SETTING UP YOUR PRINTER WITH AN RS232 INTERFACE

Users of the RS232 port will need to set the values of 2 CONTROL REGISTERS in order to instruct the computer how to send data to the printer. These values are entered with the command 'PDEV 2,x,y' where 'x' is the value described in 3 and 'y' is the value described in 4 below.

1. Study your printer manual and note down the correct settings for these items:

   baud rate
   data word length
   number of stop bits
   handshake
   parity

2. For each of these items, look up the corresponding value for the required setting in the appropriate table below, and note the value down.

BAUD RATE	VALUE
50	1
75	2
110	3
134.5	4
150	5
300	6
600	7
1200	8
1800	9
2400	10
3600	11
4800	12
7200	13
9600	14
19200	15

DATA WORD LENGTH	VALUE
8	0
7	32
6	64
5	96

NO. OF STOP BITS	VALUE
1	0
2	128

PARITY TYPE	VALUE
disabled	0
odd	32
even	96
mark transmit	160
space transmit	224

HANDSHAKE	VALUE
0-3	0
1-X	1

3. Add together the values you obtained for baud rate, data word length, and number of stop bits. Enter this as 'x'.

4. Add together the value for parity and handshake. Enter this as 'y'.

Example

baud rate 9600 - value 14
word length 8 - value 0
no. of stop bits 1 - value 0

total value of A, B and C - 14

Enter 14 as 'x'

parity odd - value 32
handshake 0-3 - value 0

Enter 32 as 'y'

If your printer doesn't seem to work properly, try decreasing the baud rate. If it only works properly below the expected baud rate, this may signify an incorrect value for handshake. Change the 'y' parameter value.

USING SUPERBASE WITH A CENTRONICS PRINTER

There are a variety of Centronics interface cables available, not all will work. The reason for this is that there are a number of ways of connecting the pins to the user port. See Table below for the correct method to use with Superbase.

PINS ON 64	Cable PINS
a Ground	33 Ground
b Flag2	10 Acknowledge
c PB0	2 Data1
d PB1	3 Data2
e PB2	4 Data3
f PB3	5 Data4
h PB4	6 Data5
j PB5	7 Data6
k PB6	8 Data7
l PB7	9 Data8
m PA2	1 Data Strobe
n Ground	16 Ground

The above settings will work for the majority of printers including Epson, Juki, Canon, Kayaka, Microline, Daisy Step, Kaga, Star, etc.

IS OTHER SOFTWARE NEEDED?

Your interface cable may have been supplied with a software cassette containing a machine code program or "wedge" designed for addressing the printer and sending the appropriate codes. These programs reside in memory and allow you to operate on your own programs at the same time.

When using Superbase, however, it is not necessary to use any other programs as Superbase has its own printer software.

SELECTED GLOSSARY

BASIC VARIABLES

Locations in the computer's memory which can be used to store information temporarily during processing.

BORDER

A string of characters, usually graphics characters, used to draw a border around the SCREEN LAYOUT.

CHARACTER

A single symbol that appears on the screen. Created by pressing a key or combination of keys.

COMMAND AREA

The top two lines of the screen where commands are entered. This is also the MESSAGE AREA where Superbase displays its messages to you.

COMMAND LINE

A sequence of commands separated by colons and executed one after the other.

CURSOR

The flashing block on the screen that indicates where the next character which is typed will appear.

CURSOR CONTROL KEYS

Marked with arrows. Used to move the cursor.

DATA

Information stored in FILES.

DATA DISK

The disk used for storing your files.

DATABASE

A collection of up to 15 Files held together on disk.

DEFAULT LIST

The KEY LIST created during a FIND or SORT operation if no listname is specified. The default name "hlist" is assigned.

DEFAULT VALUES

Those values which Superbase assigns to parameters if no others are specified.

DELETE

Remove text without leaving a gap, i.e. the remaining characters move up to fill the space that had been occupied by the deleted text. (Contrast with "erase".)

DESELECT

The operation of leaving a selected option without entering any parameters or taking any other action.

DESCRIPTIVE TEXT

Text that appears on a SCREEN LAYOUT to make clear what the various items in the record are meant to be. This may include graphics characters to underline or box in sections of the screen or to provide a BORDER around the screen.

DIRECTORY

A list of the names of the files on a disk.

DISK FORMATTING

The process of setting up a blank or recycled disk for use as a Superbase DATA DISK.

ERASING

Blanking a line of DESCRIPTIVE TEXT with spaces without filling the gap left by the line erased (as opposed to DELETING).

FIELD

A 'blank slot' where information is stored in the record.

FIELD END MARKER

A striped rectangle which appears in the Format Option to signify where a field ends.

FILE

A collection of Records stored together on disk with the same Screen Layout.

FILE DEFINITION

The file on disk storing the details of the RECORD LAYOUT.

FILL FILE

A file of information used by a wordprocessing program to fill in blank slots (variable blocks) in a standard letter.

FORCED FIELD

A FIELD which must have data entered into it and may not be left blank.

FORMATTING COMMANDS (1)

Commands which enable you to adjust the way that output is displayed on screen or printed on paper.

FORMATTING COMMANDS (2)

Commands which are used to set up the structure of the screens in your RECORD LAYOUT.

FUNCTION KEYS

The large keys on the right of the CBM 64 keyboard, used to control many Superbase operations.

HOME POSITION

The top left corner of the screen or text. The cursor can be moved to the top left of the screen by pressing CLR/HOME.

INSERT

Add characters, words or lines in between other characters, words or lines in a descriptive or other text.

INVERTING

Changing from dark characters on a light background to light characters on a dark background. Single lines or whole screens can be inverted.

ITEM LIST

A list of parameters following an OUTPUT, SORT or BATCH command. It may include field-names and/or BASIC variables and expressions.

KEY

Every record has a Key, which is whatever is stored in the Key Field of the record. The Keys are what Superbase uses to order the records in the file.

KEY LIST

A list of KEYS of records which can be used to restrict various Superbase operations to just those records whose keys appear on the list.

LOAD

Take a file that is on a disk and copy it into the computer's memory.

MATCH CRITERIA

The information you enter into a RECORD TEMPLATE to determine which RECORDS are to be selected for viewing or for incorporating into a KEY LIST.

MEMORY

That part of the computer where your document is held. The contents of memory are erased when the computer is turned off.

MESSAGE AREA

The top line of the screen where Superbase displays its messages to you. This is also the first of the two lines where you can enter COMMAND LINES.

PARAMETER

A named field, named BASIC variable, string or numeric expression that may include field names or BASIC variables, or number, entered as part of a command to tell the program what information to process, and sometimes how to process it.

PROGRAM

A sequence of numbered COMMAND LINES which are executed in numerical order, and can only be created using the full Superbase.

RECORD

A collection of FIELDS which can be spread over up to two screens and can be regarded as a unit. Records are held together in FILES and every record within a file is of the same size and layout and has the same fields as the others in that file.

RECORD FORMAT

The SCREEN LAYOUTS of the RECORDS in a FILE.

RECORD LAYOUT

See RECORD FORMAT.

RECORD TEMPLATE

The blank RECORD FORMAT as provided to enable you to enter MATCH CRITERIA or criteria to determine which RECORDS are to be included in a KEY LIST.

REPLICA FIELD

A record field copied from an already defined field in the same record.

SAVE

Take a file that is in the computer's memory and copy it onto a disk.

SCRATCH

Remove a file from a disk.

SCREEN LAYOUT

The skeleton of a record screen consisting of FIELDS and DESCRIPTIVE TEXT. This is a blank record form like an empty card in a card-index.

SCREEN DUMP

A printout of whatever is on the screen at any given time.

SEQUENTIAL FILE

A file which consists of a stream of data with each field separated by a RETURN. Sequential Files can be used to transfer data between Superbase and other programs or between separate Superbase DATABASES.

SORT PARAMETERS

The parameters entered in the SORT Option which determine the order in which the records are to be sorted.

STRING

A sequence of characters (letters and/or numbers).

STORE

Save a file from the computer's memory onto a disk.

TRUNCATION

Trimming or shortening a string of characters to a particular size.

UTILITY APPENDIX

UTILITY PROGRAM

The Utility program enables you to split a database, copy its file definitions AND ITS DATA onto another formatted disk. This utility will release deleted space, so that when you copy a database with this utility, you may find more space on your disk. It will also recover most corrupted databases, files and records, but not deleted ones. It allows you to copy non-database files such as programs and lists, but these files must not exceed 112 blocks.

BEFORE you use the utility program, you'll need to:

* Make one backup of your disk for EACH database you wish to recover (see Chapter 14).

* Use the SCRATCH command on each backup to delete all databases other than the one you wish to recover (see Chapter 14). Then view the directory to check that you only have one database on each disk. Each of these disks will be know as SOURCE disks.

* Format a blank disk using the NEW DISK command. This disk will be known as your DESTINATION disk.

* Quit Superbase.

HOW TO LOAD THE UTILITY PROGRAM

Make sure that the Commodore display is on your screen. Type 'load"utility",8,1' and press RETURN. Now type 'run' and press RETURN.

HOW TO USE THE UTILITY PROGRAM

The first prompt asks you to enter option (1/2). So enter the number '1' to recreate a database or '2' to copy a non-database file, and press RETURN.

You are next prompted to insert your data disk(s). So insert your SOURCE disk and, if you have a dual disk drive, your DESTINATION disk.

Recreating a Database

This option allows you to recreate the database from your SOURCE disk onto another disk, your DESTINATION disk. It then allows you to copy across all or some of its database files.

1. Enter the name of the database as prompted, and press RETURN.

2. The program asks for confirmation that the database it finds is the one you want to recover. So press RETURN if it is, otherwise press 'N'.

3. Next you are prompted for device and drive number. The first two prompts refer to the drive holding the SOURCE disk. The next two prompts refer to the drive holding the DESTINATION disk.

   To accept the values displayed, simply press RETURN. To change them, use the delete key once, enter the new value, and press RETURN.

   Device Number If you are using a single or dual drive unit, the device number is '8'. If you are using two single drive units, consult your drive documentation to find out how to connect them and change the device number of one of them to '9'.

   Drive Number If you are using one or two single drive units, the drive number is '0'. If you are using a dual drive unit, the drive number is printed on each drive.

4. The program now displays each filename it finds in the database. If you answer 'Y' to the 'Recover file' prompt, this file definition will be sent to the DESTINATION disk. Otherwise it is ignored.

5. If the program cannot find the database, it displays the message 'Abort Retry Ignore'. Press 'A' to end the recovery. Press 'R' if you wish to re-enter the database name and try again. Press 'I' if the database is corrupted but you wish to recover its files. You will be prompted for a file name, and for its **file number.** Entering the correct file number is extremely important. The number is related to the position of the file in the database catalog i.e. if it's the first file in the catalog its number is '0', if it's the second file, its number is '1' etc. When this file is recovered you will have to repeat the procedure for each file in the database.

6. If using a Single drive, insert DESTINATION disk when prompted. You may have to change disks several times, if the files you are copying are large.

Copying a Non-Database File

This option allows you to copy disk files such as lists, help screens, and prompts.

1. The first prompt asks you for the name of the file you wish to recover. Remember to include the '.p' suffix for program names.

2. You will then be prompted for device and drive number. See 'Recreating a database' earlier in this section.

3. If using a single disk drive, insert DESTINATION disk when prompted, and press RETURN.

ENDING OR RESTARTING THE UTILITY PROGRAM

To exit the utility at any point, press the 'RUN/STOP' key.

When recovery is complete, the message 'Recovery Completed' is displayed. If you wish to recover other databases and files, insert the appropriate source disk and type 'run' and press RETURN.

If you've finished with the UTILITY program, type 'new' and press RETURN.

DELETE PROGRAM

This program deletes database files from the currently selected database, and non-database files such as helpscreens, lists, and programs.

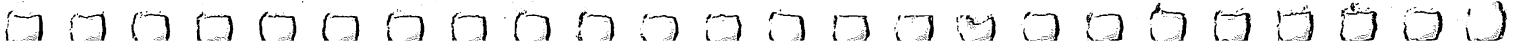
HOW TO LOAD THE DELETE PROGRAM

This program can be run while Superbase is loaded, so there is no need to QUIT. Simply select 'Execute' then enter 'delete' and press RETURN. When deleting a database file, you have the option of only deleting its records, while leaving the file definition (its format) in the database catalog.

HOW TO USE THE DELETE PROGRAM

If you choose to delete the file definition from the catalog, you have the option of deleting it or leaving it in the disk directory. If you leave it in the directory, any new file you create with the same name will automatically be formatted with this definition. To avoid this, you must delete its file definition from the catalog AND from the directory, so answer the two prompts accordingly.

When entering filenames, it is important to enter them accurately. If you do make a mistake, you'll be prompted with 'Database does Not Exist. Create it?'. You should exit the program with CONTROL-Q and execute it again.



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Number of unique words	2478
Number of sentences	2682
Number of paragraphs	2330
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