

# ***GEOPACKS***

***THE GEOGRAPHY SPECIALISTS***

## **Mini-Met**

**An application to store, display and interrogate weather information**

**By Rick Cope, Backwell School, Bristol**

**Published by Geopacks**





## Section 1 - Introducing Mini-Met

### 1.1 What will Mini-Met do?

The Mini Met weather station software is designed to be used in conjunction with GEOPACKS Weather Station equipment although, with one or two minor considerations on the recording front, it can easily be used with any suitable measuring instruments.

It has the ability to ...

- Store information on a daily basis - one record per day
- Store up to a year (366 days) in any one file
- Allow this daily weather data to be viewed as a daily, weekly, monthly or full data set
- Display this information graphically (see section 3)
- Search the data-base for days or groups of days which meet stated requirements (see section 4)
- Analyse the information for evidence of trends or relationships (see Section 5)
- Print copies of the data or graphs created from the data

### 1.2 What will Mini-Met measure?

Mini-Met will accept information for the following components of the weather;

- |                        |  |
|------------------------|--|
| 1. Air Pressure        | recorded in millibars                            |
| 2. Rainfall            | recorded in millimetres                          |
| 3. Maximum Temperature | recorded in °C                                   |
| 4. Minimum Temperature | recorded in °C                                   |
| 5. Humidity            | recorded as a percentage                         |
| 6. Cloud Cover         | recorded in 'oktas' (an okta is 1/8 cloud cover) |
| 7. Wind Speed          | recorded using the Beaufort Scale                |
| 8. Wind Direction      | recorded as compass points (8) or calm           |

Full details on how to use the GEOPACKS weather station equipment accompanies that pack or its components if purchased separately.



## Section 2 - Getting Started

### System requirements

IBM compatible PC with Windows 3.1 or Higher  
4 megabytes of hard disk space free  
4 megabytes of memory  
VGA or SVGA monitor

### Installing Mini-Met

Insert the disk marked Disk 1 into Drive A

**Run** the program a:\setup and follow the on-screen instructions.

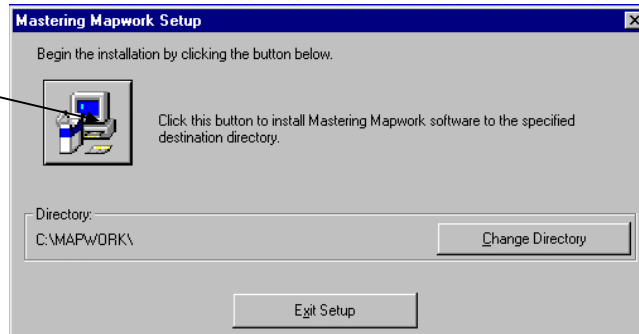
During installation the setup program will install all program and data files into a directory called **Mini\_met** unless you specify otherwise.

Users have sometimes experienced difficulty at this point as it is necessary to confirm the destination directory in order to move on. The program says "Click this button to

install Mini-Met etc...” but which button to use is not that clear as the **Exit Setup** button seems to be the most obvious option.

Hopefully the following diagram will clarify matters .....

This is the button to click!



Hopefully all will then progress smoothly!



### Section 3 - Running Mini-Met

To run Mini-Met simply click the icon or select from your program menu.

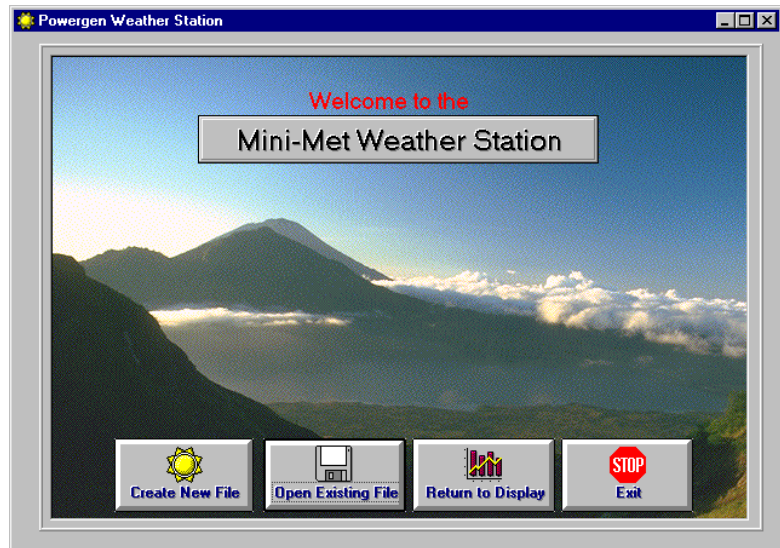
On doing so you will be presented with this title page.

Before embarking on storing your own data it may be worth having a look at the sample data files provided so you can see what Mini-Met can do.

To do this click the



button and open the **high\_low.met** data file



This loads in a sample data set for 14 days which covers in its first part the fine weather associated with a ridge of high pressure over the area, and in its second part sees the gradual arrival of a depression and its associated frontal systems giving a far less settled picture.

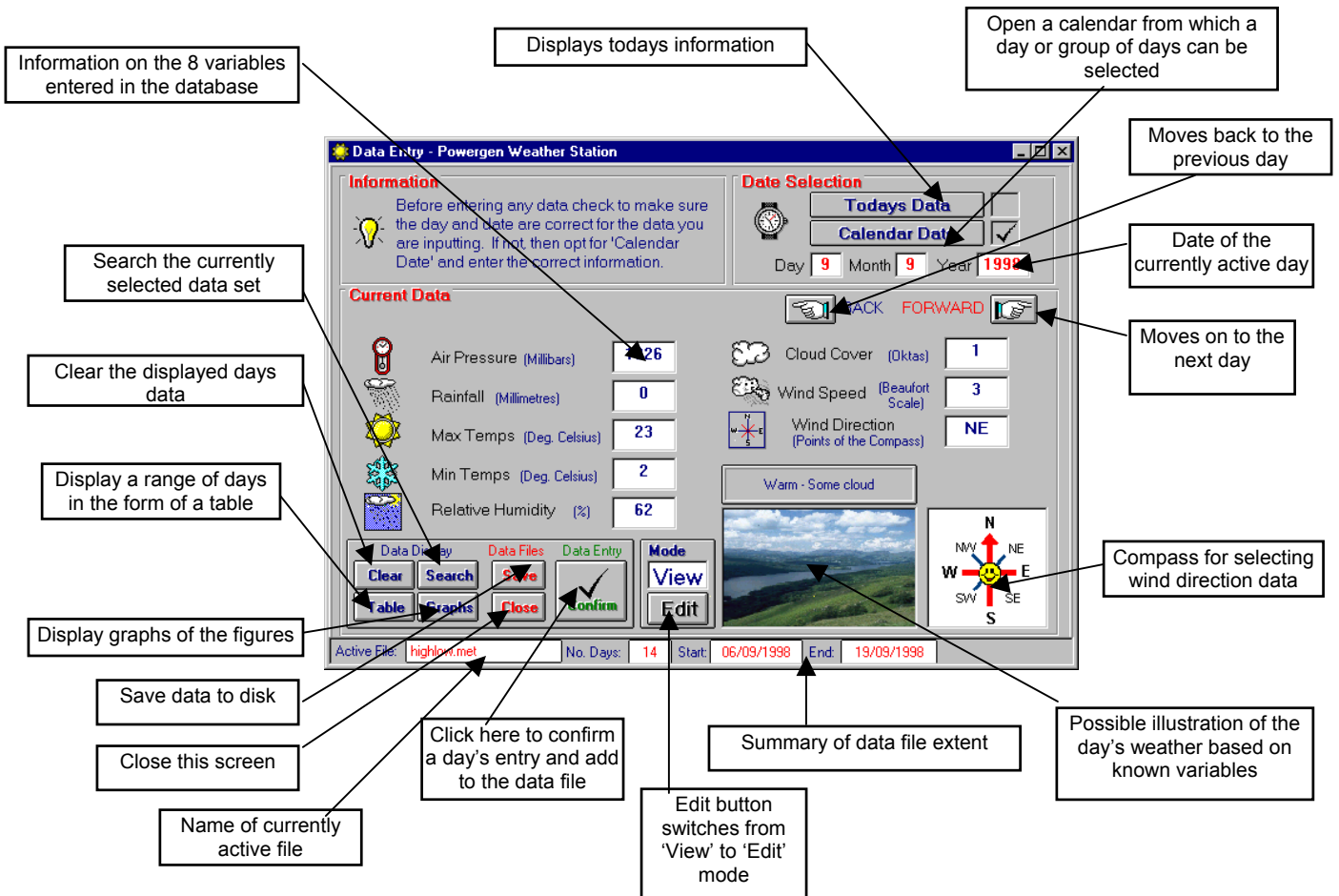
If you wish to play with a months worth of data there is a second data file called **June\_99.met**, which contains data recorded in North Somerset for the month of June 1999.



### Section 4 - Viewing Data

Once a data file is active then it is possible to view, graph, analyse and interrogate it in some detail. On loading the data file (whether it is the ‘current’ file or one created earlier

and saved) you will see the following screen. (The calendar has been removed to aid clarity) The one below is annotated to show what each section does. This page is a useful reference guide.



Each of the elements described briefly above will be explained in detail later in the documentation.

To provide both continuity of instructions and the opportunity to see the various facilities in action this handbook will take you through a logical sequence of events, which most users will wish to follow. You can choose whether to have a go at the examples or simply use these pages for reference.

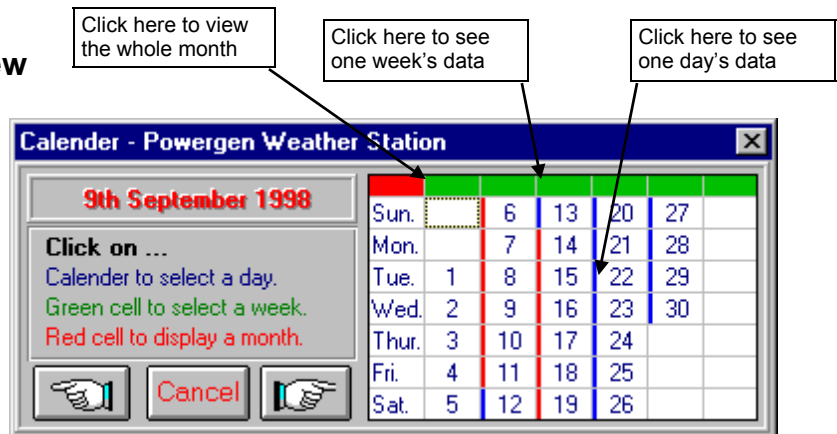
To aid this

1. *The illustrative tasks will be in italics in numbered boxes*

and the information on functions or methods in standard text such as this.

#### 4.1 Selecting Days to View

Superimposed on this screen is another window. This is the calendar. It allows you to select days to view other than today.



To select **TODAY'S** data click  the button.

2. *Click Today's Data button. Unless you have already had a play with the program and created a file, the variable panels will be blank as no data exists for today.*

To select **A DAY OTHER THAN TODAY** click  the button

You will notice on the calendar that each day has a coloured bar to its left. This is the *active data indicator*. If the bar is RED then that date contains data. If the bar is BLUE then it does not. Days which have no bar are before the data file was started and contain no information.

To see when the data file was started, how many days it contains, and the last date on which data was entered look at the **status bar** at the foot of the screen.

Active File: <b>highlow.met</b>	No. Days: <b>14</b>	Start: <b>06/09/1998</b>	End: <b>19/09/1998</b>
---------------------------------	---------------------	--------------------------	------------------------

**TO SEE ANY ONE DAY'S DATA** click on any active day (with a red bar)

This will display the selected days data together with a captioned photo giving some idea of the general trend of the day in question.


3. **Show the calendar** by clicking on the button. Having previously loaded the file **highlow.met** you will see that no data is displayed. That is because the program assumes that you want today's information. To view the data for a day in the past click on an active data day (red bar) on the calendar (see illustration above).

**Try the first day, 6<sup>th</sup> September.**

### 4.2 Navigating through the days, weeks or months

At the moment you have selected one day by clicking on the calendar or selecting the "Today's data" button. There are other ways to access selected dates.

To move on or back **ONE DAY** press  **BACK** **FORWARD**  the buttons

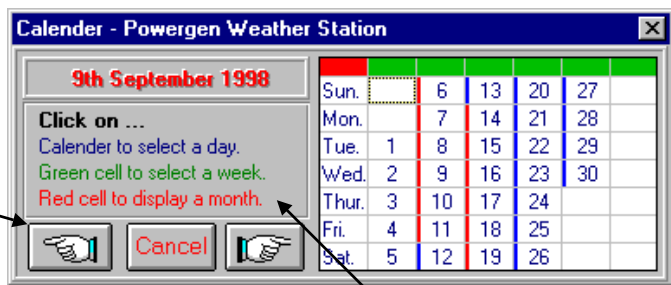
Notice how the date panel changes to help you keep track 

4. Click the 'Forward' button to move onto the next day. Try moving on or back through the database. See what happens if you try to access dates for which there is no data available.

To move on or back **ONE MONTH** press the 'month on' or 'month back' buttons



5. Try it and see what happens.



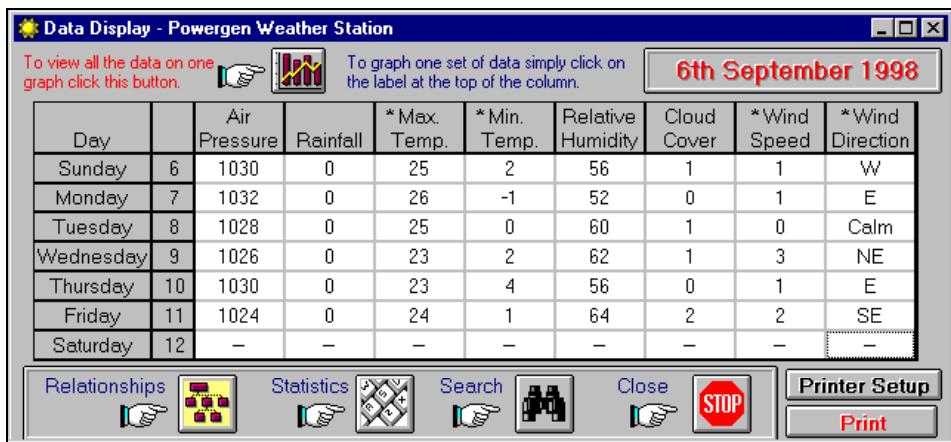
Data table commands

### 4.3 Viewing tables of data rather than just single days

Sometimes it is useful to be able to see data say a week at a time, or maybe a month at a time. This is perfectly possible using the calendar as a starting point.

- Clicking a **single cell** accesses a **single day** using the full screen display (see page 3)
- Clicking a **green cell** at the top of a column displays a summary table for the **selected week**.
- Clicking the **red cell** in the top left corner of the calendar displays a **month** at a time.

6. Click on the green cell at the top of the week 6 - 12 September to get this table.



Day	Air Pressure	Rainfall	* Max. Temp.	* Min. Temp.	Relative Humidity	Cloud Cover	* Wind Speed	* Wind Direction	
Sunday	6	1030	0	25	2	56	1	1	W
Monday	7	1032	0	26	-1	52	0	1	E
Tuesday	8	1028	0	25	0	60	1	0	Calm
Wednesday	9	1026	0	23	2	62	1	3	NE
Thursday	10	1030	0	23	4	56	0	1	E
Friday	11	1024	0	24	1	64	2	2	SE
Saturday	12	-	-	-	-	-	-	-	-



## Section 5 - Displaying the data as graphs

So far we have seen how the 'raw data' can be displayed as a single day or in tables. It is often very useful to be able to summarise the results in the form of graphs. This can be easily done for weeks, months or the whole data set.

### 5.1 Accessing the graphing functions

Depending on whether you are using the whole data set or just a selected part of it (week or month) makes a difference as to how you call up the graphs.

#### To graph the whole data set

This is done from the main single day display screen (see page 3). Simply click on the "Graphs" button on the Options Panel.



Graphs Button

A graph of the first variable in the table (Air Pressure) will be displayed. You can select other graphs by using the "Graphs" option on the graph window menu bar (see page 7)

#### To graph one week or one month

Select the week or month you require using the calendar (see 'Viewing Tables - page 5) Having displayed the data for the period selected click on the heading at the top of the table columns to display a graph of the data you wish to see.

Clicking here would display a graph of air pressure

Day		Air Pressure	Rainfall	*Max. Temp.	*Min. Temp.	Relative Humidity	Cloud Cover	*Wind Speed	*Wind Direction
Sunday	3	1030	0	25	2	56	1	1	W
Monday	4	1032	0	26	-1	52	0	1	E

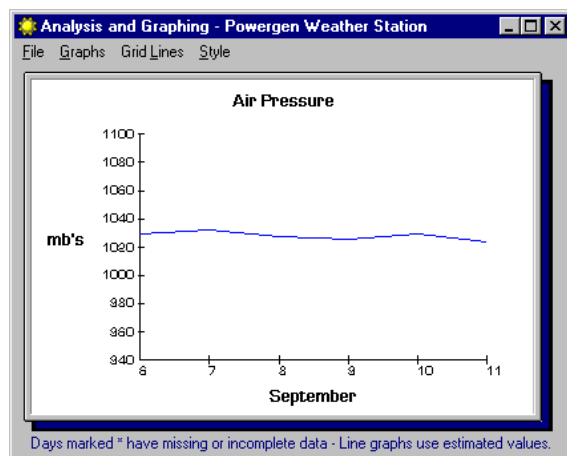
7.

Select the week beginning 6<sup>th</sup> September if you have not already done so to and click on the top of the Air Pressure column to display this graph.

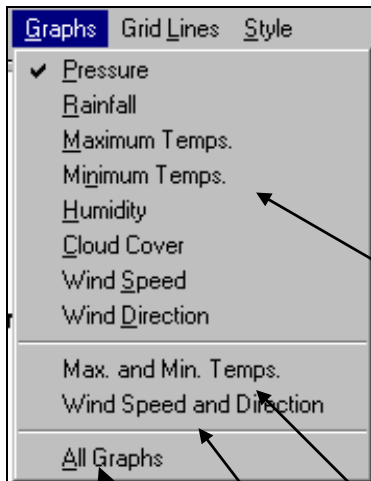
Graphs are automatically formatted to suit the data.

To change to another graph either...

- Click on the top of another column on the data table or...
- Select Graphs from the Graph Window menu bar and choose which one you want from the selection on offer.



This menu gives you access to any of the graphs. Simply select the one you want from the menu.



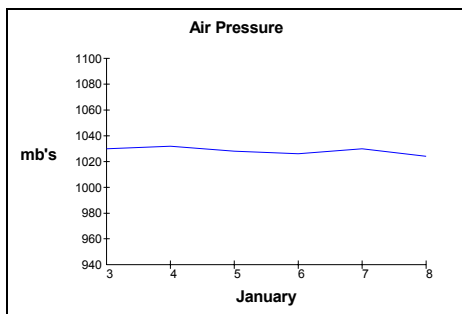
- There are a number of formats available:
- Pressure
  - Maximum Temperatures
  - Minimum Temperatures
  - Humidity
  - Wind Speed
- all use line graphs.
- Rainfall
  - Cloud Cover
  - Wind Direction
- all use bar graphs.

Displays all the graphs on one page

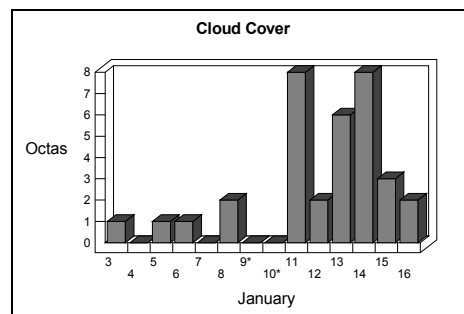
- Maximum and Minimum temperatures are displayed together on a 'high - low' bar chart

Examples of these styles of graph are shown below.

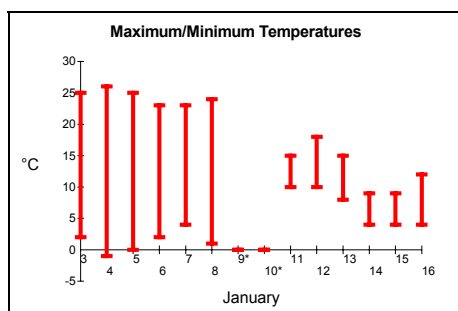
- Wind speed and Direction are shown together using a 'Wind Rose'



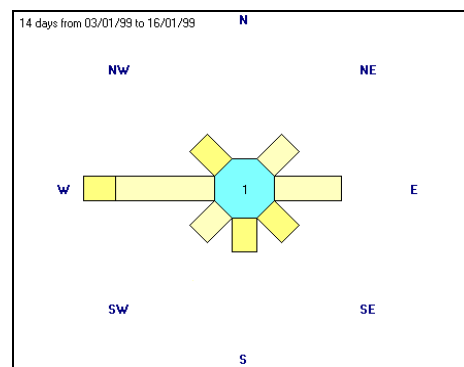
Line Graph of Pressure



Bar Graph of Cloud Cover



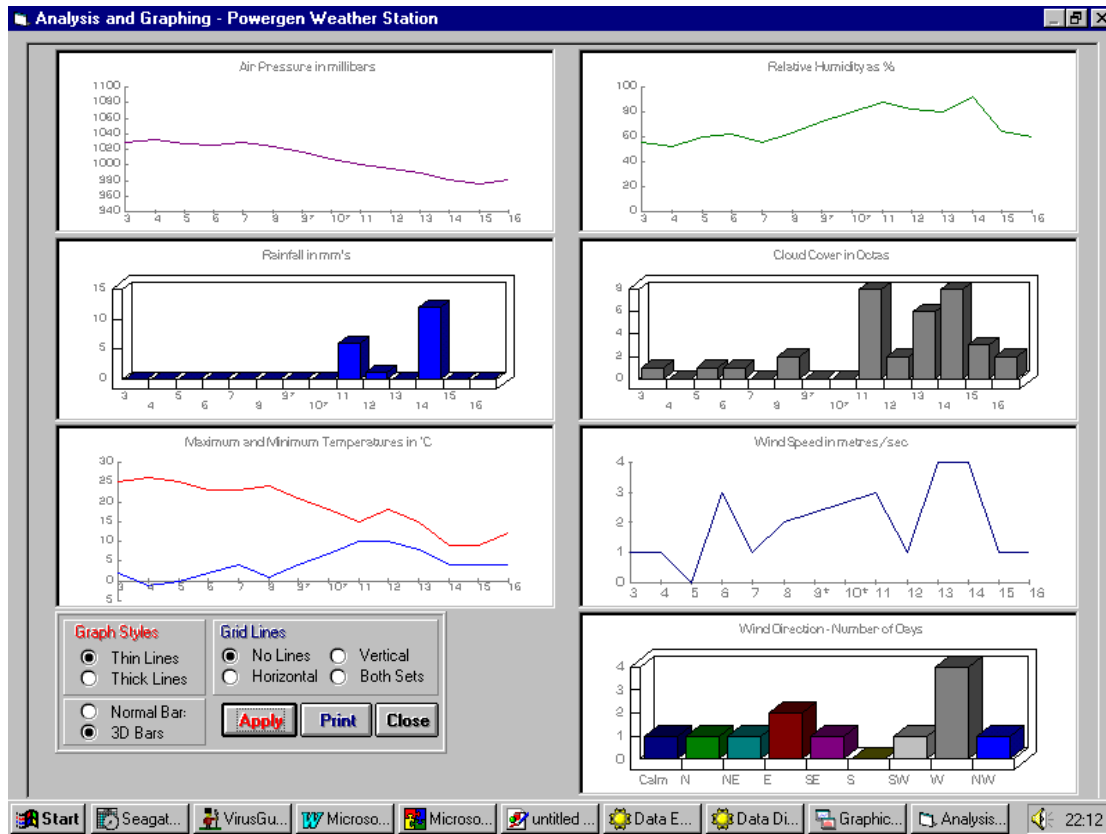
High - Low Bars of Maximum / Minimum Temps.



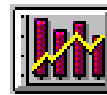
Wind Rose of Wind Speed and Direction

You will notice that the final option in this menu allows you to display all the main graphs on one screen. This is illustrated on the next page.

## 5.2 Full set of graphs on one screen



This option can also be access by clicking on the



button on both the data entry screen or the data table display.

## 5.3 Changing Graph Display Options

### Lines and Bars

It is possible to change the format of any of these graphs, both single graphs and all-on-one-screen versions using the STYLE option from the menu bar on single graphs or the Options Panel on multi-graph screen (as above)

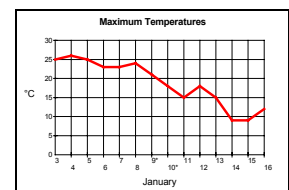
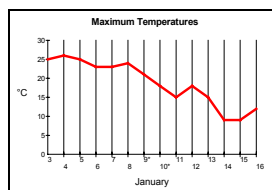
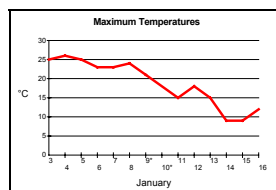
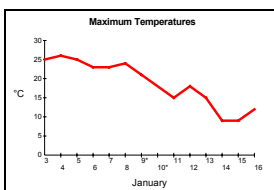
**All Line Graphs** can be drawn using either THIN LINES or THICK LINES

**Bar Graphs** can be drawn either as SIMPLE BARS or 3D BARS

**High Low Bars** can be either THICK or THIN

### Grid Lines and Axes

The appearance of the graph can also be set using the Grid Lines option. There are four possible options for grid lines.



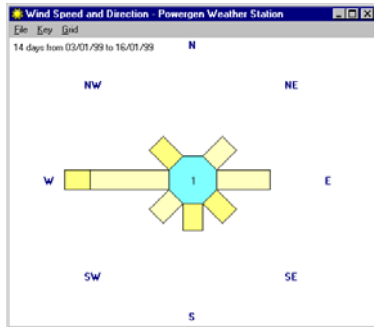
No Lines

Horizontal Only

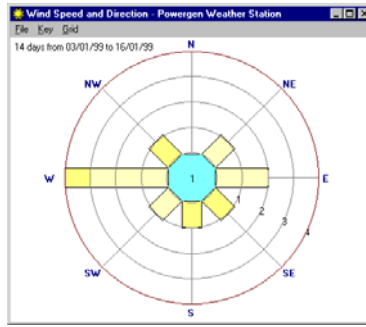
Vertical Only

Both

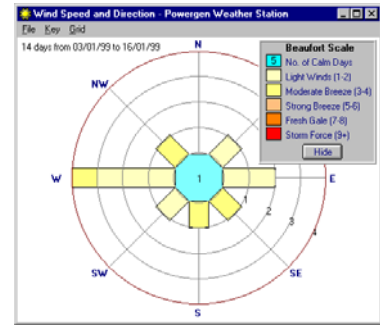
Similarly, the Wind Rose can be formatted using options from the menu bar to give...



No lines, no key



With Grid Lines



With Grid Lines and a Key

### 5.4 Combination Graphs

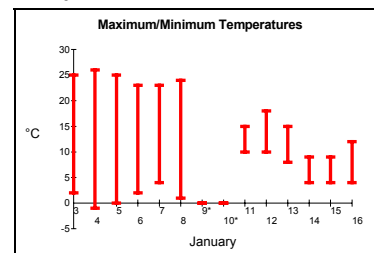
A number of variables lend themselves to be viewed together, for example, **maximum and minimum temperatures** or **wind speed and wind direction**. We have seen how to display these using menu bar options but you can also access these combined graphs directly from the Data Display Table ...

Day	Air Pressure	Rainfall	*Max. Temp.	*Min. Temp.	Relative Humidity	Cloud Cover	*Wind Speed	*Wind Direction
Friday	1							
Saturday	2							
Sunday	3	1030	0	25	2	56	1	W

You will notice from the table above that two sets of adjacent columns are 'starred'. If you click on the top of one and drag the mouse pointer over the other to HIGHLIGHT BOTH then these composite graphs can be easily displayed.

Rainfall	*Max. Temp.	*Min. Temp.	Relative Humidity
0	25	2	56

gives you this...



The wind speed and wind direction combination gives you the wind rose illustrated at the top of this page.

8 Try selecting each type single of graph from the Data Table by clicking on the top of the column containing your chosen variable.

9 Try changing the line width, bar style or grid lines using the options on the menu bar.

10 Select the combined wind speed and direction graph (from either the data table or menu from a displayed graph) and have a play with the grid lines and key options.



## Section 6 - Analysing Information (1)... Statistics

It is possible to display a summary of statistics associated with either the whole data set or just your selected sub-set of a week or a month by clicking on the button on the data table panel. This is what you get.



Summary Statistics for each variable

Number of days with each amount of cloud cover

Number of days with no wind

Table of wind speeds at each point of the compass

	1-2	3-4	5-6	7-8	9+	Total
N	0	0	0	0	0	0
NE	1	0	0	0	0	1
E	2	0	0	0	0	2
SE	0	1	0	0	0	1
S	0	0	0	0	0	0
SW	0	0	0	0	0	0
W	1	0	0	0	0	1
NW	0	0	0	0	0	0
Total	4	1	0	0	0	5



## Section 7 - Analysing Information (2)... Relationships

### 7.1 Establishing Relationships

Often it is useful to see if relationships exist between two or more variables. For example, is there a relationship between air pressure and rainfall? Does high pressure give good dry weather and low pressure wet?

To access these analysis functions click on



and this table appears.

	Air Pressure	Rainfall	Maximum Temp.	Minimum Temp.	Relative Humidity	Cloud Cover	Wind Speed	Wind Direction
Air Pressure	Dark Blue							
Rainfall		Dark Blue						
Maximum Temp.			Dark Blue					
Minimum Temp.				Dark Blue				
Relative Humidity					Dark Blue			
Cloud Cover						Dark Blue		
Wind Speed							Dark Blue	
Wind Direction								Dark Blue

Click on a cell to see a scattergraph of your chosen variables

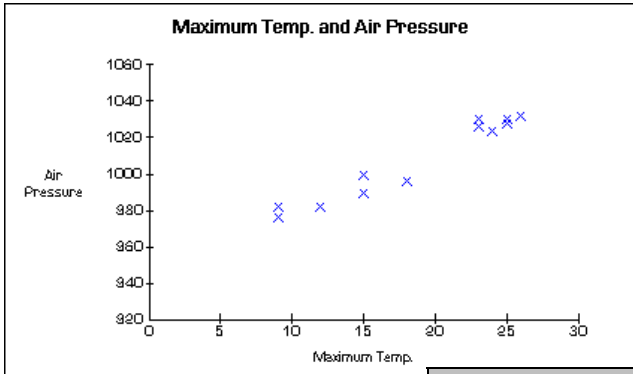
This is a 'relationship matrix' It allows you to select relationships between any two variables in your data set by simply clicking on the cell at the intersection of the two variables.

11

Click on the cell representing maximum temperatures and air pressure to examine this relationship further.

### 7.2 Scattergraphs

When you select variables to investigate from the 'relationship matrix' a *scattergraph* of the relationship will be displayed. The example below shows the relationship between air pressure and maximum temperatures.

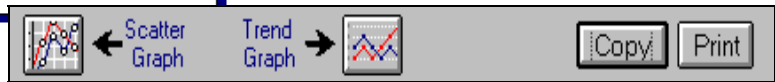


You may be able to see how all the points seem to be clustered in a sort of a line. This runs from bottom left of the graph up to the top right.

This suggests that **as air pressure increases so do maximum temperatures.**

This is called a **positive relationship.**

Below the graph you will see this panel...



### 7.3 Trend Graphs

If you are following the tutorial then at the moment you are displaying a scattergraph of pressure against maximum temperatures. Another way of looking at this is by creating '*trend graphs*'.

These graphs simplify things by converting the different units used when measuring variables into a standard value, in this case a percentage. These are then expressed as a proportion of the *range* of that variable and a line graph drawn.

*Example:*

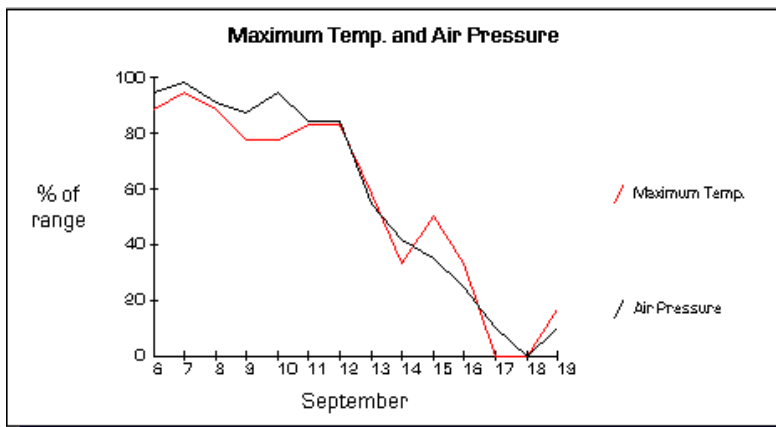
If the highest temperature was 25°C and the lowest value was 5°C then the temperature **range** is 20°C.

The lowest value recorded (5°C) is represented by 0% (0% of the possible range)

The highest value recorded (25°C) represents 100% (100% of the possible range)

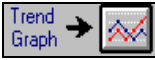
A value of say 15°C would be 50% because it is exactly half way between the lowest and highest values possible in this data set.

If this is done to both sets of data then they can then be graphed using an identical scale and compared more easily.




This graph shows you the relationship between pressure and maximum temperatures as a *trend graph*.

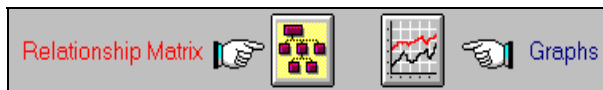
Notice the way the two lines for pressure and temperature almost mirror each other.

To view trend graphs simply click on the  button

12 Click the *trend graph* button to see the graph of pressure and temperature

To get back to the scatter graph click on the scattergraph  button

Below the panel containing the graphs and two *graph selection buttons* are two other buttons.




These allow you to switch between the *relationship matrix* (see page 10) and the *scattergraphs / trend graphs*.

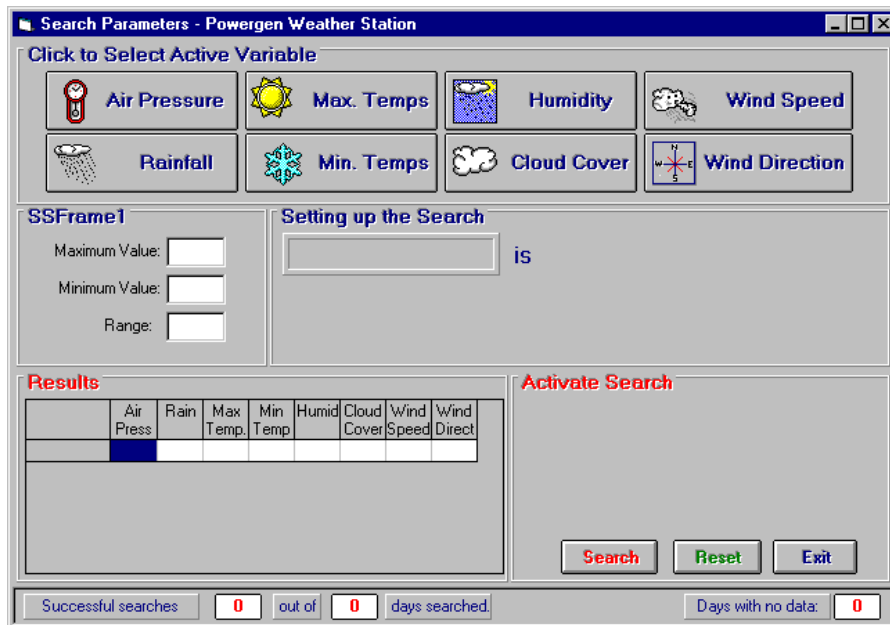
13 Try switching back to the relationship matrix. Select another pair of variables and look at the scattergraphs or trend graphs associated with them.



## Section 8 - Searching the Data Base

### 8.1 Accessing the search window

To activate the search 'Window' simply click on the  button at the base of the Data Table (see page 5). This will then display the following screen:



It is from this screen that a number of searches can be carried out.

14 Close the Relationships Window and return to the Data Table. Click on the Search button to get this screen

## 8.2 How to search

There are two things to consider when carrying out a search;

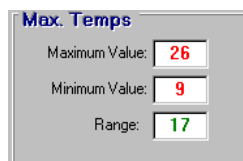
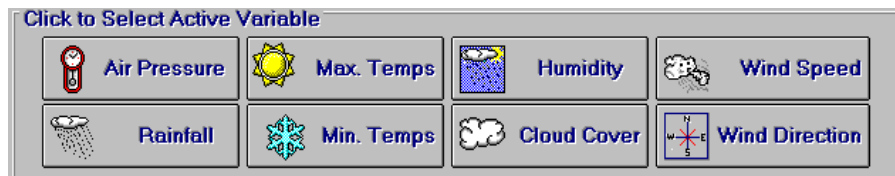
1. Do you wish to search the whole data set or just part of it?
2. Do you wish to search using just one variable (a simple search) or more than one (a nested search)?

There are a number of stages to carrying out a search.

**Before embarking on a search** - If you do not wish to search the whole data set then use the Calendar to select the week or month to search through

**Stage 1** Open the search Window (see page 12)

**Stage 2** Select the variable you wish to search by clicking on the named panels at the top of the Window.



Having selected a variable to search your selection will be confirmed in the panel below these buttons and the range of the selected variable summarised in the panel to the left.

You will then be asked to “define the nature of your search”.

**Stage 3** Decide on the ‘nature’ of the search you wish to carry out. There are four options:

- To look for data with a value GREATER THAN something
- To look for data with a value LESS THAN something
- To look for data with a value EQUAL TO something or ...
- To look for data with values BETWEEN two others

This is done by selecting one of the following four option buttons.



one of the following


**Stage 4** On doing so you will be asked to enter the value(s) above, below or equal to which define your search. In the example shown here the user is searching for all those days in which maximum temperatures were over 20°C


Click on the confirm button once you have selected your search values(s)



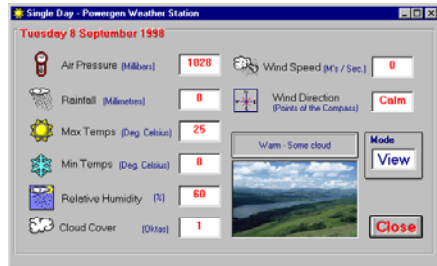
Once confirmed your selection will be entered in the Active Searches Window below this panel.

searching cont.

**Stage 5** To start the search click on the  button

To cancel a search click on the  button


**Stage 6** The results of successful searches will be displayed as a table at the bottom left of the screen, together with a 'status bar' outlining the success rate at the foot of the main window.



	Air Press	Rain	Max Temp.	Min Temp.	Humid	Cloud Cover	Wind Speed	Wind Direct
Sun 6 Sep	1030	0	25	2	56	1	1	W
Mon 7 Sep	1032	0	26	-1	52	0	1	E
Tue 8 Sep	1028	0	25	0	60	1	0	Calm
Wed 9 Sep	1026	0	23	2	62	1	3	NE
Thu 10 Sep	1030	0	23	4	56	0	1	E
Fri 11 Sep	1024	0	24	1	64	2	2	SE

If you wish to see a 'full screen' display of any one of the successful 'hits' just click on the row containing the day you want and a full data screen will appear.

It is possible to search using up to FOUR variables at any one time.

**To carry out a 'nested' search** all you do is repeat Stages 2 - 4 for the variables you wish to include then, when you are happy with the search set up click the  button to start.

In this example the user is trying to find all those days in which...

- Maximum Temperatures are greater than 20°C
- There were relatively clear skies (cover <2 Oktas) and
- Air Pressure was high (>1020mb)



To leave the search window simply click  the button

**15** Use the guidelines above to carry out a search on the **highlow.met** data to find out which days had **temperatures of over 20°C**

**16** Now try narrowing down the search by filtering out all those cloudier days by searching for days with **cloud cover of less than 2**

**17** Narrow it down still further by going for **Air Pressure greater than 1020**

How many days are you left with?



## Section 9 - Entering Your Own Data

Although you may think it a little unusual for this section to come at the end it seemed to be sensible for you to understand how the program functioned before attempting to enter any of your own data.

As explained in the introduction on page 1, there are 8 variables which Mini-Met will accept. The data entry Window is identical to the data viewing Window illustrated in Section 4 on page 2, the only major difference being that you cannot enter data when in "view" mode.

### 9.1 Starting a data file

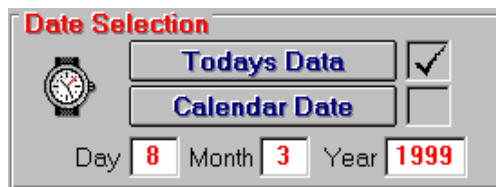
New data files can only be started from 'today' onwards. You cannot back-date a file so it is important to 'open' a file on the day of your first recording.

#### To start a new data file:

1. Ensure that the date is today's date, if not click



2. Today's date will appear in the top right panel



3. Change from "View" mode to on the 'Edit' button

The Edit Button

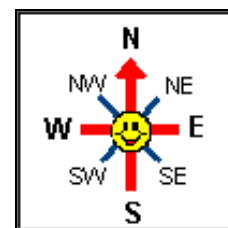


"Edit" mode



by clicking

4. Click on the panel into which you wish to insert data and type in your information
5. Repeat this for all the variables
6. When you get to "Wind Direction" it is a little bit different. On selecting this variable you will be advised that to enter data you must click on the compass rather than type it in. Simply click on the compass point letters and they will appear in the Wind Direction panel.



7. The ☺ represents "Calm" so if there is no wind on the day you are recording then click that central symbol and the word "Calm" will be entered in the Wind Direction panel.

8. Having entered your data you must Confirm it (this verifies that the data is readable to avoid problems displaying or analysing it at a later date). To do this click the "Confirm" button. If the data is OK then you will be told so, if not you will be prompted as to which panel contains incorrect data and why and asked to re-enter it.



18

Try creating a new data file for today's information or just make some up to test the procedure. You can always remove these test files later to avoid confusion with the 'real thing'

Now your data is entered for 'today' you will need to save it.

### 9.2 Saving newly entered data

To save new or amended data select the  button and the standard 'Windows' file dialog box will appear.


Give your file a suitable name ensuring that you add the extension **.met** to it. This enables Mini-Met to find it more easily next time you need it.

### 9.3 Loading files created earlier

Once you have saved a file it is easy to retrieve the data from either your hard disk or floppy.


If using floppies ensure the appropriate disk is in the 'a' drive and select from the menu buttons on the start-up screen.



If you are not on the start-up screen then select  to get there.






## Section 10 - Getting Help

To access the Help files simply click on the Help Icon  on the currently active window, or select 'Help' from the menu bar.

A standard Help file (this manual in a paged text form) will appear.



## Section 11 - Leaving Mini-Met

Close all active Windows using the  or   buttons. This will return control to the start-up screen.

Once there click the  button to leave Mini-Met.

## Appendix 1

### Installing Geopacks Software on a Network

Geopacks Software is written in Visual Basic and in order for it to run it is necessary to install files into specific locations on any computer that is running the software.

- There are the program (or application) files, which are installed into the folder chosen to hold the programs themselves. This is selected by the user when setting up the install sequence and prompts to this effect will be displayed.
- Other files (the 'system' files which actually run the code) are installed automatically into the Windows System folder on the host machine. On a standalone machine the files are installed into their correct locations automatically and after installing the programs should run with no extra 'tweaking'

However, installing on to a network is different to installing onto a standalone PC. Due to the way in which Windows locates the required files it is necessary to undertake a few extra steps during the installation process. If you have bought a network version of the software and do not have a network, but wish to install it on to more than one computer, please contact Geopacks.

To install on a network...

- 1) Install the software onto the server in the usual way.
- 2) If you use install software like Install Wizard or Winstall you will need to replicate the files installed in the \Windows\System folder into the equivalent folder of the client machines.
- 3) If you need to manually install the \Windows\System folder files, you need to copy the files listed in Table 1 on the next page from your \Windows\System folder on the server to the windows system directory on the client machine.

*Table 1 on the next page identifies the 'System' files for each application in the current Geopacks Suite of software which need to reside in the \Windows\System folder of client machines which will run the software.*

- 4) You will need to map a network drive from the client machine to the server. Make sure that applications are installed in a folder on the mapped drive but that the application folder is NOT the root folder of the mapped drive.
- 5) Create a shortcut from the client machine to the 'start-up' program for each application in the mapped drive and folder on the server where you installed the application software.

The start-up programs for the Geopacks Software are as follows...

<b>Slope Analysis</b>	Slopes.exe
<b>Channel Analysis</b>	Chan32.exe
<b>Sediment Analysis</b>	
Roundness Analysis	Cailleux.exe
Bedload Analysis	Bedload.exe
Orientation Analysis	Orient.exe
Sediment Analysis	Fines.exe
<b>Full Fieldwork Suite</b>	
Channel Analysis	channel.exe
Slope Analysis	slopes.exe
<b>Mastering Mapwork</b>	startup.exe
<b>Down on the Farm (Main Program)</b>	farm32.exe
<b>Down on the Farm (File Manager)</b>	FileEdit.exe
<b>Slide Show Maker</b>	Make32.exe
<b>Slide Show Viewer</b>	View32.exe
<b>Coastal Manager</b>	Coasts.exe

The software should now work from a client machine.



**Table 1** – Files to reside in \Windows\System folder (or Microsoft Shared\DAO folder in the case of two files used by “Down on the Farm – shown at bottom of the list)

INSTALLED FILES	SLOPE ANALYSIS	CHANNEL ANALYSIS	SEDIMENT ANALYSIS	FIELDWORK FULL SET	MASTERING MAPWORK	DOWN ON THE FARM	COASTAL MANAGER	SLIDE SHOW
<b>'RUN-TIME' FILES COMMON TO ALL APPLICATIONS</b>								
Msvcrt40.dll	✓	✓	✓	✓	✓	✓	✓	✓
Msvbvm60.dll	✓	✓	✓	✓	✓	✓	✓	✓
Stdole2.tlb	✓	✓	✓	✓	✓	✓	✓	✓
Oleaut32.dll	✓	✓	✓	✓	✓	✓	✓	✓
Olepro32.dll	✓	✓	✓	✓	✓	✓	✓	✓
Comcat.dll	✓	✓	✓	✓	✓	✓	✓	✓
Asyncfilt.dll	✓	✓	✓	✓	✓	✓	✓	✓
Ctl3d32.dll	✓	✓	✓	✓	✓		✓	✓
<b>EXTENSION FILES USED BY INDIVIDUAL APPLICATIONS</b>								
COMCTL32.OCX						✓		
COMDLG32.OCX	✓	✓	✓	✓	✓	✓	✓	✓
EXPSRV.DLL						✓		
GAUGE32.OCX	✓	✓	✓	✓	✓		✓	
GRAPH32.OCX	✓	✓	✓	✓	✓	✓	✓	
GRID32.OCX	✓	✓	✓	✓	✓			
GSW32.EXE	✓	✓	✓	✓	✓	✓	✓	
GSWDLL32.DLL	✓	✓	✓	✓	✓	✓	✓	
MFC40.DLL	✓	✓	✓	✓	✓	✓	✓	✓
MSCOMCTL.OCX								✓
MSFLXGRD.OCX		✓	✓	✓		✓	✓	
MSJET35.DLL						✓		
MSJINT35.DLL						✓		
MSJTER35.DLL						✓		
MSMASK32.OCX	✓	✓	✓	✓	✓			
MSRD2X35.DLL						✓		
MSREPL35.DLL						✓		
MSSTDFMT.DLL							✓	
PICCLP32.OCX	✓	✓	✓	✓	✓	✓	✓	✓
RICHE32.DLL							✓	✓
RICTX32.OCX							✓	✓
SPIN32.OCX	✓	✓	✓	✓	✓			
TABCTL32.OCX						✓	✓	
THREED32.OCX	✓	✓	✓	✓	✓	✓	✓	✓
VB5DB.DLL						✓		
VBAJET32.DLL						✓		
<b>FILES TO GO INTO 'PROGRAM FILES \ MICROSOFT SHARED \ DAO' FOLDER</b>								
DAO350.DLL						✓		
DAO2535.TLB						✓		

This information can also be found on the CD in a Word file called “Network Installation.doc”



## Batch copying of system files

There are two supplementary folders on the CD which are not used during the setup process. The files in these folders are extra copies of the System Files which are installed into the Windows System folder or, in two cases, the Program Files/Common Files/Microsoft Shared/DAO. As covered above, they need to reside on the hard drive of each workstation that will be used to run these Geopacks applications.

They are installed automatically onto the hard drive of the computer which is used for installing the applications. However, several network managers have suggested that it would be easier to have them all in one folder on the CD as well. This enables 'batch' copying onto the C:\ drive of workstations which will run the Geopacks applications.

So, there are two folders on this CD which contain these files. They can be found in the 'Files' folder. The SysFiles folder contains all files which reside in the System Folder. The ShareDOA folder holds the two files which go into the Program Files/Common Files/Microsoft Shared/DAO folder.

**WARNING:** Normal installation automatically checks to see if a file you are trying to install is already present or not. If the file to be installed is more up to date than the existing version it will update it with the later version. If it is older it will either leave it or gives you a warning and recommends that you retain the existing, newer, version.

**BE CAREFUL** if block copying not to overwrite newer versions of these system files as it may cause problems with other software on the machine. Geopacks software deliberately uses slightly older versions of some system files to ensure compatibility with as wide a range of Windows versions as possible. This does not affect the functionality of the software.

