

THERMOMAX®

**MASTERLINK
SOFTWARE**

Installation & User Manual

ENGLISH

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1.0 INSTALLATION

This chapter covers how to install the software on a computer running **Windows® 95, Windows® 98, Windows® NT, Windows® 2000** and **Windows® ME**. The installation program will copy all necessary files onto the hard disk and create an icon for **MasterLink Software**.

1.1 Minimum Configuration

The minimum configuration for running MasterLink Software is detailed below:-

- 10Mb + free hard disk space
- **Windows® 95, Windows® 98, Windows® NT, Windows® 2000** or **Windows® ME**
- 1 free serial port
- CD-ROM

1.2 Using the Install Program

If you have a previous version of Masterlink Software installed, we recommend that you uninstall it before proceeding with the installation.

To install the software, follow the steps detailed below:

1. Insert **installation CD** into the **CD-ROM**.
2. The Masterlink Software installation program will auto run from the CD-ROM and the following dialogue box will appear on the screen, asking the user to select the language in which to install the Masterlink Software:

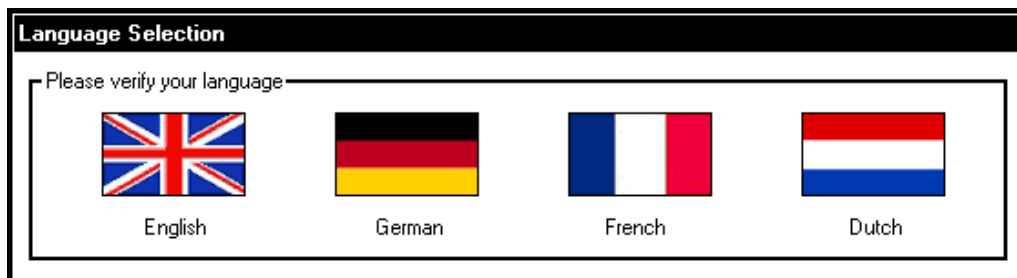



Figure 1.1 Installation Language Selection

3. Click on the  icon with the left button of the mouse to install in English.
4. The following dialogue box, Figure 1.2, will appear:

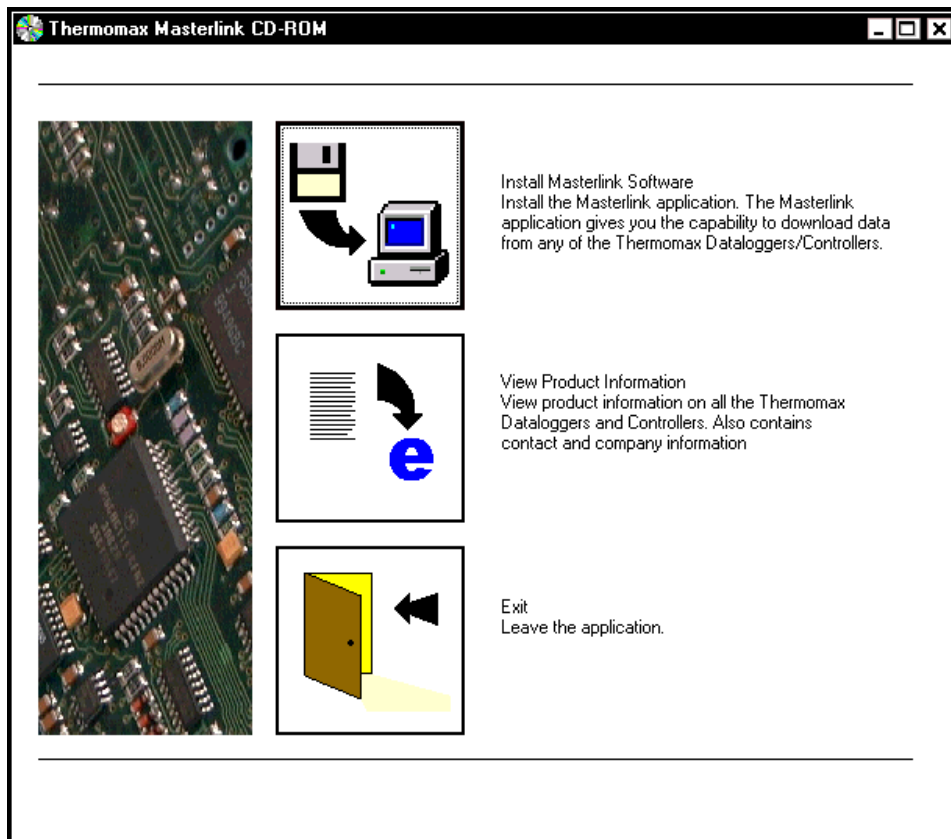



Figure 1.2 Commence Installation

5. Click the  icon to begin the installation process.
6. The following dialogue box, **Figure 1.3** will appear to help the user with the installation of the Masterlink Software.

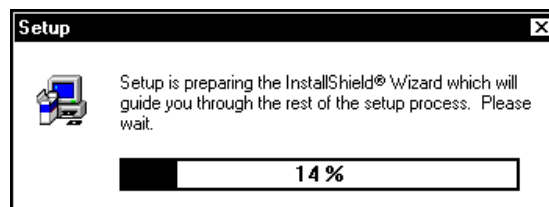


Figure 1.3

7. After a short delay, the user will be presented with the dialogue shown in **Figure 1.4**.

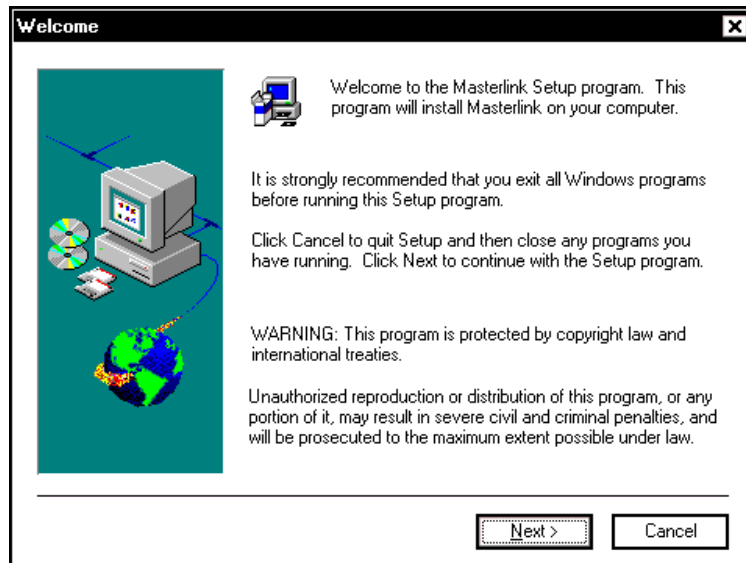


Figure 1.4, Welcome dialogue

8. This dialogue warns the user to close all windows programs before running the set-up program. If the user does have programs running and wishes to close them before installing the Masterlink Software, click . If not, click to continue.
9. The user will then be prompted to enter the username and company to that the software is licensed. This information must be entered otherwise the installation program will not proceed. **Figure 1.5** shows the dialogue into which this user information must be entered.

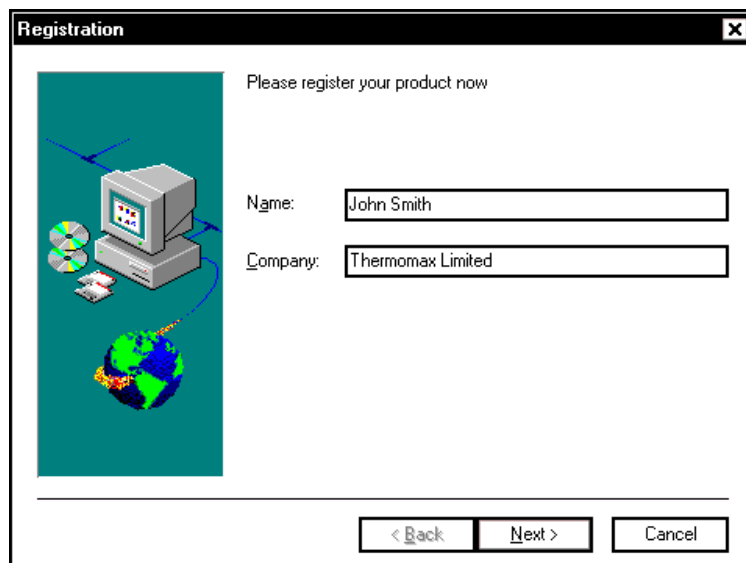


Figure 1.5, User Registration

10. Once has been pressed, the user will be asked to confirm that the information entered was correct. This is illustrated in **Figure 1.6**.

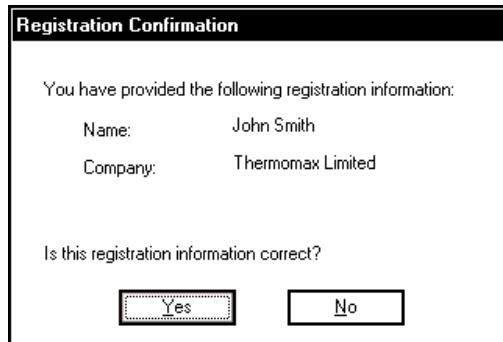


Figure 1.6, Registration Confirmation

11. If all the details are correct, press . To change or amend the details, press .

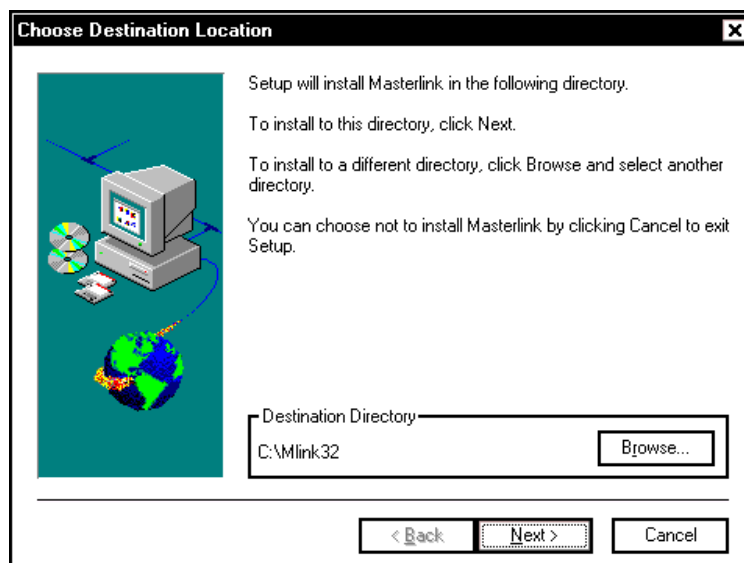


Figure 1.7, Choose Destination Location

12. The default directory is **C:\Mlink32**. To change this directory, click on and replace it with the desired location. If the specified directory does not exist the installation program will attempt to create it.
13. Once the directory has been specified, press . Selecting will abort the installation and cause the installation program to be terminated.

14. The following dialogue box, **Figure 1.8**, will appear displaying the progress of the files being decompressed to the selected directory.

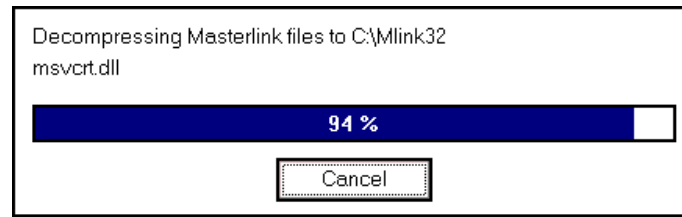


Figure 1.8, Decompressing of Files Progress

15. If the installation was successful, then a program group called **Thermomax MasterLink** will have been created. Within this group there should be an icon called MasterLink, as shown in **Figure 1.9**. To start the MasterLink software, double click this icon.



Figure 1.9, Masterlink Software Icon

When Masterlink Software is run for the first time, the user will be prompted for a password. This password will be used to enable the users to set up the parameters of the unit. Please remember this password, however if it is forgotten, please contact Thermomax for details on how to retrieve it.

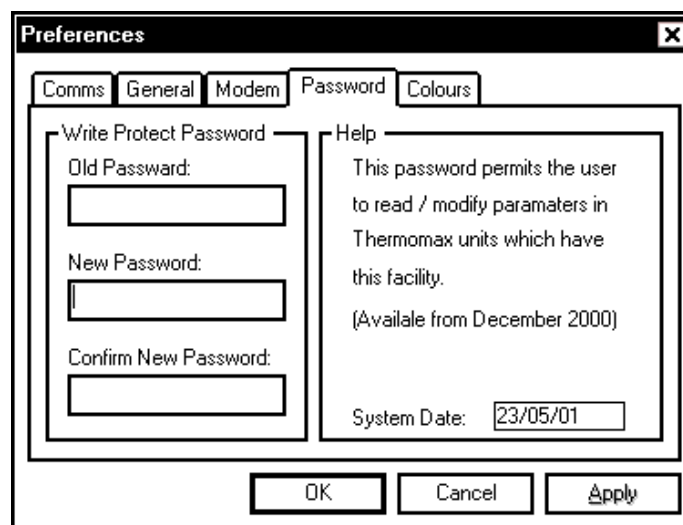


Figure 1.10, Preferences Password Dialogue

1.3 Creating Floppy Disks from the Thermomax CD

1. Insert the Thermomax CD into a PC with a CD-ROM.
2. View the contents of the CD in Windows® Explorer.
3. Select the “English” directory and four sub-directories named disk 1, disk 2, disk 3 and disk 4, will appear.
4. Copy the contents of each of these directories onto four separate floppy disks.
5. Begin installation by inserting disk 1 into the floppy drive, run SETUP.EXE and follow the instructions given on the screen.

2.0 GETTING STARTED

This section will provide a basic overview of the **Masterlink** Software. It will cover the various aspects of the main display.

Main Display

A typical screen capture of the software is shown below in **Figure 2.1**.

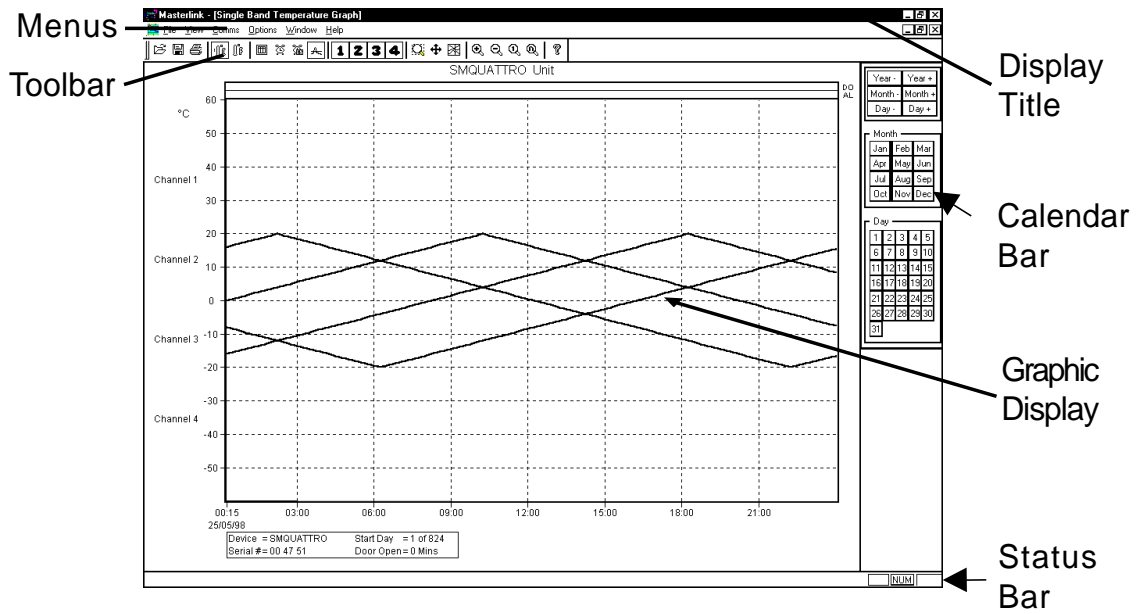


Figure 2.1, Typical Main Display

The main display consists of various components, as illustrated in the previous diagram. These components are detailed and explained in the following sub-sections.

2.1 Toolbar

The **toolbar** provides the user with shortcuts for accessing the more common menu options. To select an item from the toolbar, move the mouse to the desired option and click once with the left mouse button. The meanings of the various toolbar symbols are detailed, where relevant in the following sections.

2.2 Menus

Each of the menu titles represent a drop down menu which offers the user further choices. To reveal a drop down menu, use the mouse to point at a menu and then click once with the left button. After having selected a menu, the list of sub-menus will appear. Any of these sub-menus may be selected by left clicking with the mouse.

2.2.1 The File Menu

Figure 2.2 shows the options available from the file menu.

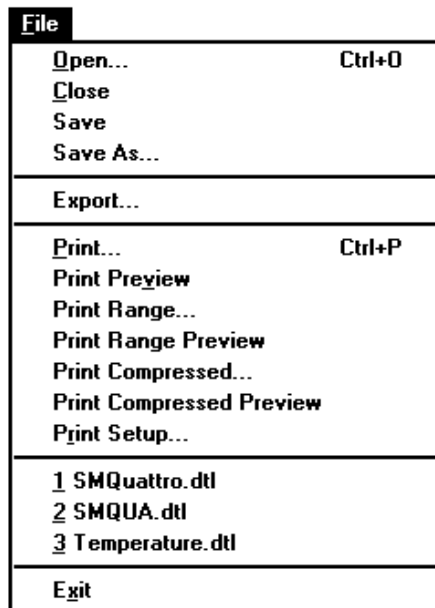



Figure 2.2, The FILE Menu

File → Open

The Open menu enables the user to open a data file, which has been previously downloaded from a device and saved to the hard disk of the computer. This option may also be selected from the


Toolbar using the  icon. By default, only files with a **.DTL** extension will be displayed.

File → Close

This option will close the current graphic window. **MasterLink** will prompt the user to save any information, which has changed since the last save. If the user chooses to ignore this prompt then data or set-up changes may be lost.

File → Save

The Save option enables the user to write data to the hard disk of the computer. This option may also be selected from the Toolbar

using the  icon. Having saved downloaded data, the user may retrieve it using the Open command. By default, files will be saved with a **.DTL** extension.

If the data was previously saved, MasterLink will update the file; otherwise the user will be prompted to enter a filename.

File → Save As


This option is the same as Save except the user will always be prompted to specify a filename.

File → Export

This option enables the user to **EXPORT** data to a file, which may then be imported to Microsoft® Excel or Lotus 123® spreadsheet software.

File → Print

This option enables the user to make a hardcopy of the current graphical display using a printer. This option may also be

selected from the Toolbar using the  icon. This option will invoke the standard **Windows**® print utilities. For help on configuration of printers, please refer to the **Windows**® help system or manuals.

File → Print Preview

Print preview enables the user to view how the data will print prior to actually printing it.

File → Print Range

This option is similar to the print command except that the user may specify a range of dates to be printed. Each printed sheet will contain one day of data. Once selected, the user will be prompted to enter the range of days using the dialogue as shown in **Figure 2.3**.

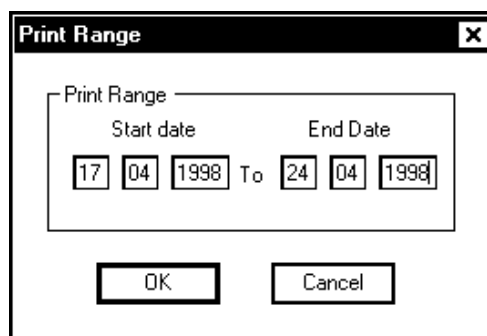


Figure 2.3, Print Range Dialogue

File → Print Range Preview

Using this option, the user may view how a range of dates will print prior to actually printing them.

File → Print Compressed

This option allows the user to make a hardcopy of a specific range of dates. The Masterlink Software will compress the print, to maximise the number of days which are printed on each page, e.g. SMX 100 – 12 days, SM QUATTRO – 3 days.

File → Print Compressed Preview

This option allows the user to view how the compressed print will print prior to actually printing it.

File → Print Set-up

This option invokes the standard **Windows**[®] print set-up dialogues. For help on setting up a printer, please refer to either the **Windows**[®] help system or the **Windows**[®] user manual.

File → Most Recent File List

The **most recent file list** will contain the last 4 files to be opened by the user. It provides a quick and convenient method of reopening a file. Simply click left on the desired filename and the file will be reopened. If no files have previously been opened, then this list will be empty.

File → Exit

This option enables the user to **Exit** MasterLink. If any files have been changed and not saved, then the user will be prompted to save them before the program is terminated.

2.2.2

The View Menu

Figure 2.4 illustrates the options available from the View menu.

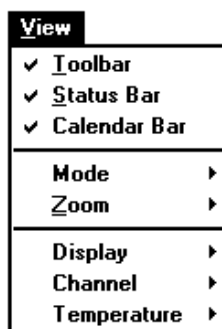


Figure 2.4, The View Menu

View → Toolbar

This option enables the user to either hide or display the toolbar.

If this option is marked with a ✓, then the toolbar is displayed. The state of the option is toggled each time this option is selected.


View → Status Bar


This option enables the user to either hide or display the Status Bar. If this option is marked with a ✓, then the Status Bar is displayed. The state of this option is toggled each time the option is selected.


View → Calendar Bar





This option enables the user to either hide or display the Calendar Bar. If this option is marked with a ✓, then the Calendar Bar is displayed. The state of this option is toggled each time the option is selected.

View → Mode




Clicking on the **Zoom** option allows the user to zoom in on a selected area of the graph. Position the magnifying glass at a corner of the area you wish to magnify. Drag diagonally until the area is enclosed in the box, then release the mouse button. This option may also be selected from the Toolbar using the  icon.


Clicking on the **Scroll** option allows the user to see portions of the graph outside the current viewing area. An auto-panning feature scrolls the drawing window automatically whenever you click outside the viewing area. This option may also be selected from the Toolbar using the  icon.

Clicking on the **Cursor** option allows the user to move the cursor to any area on the graph using the left mouse button. Once an area has been selected, the temperature for each channel is displayed at the bottom right corner of the graph for that particular time. This option may also be selected from the Toolbar using the  icon.

When the cursor mode has been selected, the user may use the , , ,  keys on the keyboard to move the cursor.

View → Zoom

Clicking the **In** option automatically zooms in on the graph. This option may also be selected from the Toolbar using the  icon. Clicking the **Out** option automatically zooms out from the graph. This option may also be selected from the Toolbar using the  icon. Clicking the **One Day** option automatically displays one day's data on the screen. This option may also be selected from the Toolbar using the  icon.

Clicking the **Normalise** option automatically eliminates any blank area on the screen by zooming in so that the area that contains the graph is displayed. This option may also be selected from the Toolbar using the  icon.


NOTE: The VIEW → MODE and VIEW → ZOOM, may only be used when a graphical view is selected, i.e. not a table view.

View → Display

This option enables the user to select the way in which the data is displayed. See **Section 4.0** for more information.

Graph

This option will use the single set of axis and display all the channels overlaid. This option may also be selected from the

Toolbar using the  icon.

Single Day Alarms

This option will list the times at which an alarm occurred for a specified day. This option may also be selected from the toolbar

using the  icon.

Total Alarm Activity

This option will list the days on which alarms occurred. This option

may also be selected from the Toolbar using the  icon.

Single Day Temperature

This option will list, in table format, the actual data points for each channel and each sample period. This option may also be

selected from the Toolbar using the  icon.

View → Channel

Using this option the user may choose to switch a channel on / off from a single graph display. To enable / disable a channel, simply select the number of the channel, which is to be removed / added.

Currently displayed channels are marked with a ✓.


The channel may also be selected from the Toolbar using any of

the following icons, , , , or .


View → Temperature

This option enables the user to display the data in either degrees Centigrade or Fahrenheit.

The data can be displayed in degrees centigrade by selecting this option from the menu. This option may also be selected from the

toolbar using the  icon.

The data can also be displayed in degrees Fahrenheit by selecting this option from the menu. This option may also be selected from the

Toolbar using the  icon.

2.2.3

The Comms Menu

Figure 2.5, illustrates the options available on the Comms Menu.

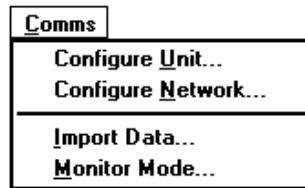


Figure 2.5, The Comms Menu

Comms → Configure Unit

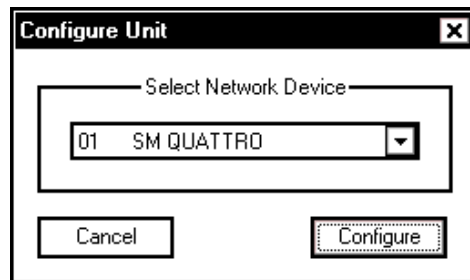


Figure 2.6, Configure Unit

The following dialogue allows the user to change the parameters of the unit directly from the PC, i.e. date, time, high and low alarm information, whether a channel is turned on or off, as illustrated on the following page. This dialogue box will only appear for units with software version 2.X or LCT-2 Network. This function works irrespectively of the Network Mode being enabled.

For more information regarding "Write Protect Password", see section 2.2.4.

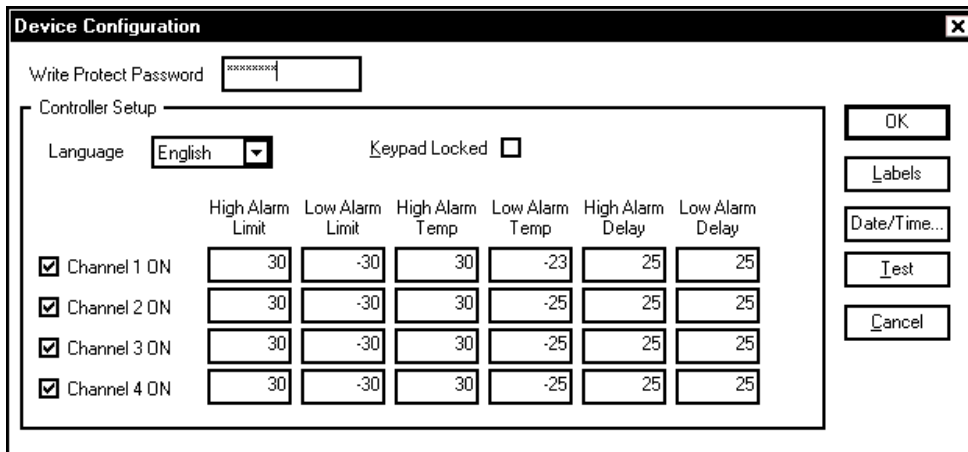


Figure 2.7, Device Configuration

Comms → Configure Network

This dialogue allows the user to enter the names and electronic serial numbers of the devices that are being networked.

NOTE: This option is *only* available if the Network Mode is enabled, (see section Options → Preferences → Comms). The Network Mode is only to be used in conjunction with a Thermomax Network of up to 32 units. This network may consist of:

- LCT-2 Network Version
- Panelmount Units (Version 2.X)
- Any Thermomax Unit (Version 1.X) with Netlink Hardware plugged into the serial socket

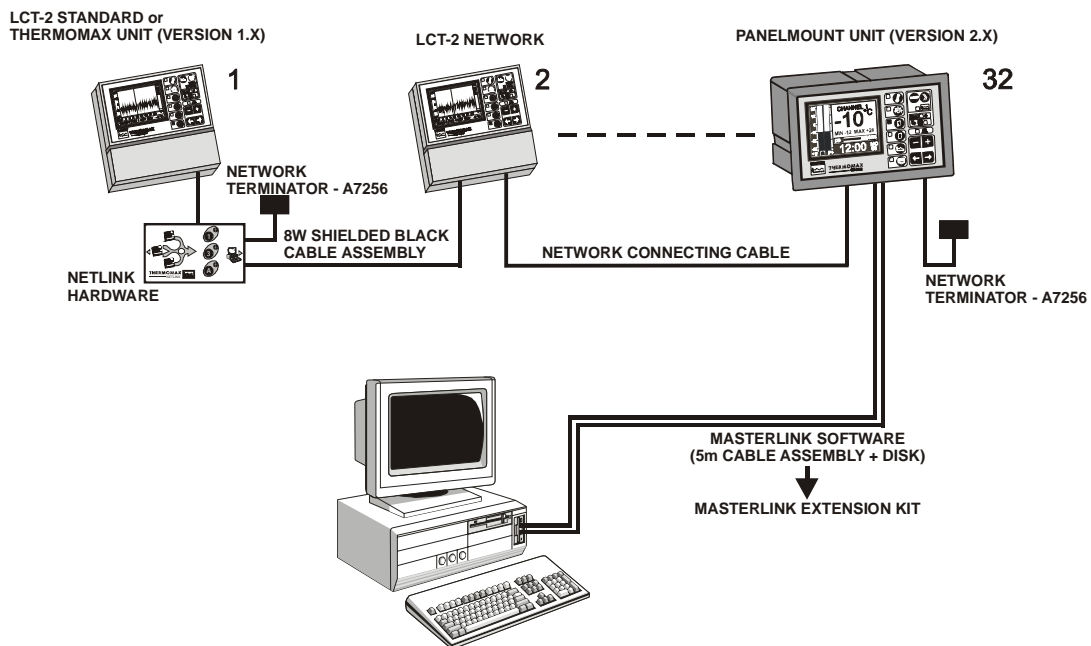


Figure 2.8, Network Configuration

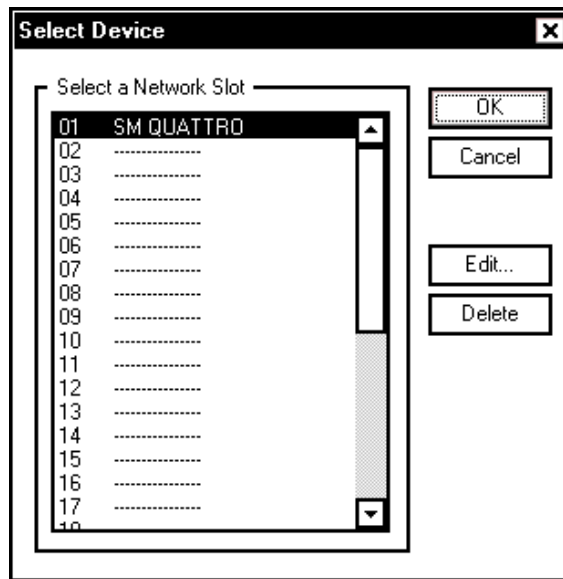


Figure 2.9, Configure Network

To enter this information, click with the left mouse button on the number you wish the unit to be in the network and then click on . The following dialogue box will appear.

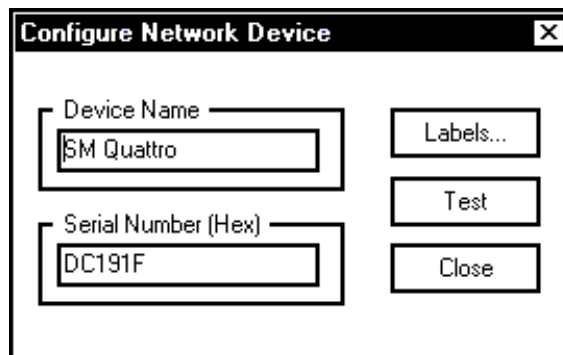


Figure 2.10, Configure Network Device

To enter the information, click with the left mouse button in the text boxes labeled “Device Name” and “Serial Number”. The Serial Number must be read from each Thermomax unit and entered into this box. It is a six digit Electronic Serial Number. To find this Electronic Serial Number for each Panelmount unit, read section 3.0 of this manual. Clicking the TEST button, will determine if the unit serial number is correct.

Comms → Import Data

This option enables the user to import information from a Thermomax datalogger unit using the supplied RS232 lead. For more information on this option, please refer to **Section 4.0**.

Comms → Monitor Mode

This option enables the user to view the current temperature at 15 second intervals. For more information on this option, please refer to **Section 3.3**.

2.2.4 The Options Menu

Figure 2.11 illustrates the available items on the Options Menu.



Figure 2.11, The Options Menu

Options → Graphics

This option enables the user to change various aspects of the display. For more information, please refer to **Section 5.0**.

Options → Preferences → Comms

This option enables the user to specify the communications port to which the monitoring device is attached. If the user tries to select a communication port, which is already in use or does not exist, then a warning message shall be displayed when the user tries to download or connect to their Thermomax unit.

From this dialogue, the user is also given the option of enabling the Network Mode that allows up to 32 units to be networked using the Thermomax Netlink Hardware. If the units being networked are LCT-2NWs or Thermomax Version 2.X panelmount units, the Netlink Hardware is not required.

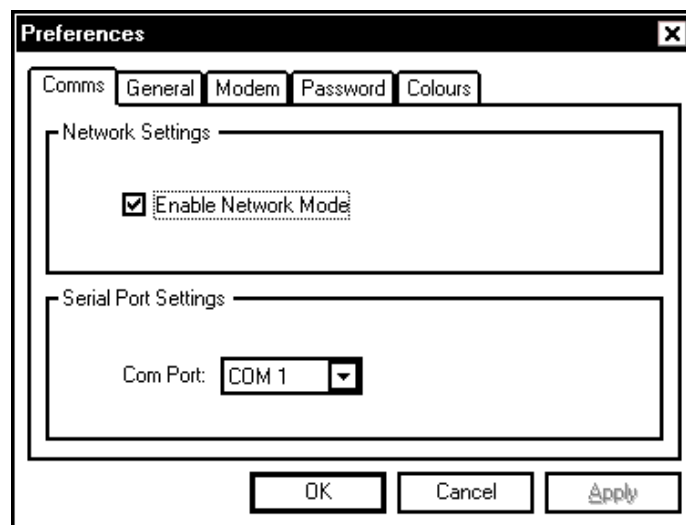


Figure 2.12, Preferences

Options → Preferences → General

This option enables the user to start the application so that it occupies the entire screen on start up. The user can also change the look of the Toolbar. The state of the option is saved and invoked each time the application is started. The Display Date on Printouts option when selected, will print the current date on any pages printed.

Options → Preferences → Modem

Allows user to enter a phone number for remote communication via a modem. This option should be selected by users who wish to connect their PC to the unit via a modem link, (see section 4.4).

Options → Preferences → Password

The password function allows the user to read / modify parameters in Thermomax units which have this facility. The "Write Protect Password" must be entered whenever a Thermomax unit (Version 2.X) is selected for parameter editing. Please remember this password, however if it is forgotten, please contact Thermomax for details on how to retrieve it.

Options → Preferences → Colours

Allows the user to pick their own default colour scheme and save it. Any new data that is downloaded will be in the newly selected colours.

Options → Language

This option allows the user to choose between English, German, French or Dutch.

2.2.5 The Window Menu

Figure 2-13, illustrates the available options on the Window Menu.

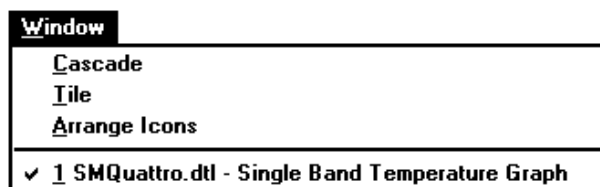


Figure 2.13, The Window Menu

Window → Cascade

This option enables the user to cascade multiple graphic windows. This is a standard **Windows**® option, please refer to the **Windows**® User Manual for further information.

Window → Tile

This option enables the user to tile multiple graphic windows. This is a standard **Windows**® option, please refer to the **Windows**® User Manual for further information.

Window → Arrange Icons

This option enables the user to arrange the icons within the main display window. This is a standard **Windows**® option, please refer to the **Windows**® User Manual for further information.

Window → Window List

This option displays a list of all open data windows. The currently active window is illustrated with a □. The user may change the active window by using the mouse to click left upon the desired window. This is a standard **Windows**® option, please refer to the **Windows**® User Manual for further information.

2.2.6 The Help Menu

Figure 2.14 illustrates the available options in the Help menu.



Figure 2.14, The Help Menu

Help → About Thermo

This option displays further information about MasterLink. **Figure 2.15** illustrates a typical **About Box**. The about box will contain the software version number and the license information entered during the installation process.

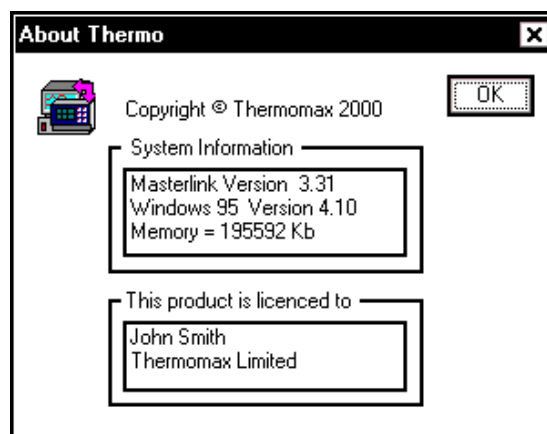



Figure 2.15, The About Box

This option may also be selected from the Toolbar using the  icon.

2.3 **Calendar Bar**

The Calendar Bar provides the user with a quick and simple method of viewing data from particular days or months. The operation of the calendar bar is detailed in **Section 4.0**.

2.4 **Status Bar**

The status bar is displayed along the bottom edge of the main window. It will provide various status messages to the user, i.e., Caps Lock or NUM lock being on.

2.5 **Display Title**

The display title provides the user with a short summary of the current display window. For example, in **Figure 2.1**, the display title reads: -

MasterLink - SMQUATTRO.DTL Single Band Temperature Display

SMQUATTRO.DTL is the name under which the data has been stored and Single Band Temperature Display is the current display mode.

For more information, please refer to **Section 5.0**


2.6 **Graphic Display**

This window displays the actual data. It may be customized and changed in various ways. Please refer to **Section 4.0** for further details.


3.0 FINDING THE ELECTRONIC SERIAL NUMBER FOR EACH UNIT (STANDARD AND PANELMOUNT)

In order to download data from the unit using the Masterlink Software, you must know the Electronic Serial Number of that unit. For each unit, the diagnostic screen can be found in the following way:
Note: The user should start from the main screen and follow the steps below.


SM UNO

1. Press the  key twice.
2. The electronic serial number will be displayed at the top of this screen.
SM-UNO VER 2.X ID: XX XX XX


SM QUATTRO

1. Press the  key twice.
2. The electronic serial number will be displayed at the top of this screen.
SM QUATTRO VER 2.X ID: XX XX XX






SMX 100

1. Press the  key twice to reveal the diagnostic screen.
2. The electronic serial number will be displayed at the top of this screen.
SMX 2.X (CAL 31 JAN 02) XX XX XX

SM DUE

1. Press the  key twice.
2. The electronic serial number will be displayed at the top of this screen.
SM-DUE VER 2.X ID: XX XX XX

LCT-2

1. Press and hold the  key until the following message is displayed:
"DEUTSCH  FRANC  OR S TO CONTINUE"
2. Press the  key again.
3. Press and hold the  key until the following message is displayed:
"LCT 2 XX XX XX"
" VERSION 1.X "

The digit denoted by XX XX XX in all above represents the electronic serial number of each unit.

4.0 COMMUNICATIONS

This section will detail how to retrieve information from the connected monitoring device.

4.1 Connecting A Device

A monitoring device may be connected to each spare communications port of the PC. All connections should be made using the cables supplied with the devices.

MasterLink supports the standard communication ports COM1 to COM4.

To use a particular communication port, the user should connect the device to the required port and then select the port from within **MasterLink** using the Options → Communications menu.

If the selected communications port is already in use or is not present, then an error message will be displayed whenever the user tries to download or connect to their Thermomax unit.

4.2 Importing Data

To import data, the user should select the Comms → Import Data option. After having selected this option, a dialogue as shown in **Figure 4.1** will be displayed. From this dialogue, the user may then select the type of import required. This first dialogue box will only appear for units with software version 2.X. The second dialogue box will appear for units manufactured before this with software version 1.X.

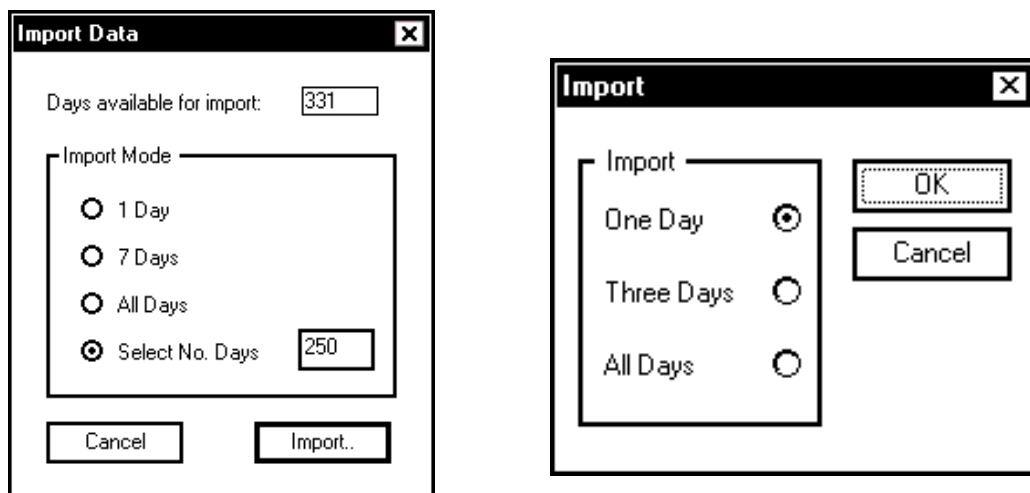


Figure 4.1, Comms → Import

4.2.1 Import One Day

This option will import the temperatures recorded today. As the information is being downloaded, a status window will display the progress.

4.2.2 Import Seven Days

This option will import the last seven days worth of temperatures. As the information is being downloaded, a status window will display the progress.

4.2.3 Import All Days

This option will import all the data stored in the connected device. As the information is being downloaded, a status window will display the progress.

4.2.4 Select No. Days

This option will import the number of days selected by the user, as in Figure 4.1, the last 250 days data.

As the information is being downloaded, a status window will display the progress.

4.2.5 Communication Status

As the information is being imported, a status dialogue will be displayed on the screen. **Figure 4.2** illustrates a typical example of this dialogue.

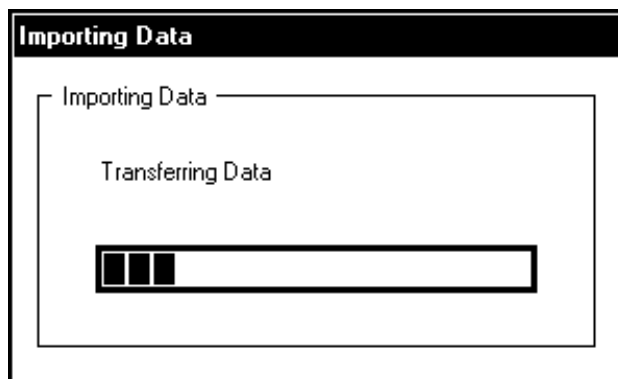


Figure 4.2. Communications Status Dialogue

As the data is downloaded, the percentage bar will move nearer 100%. The importing of data is completed when the percentage bar reaches 100%. The text above the percentage bar indicates the status, for example, this text message will start off with '**Initialising Communications**', then move to '**Transferring Header**' and then to '**Transferring Data**'.

If **MasterLink** is unable to communicate with the connected device, it will time-out after a period of 30 seconds and display a "COMMUNICATIONS DOWNLOAD FAILED" message.

4.3 Monitor Mode

Monitor mode is a method of importing the current temperature channels every 15 seconds.

To enter monitor mode, select the **Comms** → **Monitor Mode** option. This will cause the monitor mode dialogue to appear, as illustrated in **Figure 4.3**.

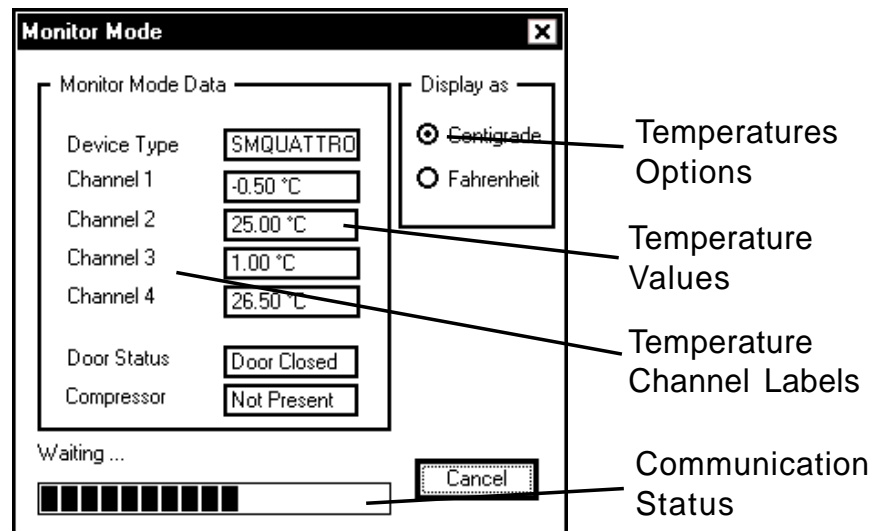


Figure 4.3, Monitor Mode Dialogue

4.3.1 Monitor Mode - 'Display as'

The user may select whether to display the temperature values in Centigrade or Fahrenheit by clicking with the left mouse button on the desired choice. The default value is Centigrade.

4.3.2 Monitor Mode - Temperature Values

These are the actual values downloaded from the connected device. Any channels which are unavailable on the connected device will read '—'.

4.3.3 Monitor Mode - Temperature Channel Labels

The temperature channel labels will change according to the connected device.

4.3.4 Monitor Mode - Communication Status

The communications status indicates the status of the communications during Monitor Mode. When a set of values have been downloaded the blue bar will go back to zero and start growing. Once it reaches its full size, another set of values will be downloaded (this will be approximately 15 seconds).

4.4 REMOTE COMMUNICATIONS

4.4.1 Setting up the Network

From the “Options” menu, select “Preferences”.



Figure 4.4, Options Menu

The following dialogue box will appear on the screen:
Click on the Modem tab to display it on the screen, as shown below.

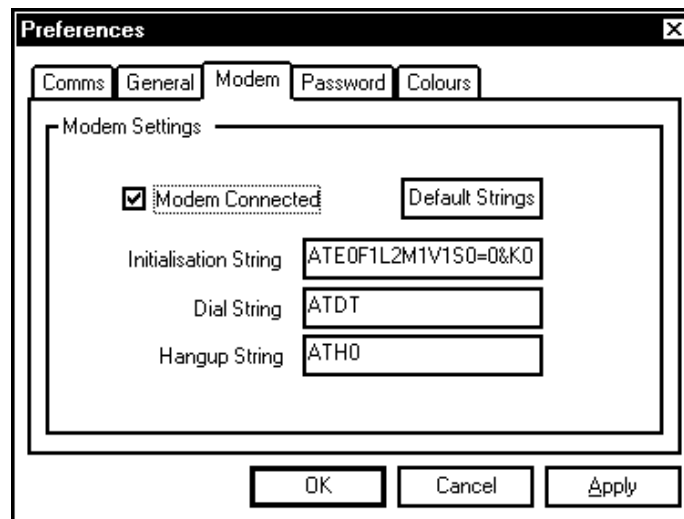


Figure 4.5, Modem Preferences Dialog Box

Click on the box situated beside “Modem Connected” to enable this option.

This dialogue box enables the user to edit the strings for the modem that is connected. However editing is not necessary and if the strings are altered accidentally, click on the button, Default Strings, and the strings will be changed back to their original state.

Once the modem is enabled, click on the Comms tab and the following dialogue box will appear on the screen.

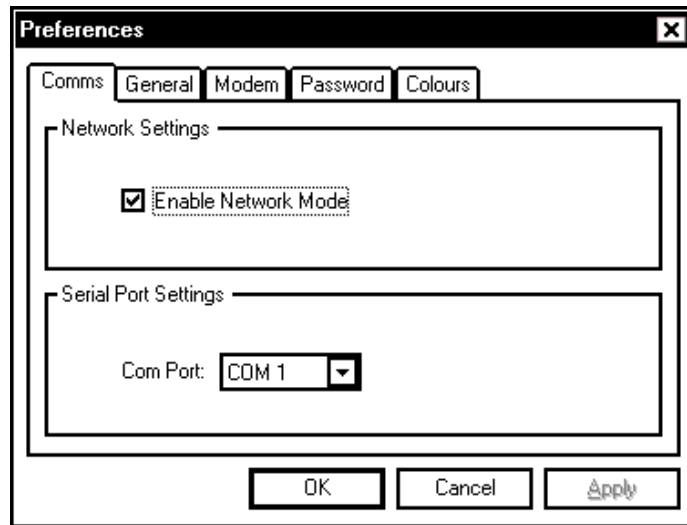


Figure 4.6, Comms Preferences Dialog Box

From this dialogue, the user must enable the network mode by clicking on the box beside “Enable Network Mode”. This will enable the user to set up the correct comms port that the modem is connected to:

- Internal Modem → Comm 3 or Comm 4
- External Modem → Comm 1 or Comm 2 (depending which comm port the mouse is connected to)

4.4.2 Selecting Unit for Download

To select the unit that you wish to download data from, select Configure Network from the Comms menu.

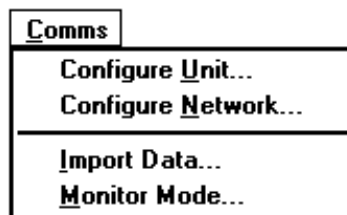


Figure 4.7, The Comms Menu

The following dialogue box will appear. This information is in section 2.2.3.

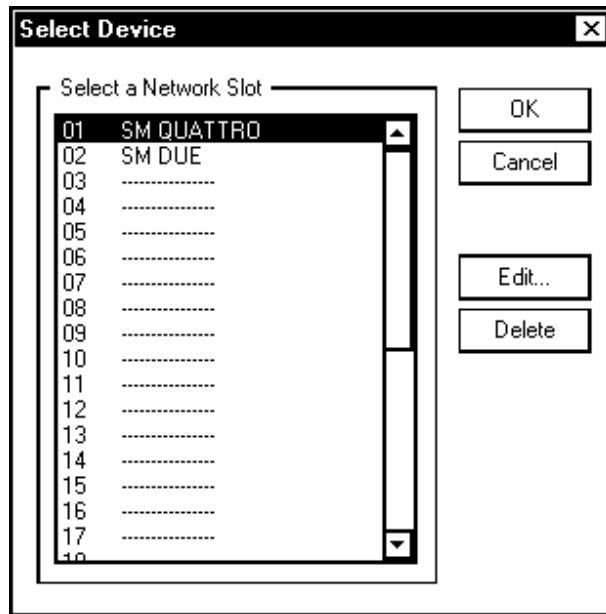


Figure 4.8, Select Device Dialog Box

Once the unit and its corresponding serial number, etc. has been entered, the user must also enter the telephone number of the location of the unit from which the data is to be downloaded, as shown in the dialog box below.

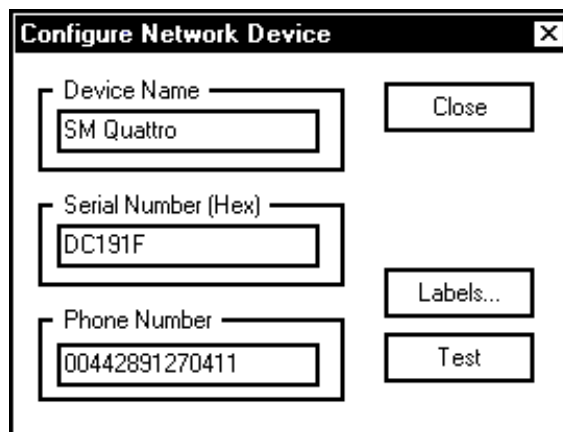


Figure 4.9, Configure Network Device Dialog

To enter the telephone number, click with the left mouse button in the text box labelled "Phone Number" and then click . The user is now ready to download the data from the unit or set the unit's parameters, and this is carried out as illustrated in Section 4.2.

Once the user has clicked on the following progress box appears on the screen, initialising the modem.

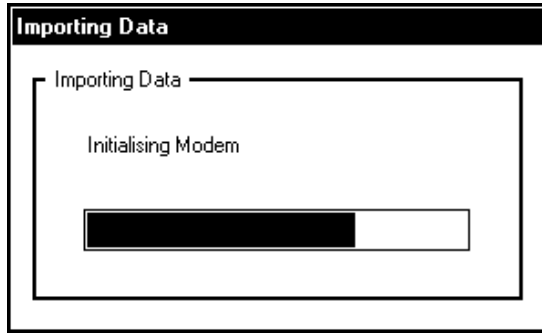


Figure 4.10, Import Status Dialog Box

If the initialisation process has not been possible, a warning message will appear on the screen. Check that the correct information has been entered and try again.

If the initialisation process has been successful, the modem will then dial the entered telephone number.

The modem connected to the PC will communicate with the modem connected to the Thermomax unit for approximately 15 seconds and then the line will go silent.

The following progress boxes will appear on the screen informing the user that the data is being transferred.

Once the data is transferred the modem will automatically hang up.

Also if the user is viewing monitor mode, the modem will hang up if is pressed.

4.4.3 LCT-2 ONLY, (C0422)

When configuring the network of the LCT-2 over the modem, the following dialogue box will appear.

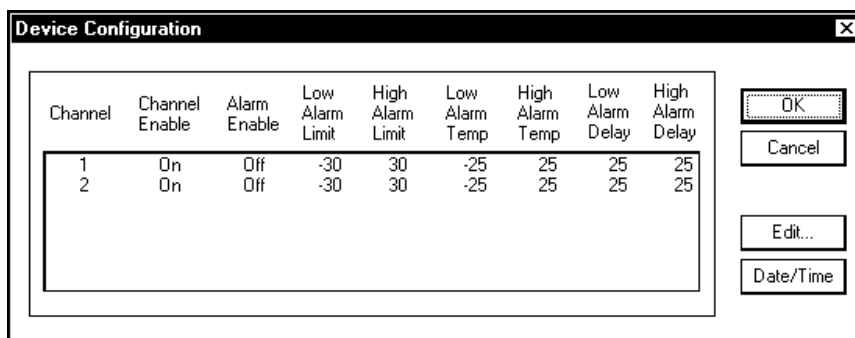


Figure 4.11, Device Configuration Dialog Box

If this dialogue box has been open on the screen for 10 minutes without any activity from the user, the following dialogue box will appear.

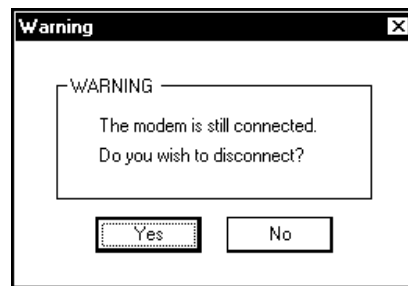


Figure 4.12, Warning Dialog Box

To stay on line, click .

To terminate the connection, click .

If the user does not answer this dialogue box, the connection will be terminated after another 2 minutes.

4.4.4 **CHANGING CHANNEL LABELS**

It is now possible to change the labels of channels using the newer versions of Masterlink Software and for this information to be saved. This is possible due to the label being assigned directly to the unique serial number of the unit.

To change the name of a global label from the Options menu, select labels and the following dialogue box will appear.

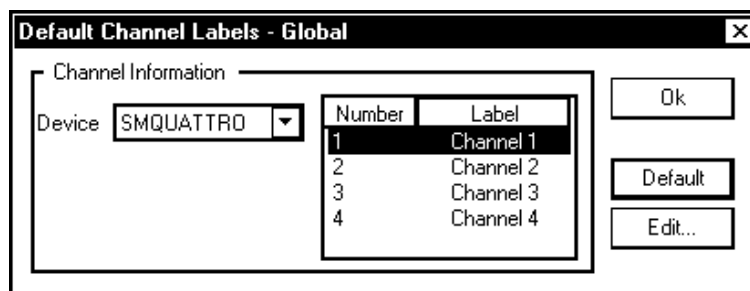


Figure 4.13, Default Channel Labels - Global Dialog Box

To edit the label numbered 1, click on it with the left mouse button and click on . The following dialogue box will appear.

The Global settings will be active for all, e.g. SM Quattro's. All SM Quattro's will have the same channel labels. If you require different labels for different SM Quattro's, then follow the procedure for 'Configure Network-Channel Labels', illustrated on the following page.

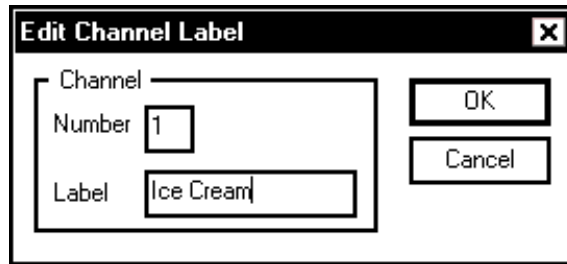


Figure 4.14, Edit channel Label Dialog Box

To change the label, click with the left mouse button in the text box labelled "label" and input the name of your choice. Repeat this for all channels if necessary and once complete, click on .

Pressing will change the labels back to Channel 1, Channel 2, etc.

To assign labels to a particular unit, from the Comms menu, select Configure Network. The following dialogue box will appear.

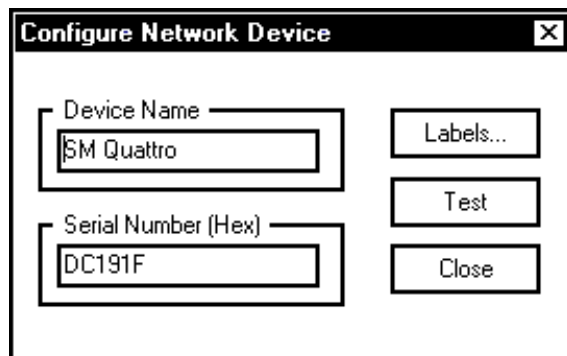


Figure 4.15, Configure Network Device Dialog Box

Click on and the following dialogue box will appear.

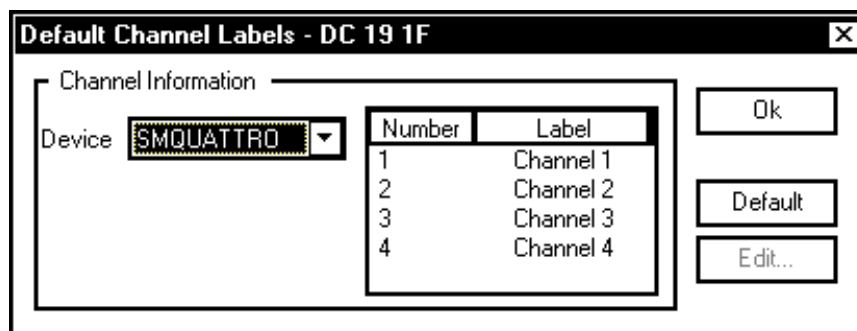


Figure 4.16, Default Channel Labels Dialog Box

5.0 GRAPHICS

5.1 The Calendar Bar



Figure 5.1, The Calendar Bar

The **Calendar Bar** is located on the right side of the main display and is illustrated in **Figure 5.1**. This enables the user to easily navigate through the data, for the currently selected record. To jump to a particular day or month, the user should left click with the mouse on the desired button. Note: **MasterLink** will disable buttons, which have no associated data.

5.2 Displaying Information

The data may be displayed in 4 different formats. These formats are detailed in the following sections.

5.2.1 Graph Mode

Figure 5.2 illustrates an example of the **Graph Mode**.

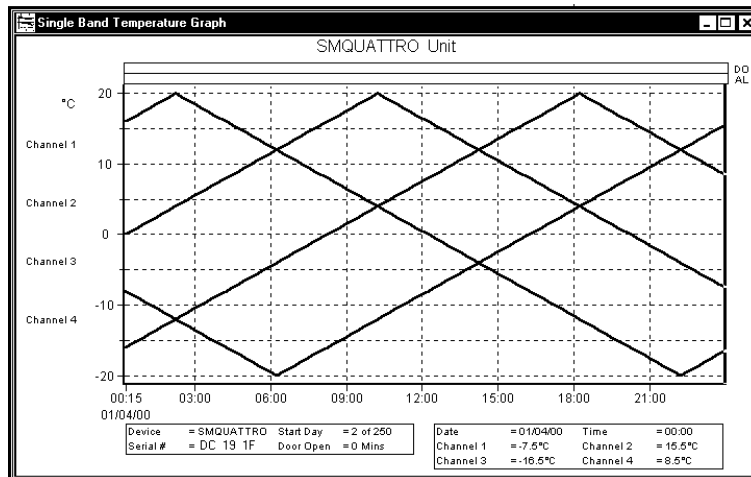


Figure 5.2, Temperature Graph

The graphic mode enables the user to view all temperature channels for one day on the same axis. The user may view the temperature in either Centigrade or Fahrenheit. The channel labels are displayed in the same colour as their corresponding channel beside the y-axis. If alarm, door open or defrost information is available, then it will be displayed in bands above or below the main graph and labeled accordingly. If there is a total door open time for the associated graph, then this will be displayed beside the title of the graph.

5.2.2 Temperature Table View

Figure 5.3 illustrates an example of the Temperature Table View

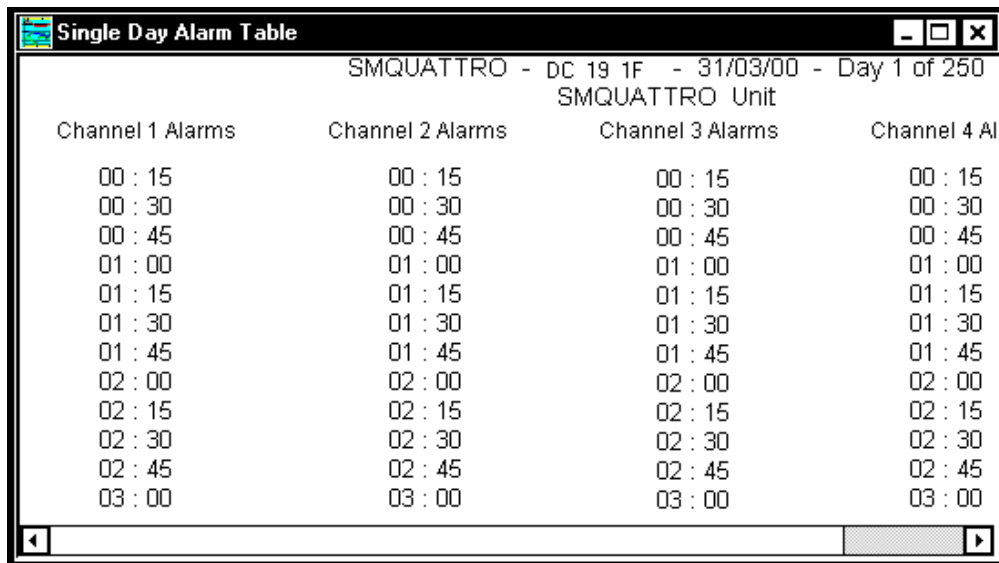
SMQUATTRO - DC 19 1F - 31/03/00 - Day 1 of 250																
SMQUATTRO Unit																
	Channel 1			Channel 2			Channel 3			Channel 4						
00:15	10.0	14.5	14.5	15.0	10.5	11.0	10.0	9.0	11.0	9.5	9.0	11.5	11.5	14.0	14.5	13.5
01:15	10.0	12.0	14.5	10.5	14.0	11.5	9.5	14.0	14.0	14.5	13.5	11.5	11.5	9.5	10.5	13.5
02:15	11.0	12.0	11.0	10.0	12.0	10.0	11.0	10.5	9.5	10.5	13.5	15.5	15.5	14.0	12.0	11.0
03:15	9.5	13.5	12.0	10.0	11.0	9.5	13.0	16.5	14.0	12.0	11.0	9.5	9.5	12.5	14.5	14.0
04:15	14.5	12.0	10.0	12.5	9.5	12.0	15.0	10.5	12.5	14.5	14.0	13.5	13.5	11.5	10.0	12.0
05:15	12.0	11.0	10.0	11.0	11.0	11.5	11.5	10.5	11.5	10.0	12.0	14.0	14.0	14.5	13.5	11.5
06:15	12.0	9.5	12.0	15.5	9.5	14.5	12.0	10.0	14.5	13.5	11.5	10.5	10.5	11.0	13.0	15.0
07:15	9.5	11.5	14.5	10.0	13.0	11.5	10.5	9.5	11.0	13.0	15.0	13.5	13.5	12.0	11.0	9.5
08:15	12.0	14.0	10.5	11.0	11.0	13.0	9.0	12.0	12.0	11.0	9.5	9.0	9.0	8.5	10.0	11.0
09:15	11.0	11.0	10.0	9.0	14.5	10.0	11.0	11.5	8.5	10.0	11.0	13.5	13.5	15.5	15.0	13.5
10:15	13.0	11.0	9.5	14.0	11.0	10.0	9.0	14.0	15.5	15.0	13.5	12.5	12.5	11.5	10.0	9.0
11:15	15.0	14.5	9.5	10.5	12.0	9.5	14.0	12.5	11.5	10.0	9.0	9.5	9.5	12.5	15.5	14.5
12:15	11.5	14.0	13.0	10.0	15.0	14.0	14.5	12.0	12.5	15.5	14.5	13.5	13.5	11.5	10.0	10.0
13:15	14.0	12.0	10.0	12.0	10.0	8.5	10.5	10.5	11.5	10.0	10.0	12.0	12.0	14.0	15.0	15.0
14:15	12.5	13.5	10.0	12.0	12.0	12.5	15.0	11.5	14.0	15.0	15.0	14.5	14.5	13.5	12.5	10.0
15:15	14.0	10.0	14.5	19.0	10.0	9.5	9.0	10.0	13.5	12.5	10.0	9.5	9.5	13.5	14.5	13.5
16:15	9.0	11.0	12.5	9.0	12.5	13.5	15.5	14.5	13.5	14.5	13.5	12.0	12.0	11.0	9.5	12.0
17:15	12.5	14.0	9.5	12.0	12.0	11.5	13.5	14.5	11.0	9.5	12.0	13.5	13.5	15.0	15.5	14.0
18:15	14.0	10.0	11.0	11.5	12.5	10.5	9.5	9.0	15.0	15.5	14.0	12.5	12.5	11.0	9.5	10.0
19:15	10.5	10.0	9.5	13.0	11.5	14.0	14.5	13.0	11.0	9.5	10.0	11.5	11.5	13.5	15.5	15.0
20:15	11.0	9.5	14.5	12.5	12.5	11.0	9.5	12.0	13.5	15.5	15.0	14.0	14.0	11.0	9.0	11.5

Figure 5.3, Temperature Table

This view displays the actual temperature data for the current day in table format. The temperature can be view in either Centigrade or Fahrenheit.

5.2.3 Single Day Alarm View

Figure 5.4, illustrates an example of the Single Day Alarm View.



The screenshot shows a window titled "Single Day Alarm Table" for "SMQUATTRO - DC 19 1F - 31/03/00 - Day 1 of 250 SMQUATTRO Unit". It displays a table with four columns: "Channel 1 Alarms", "Channel 2 Alarms", "Channel 3 Alarms", and "Channel 4 Alarms". Each column contains a list of times from 00:15 to 03:00 in 15-minute increments.

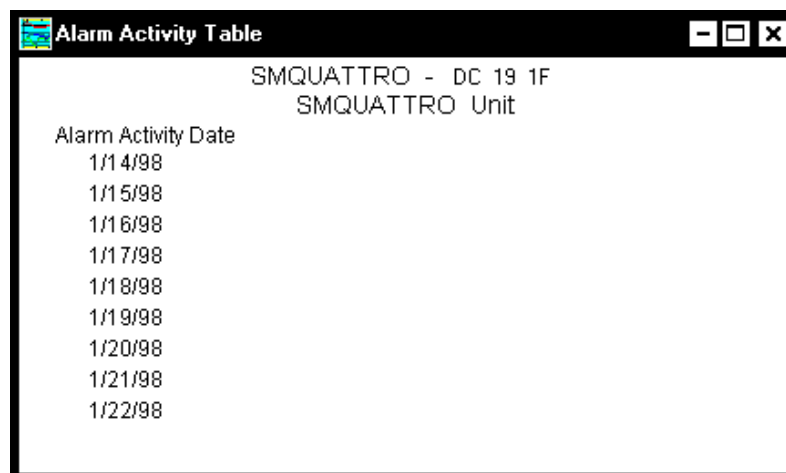
Channel 1 Alarms	Channel 2 Alarms	Channel 3 Alarms	Channel 4 Alarms
00 : 15	00 : 15	00 : 15	00 : 15
00 : 30	00 : 30	00 : 30	00 : 30
00 : 45	00 : 45	00 : 45	00 : 45
01 : 00	01 : 00	01 : 00	01 : 00
01 : 15	01 : 15	01 : 15	01 : 15
01 : 30	01 : 30	01 : 30	01 : 30
01 : 45	01 : 45	01 : 45	01 : 45
02 : 00	02 : 00	02 : 00	02 : 00
02 : 15	02 : 15	02 : 15	02 : 15
02 : 30	02 : 30	02 : 30	02 : 30
02 : 45	02 : 45	02 : 45	02 : 45
03 : 00	03 : 00	03 : 00	03 : 00

Figure 5.4, Single Day Alarm Table

This view displays a table of the current day's alarms and the time at which they occurred.

5.2.4 Total Alarm Activity View

Figure 5.5, illustrates an example of the Total Alarm Activity View.



The screenshot shows a window titled "Alarm Activity Table" for "SMQUATTRO - DC 19 1F SMQUATTRO Unit". It displays a list of dates under the heading "Alarm Activity Date", ranging from 1/14/98 to 1/22/98.

Alarm Activity Date
1/14/98
1/15/98
1/16/98
1/17/98
1/18/98
1/19/98
1/20/98
1/21/98
1/22/98

Figure 5.5, Total Alarm Activity View

This view displays the dates on which one or more alarms occurred.

5.3 Graphics Set-up

The user may configure almost every aspect of the graphical display. The set-up information is saved with each record; therefore, each record may be configured differently. To set-up the graphics, select **Options** → **Graphics**.

5.3.1 Channel Display

This option enables the user to select which channels should be displayed and which should be hidden. Only channels for which there is data may be enabled and selectable. To do this double click the left mouse button on the display you wish to enable or disable. The user can also change the “Channel Label” to customize the software for their installation, e.g. Room 1. **Figure 5.6** below shows the status for each channel.

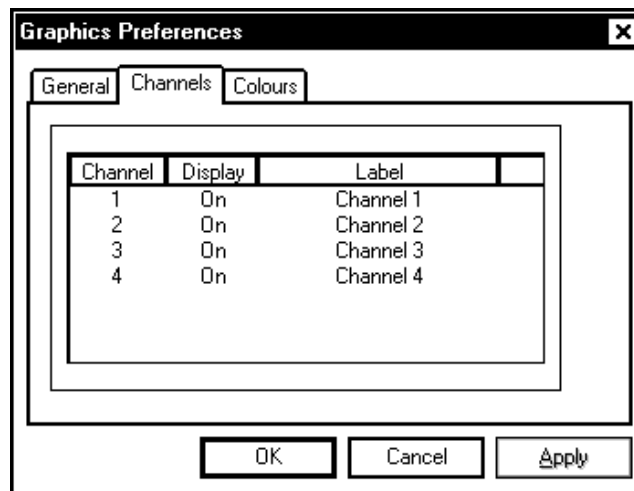


Figure 5.6, Edit Channel Dialogue

5.3.2 General

This option, shown in **Figure 5.7**, allows the user to enable and disable the vertical and horizontal axes. The user can also give the graph a title of their own choice by typing this in the text box labeled “Title”.

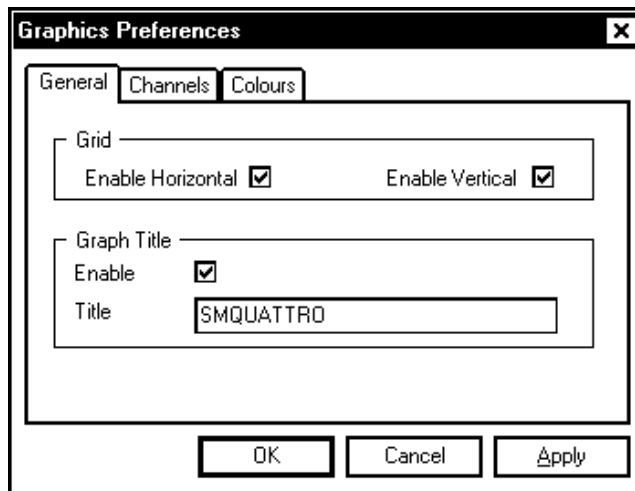


Figure 5.7, General Set-up Dialogue

5.3.3 Colour Set-up

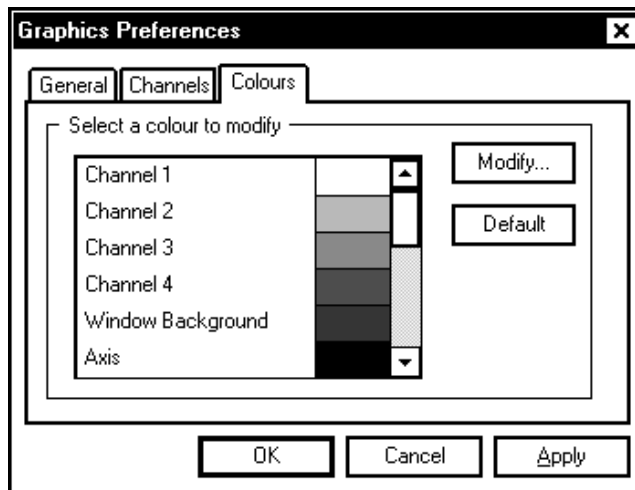


Figure 5.8, Colour Set-up dialogue

If the user selects colour, the dialogue similar to that shown in **Figure 5.8** will be displayed. This dialogue enables the user to change the colours for various items of the graphical display. To change a colour, the user should select the desired item by double clicking with the left mouse button. The user may default the colours by pressing the Default All button.

Appendix 1- Read before installing on Windows® NT and Windows® 2000

INSTALLING MASTERLINK UNDER Windows® NT and Windows® 2000

When Masterlink is installed under **Windows® NT and Windows® 2000**, the user installing the software needs to have administrator privileges, as a driver needs to be installed to allow Masterlink to communicate with certain products. If the user does not have administrator privileges, the installation software will be unable to complete the installation correctly.