



C-PlotTM

Chart Plotting Software

Version 8



Users Guide

C-Plot Pro Supports C-Map CM-93/3, ARCS and Seafarer Charts
C-Plot SF/Voyager supports ARCS and Seafarer Charts

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1.0 Overview of C-Plot Pro/SF/Voyager

1.1 What is C-Plot Pro/SF/Voyager for Windows 2000/XP?

C-Plot SF/Pro for Windows is a computerised chart display plotting system, designed and manufactured by TMQ International, Australia. C-Plot Pro/SF/Voyager software enables you to view Seafarer, ARCS (also known as *HCRF* – Hydrographic Charts Raster Format), C-Map and TMQ encrypted electronic charts.

External devices can be interfaced with C-Plot, to supply it with a variety of data, provided that these devices are NMEA (National Marine Electronics Association) compliant. One such device is the C-Panel, which has been specifically designed to allow simple operation of the C-Plot application. This manual provides instructions for both C-Panel and Mouse/Keyboard users.

There are three distinct versions of the C-Plot application, the ‘Pro’ version, the ‘SF’ version and “Voyager” version. This manual provides instructions for using all, with ‘Pro’ specific features clearly marked (See the Manual Style Conventions section).

1.2 Hardware Requirements




C-Plot Pro/SF/Voyager operates using **Microsoft Windows 2000™ and Windows XP™** on IBM™ or compatible Personal Computers (PCs).

It is recommended to use Windows XP™ as the operating system.

The Minimum system requirements for C-Plot SF/Pro are:

- CPU: Intel™ Pentium III Processor, 450MHz or higher
- RAM: 256 Mb (minimum)
- Mouse or Trackball pointing device.
- True Colour (24 bit minimum) Windows compatible graphics system (800x600 screen resolution, minimum)
- At least 1 serial communications port
- 2 USB Ports (required for up to 2 security dongles, 1-TMQ Dongle and 1 C-Map E-Token CM93-3 charts are protected)
- HDD: at least 3Gb of free space dedicated to C-Plot Pro.
- CD-ROM Drive for installing C-Plot & assorted charts.
- Floppy Disc Drive

 *It is advisable to install a high impact hard disc drive (HDD) as most disc drives are designed to sit on a desktop, not a boat with constant motion.*

You should leave sufficient disc space for the electronic chart database (Seafarer and TMQ charts, User marks and track files). The more available space on your HDD for the electronic chart databases, the more charts your C-Plot Pro/SF/Voyager can use and store.

1.3 Item Checklist

The following list details the items that you should have received as a part of the C-Plot Pro/SF/Voyager product pack.

- ✓ 1 x CD-ROM Containing all the necessary files to install C-Plot SF/Voyager/Pro
- ✓ 1 x Parallel Port (LPT) or Universal Serial Bus (USB) Security Key (Dongle)
- ✓ 1 x Authorisation Codes Document
- ✓ 1 x Table of Shortcut Keys
- ✓ 1 x Installation Guide
- ✓ 1 x Users Guide



 The TMQ Dongle must be plugged in at all times while using C-Plot Pro/SF/Voyager.

1.4 Security Key Identification (Dongles)

Identification of the two types of USB security keys (Dongles) can be made by looking at the text moulded into the key itself.

C-MAP

TMQ Dongle (HASP)



The TMQ HASP security key is required for any version of C-Plot V8 installed.

C-Map CM-93/3 eToken




The C-Map CM-93/3 eToken is only required and supplied if C-Map CM-93/3 charts are to be installed.

Note:- Be sure to have TMQ Dongle (SF/Voyager) or both keys (Pro) inserted at all times when using C-Plot.

1.5 Manual Style Conventions

This manual follows several conventions for clarity and to help you find and understand information quickly and easily.

Bold – text is used to refer to Menus and Functions in the C-Plot Pro/SF/Voyager application.

Italics – text is used to signify an important message. This text will also be found with the following symbol .



- This symbol is used when detailing features of the C-Plot application that are only included in the Pro version.

Access Sequences: - All access sequences describe how to navigate to a particular function from the **Normal Chart Display Mode**.



- This symbol is used when detailing how the C-Panel should be used to access a particular feature of C-Plot. More information on the C-Panel can be found in Appendix F.



- This symbol is used when detailing how the mouse should be used to access a particular feature of C-Plot.



- This symbol is used when detailing how the keyboard should be used to access a particular feature of C-Plot.



- This symbol represents clicking the 'Left' mouse button. If this symbol is not present and the sequence calls for a mouse button click, assume that this is a 'Left' mouse click. Mouse operations can be emulated using the C-Panel joystick. When using the C-Panel to emulate the mouse pressing 'Select' is equivalent to a 'Left' mouse button click.



- This symbol represents clicking the 'Right' mouse button.

→ - The arrow is used to indicate the next action to be performed in a sequence. This can be used for Mouse, Keyboard and C-Panel input devices.

+ - The 'Addition' operator is used when several actions should be performed simultaneously (i.e. Alt +M = The 'Alt' key and the 'M' key should be pressed simultaneously).

2.0 C-Plot Pro/SF/Voyager Basics

2.1 The Main Chart Display Window

If C-Plot is to be used effectively, it is important to become familiar with the main display (See Figure 2.1). The following figure identifies the key aspects of the C-Plot main display, each of which are explained in more detail.

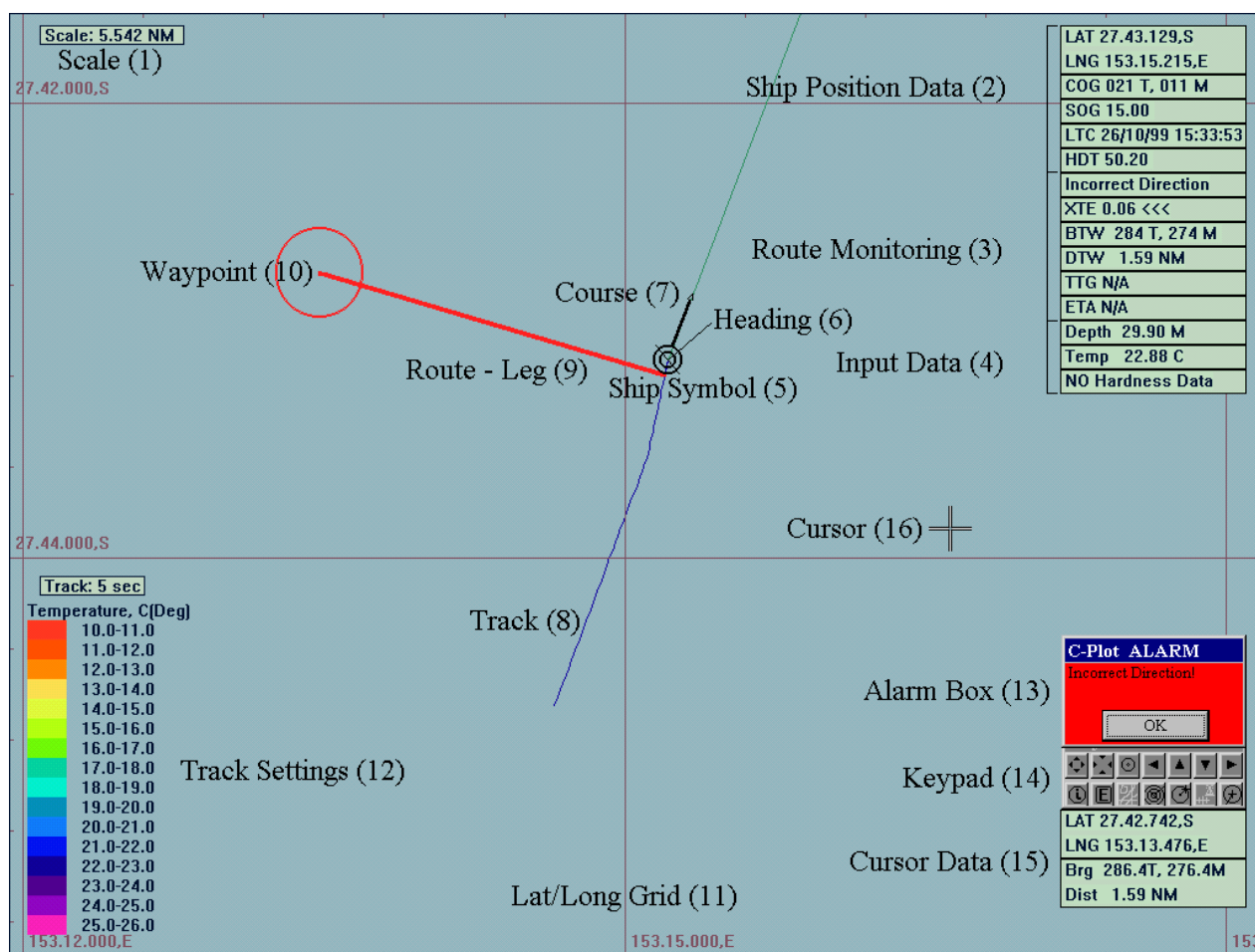


Figure 2.1

1. **Scale** – An indication of the scale of the display.
2. **Ship Position Data** – Information relating to the current position of the vessel. If these data fields appear RED this indicates that GPS input has been lost and C-Plot is now in 'Dead Reckoning' Mode (See Appendix I).

-
3. **Route Monitoring** – Information relating to the current leg of the vessel's route.
 - **XTE** – Cross track error, the distance between the vessel and the current leg of the selected route.
 - **BTW** – Bearing to waypoint, the bearing to the waypoint from the vessel.
 - **DTW** – Distance to waypoint.
 - **TTG** – Time to go, displays the estimated traveling time to reach a particular waypoint.
 - **ETA** – Estimated time of arrival to the final waypoint of the route.
 4. **Input Data** – Optional data gathered by the system. These include:
 - Temperature
 - Depth
 - Hardness
 5. **Ship's Symbol** – This circular indicator represents the current GPS position of the vessel on the chart.
 6. **Heading** – This black symbol, pointing directly out from the vessel position indicator, represents the orientation of the vessel.
 7. **Course** – The heavy black line indicates the current course of the vessel. The length of this line corresponds to the current speed of the vessel. The thin line extending to the edge of the screen is the extended course line.
 8. **Track** – A line indicating where the vessel has been. The track can be configured to show past input data (i.e. Temperature, Depth, etc). The key for a track configured like this is shown at point 12.
 9. **Route** – A pre-determined set of legs that represent the desired voyage of the vessel. This information can be transmitted to an autopilot (if installed) to provide a more integrated system.

-
10. **Waypoint** – The vessel will steer toward this waypoint when following a route.
 11. **Lat/Long Grid** – This details the latitude and longitude in the form of a grid. The labels around the bottom and left edges of the screen give the numeric details.
 12. **Track Settings** – These parameters display the current configuration of the track data. In this example the track is updated every 5 seconds, and the colour of the track represents temperature, which is colour coded as indicated by the coloured bar.
 13. **Alarm Box** – This is the area where visual alarm messages will appear.
 14. **Key Pad** – The Key Pad contains buttons that perform a number of common functions. This tool is discussed in greater detail in a later section.
 15. **Cursor Data** – This is information relating to the cursor, such as latitude, longitude, bearing and distance from the vessel's position.
 16. **Cursor** – The cursor is shown as a cross and represents the position of the pointing device (mouse, joystick, etc). Apart from selecting objects, the cursor has extended features. These are discussed in section 3.1.1.

2.1.1 Extended Cursor Features

The cursor is the primary tool for pointing and selecting objects, however it does possess extended features that allow C-Plot to be used effectively. Clicking the right mouse button at anytime can access these features. The first right button click enables the query mode of the cursor, transforming the cursor's appearance (Figure 2.2). Clicking the left mouse button in this mode allows information on the selected object to be displayed (See section 2.1.2). The second right button click activates the **Main Menu**.





 (Normal Cursor)  →  (Query Cursor)  → **Main Menu**

Figure 2.2

2.1.2 The Object Information Function

Object Information can be displayed by using any one of the following access sequences.

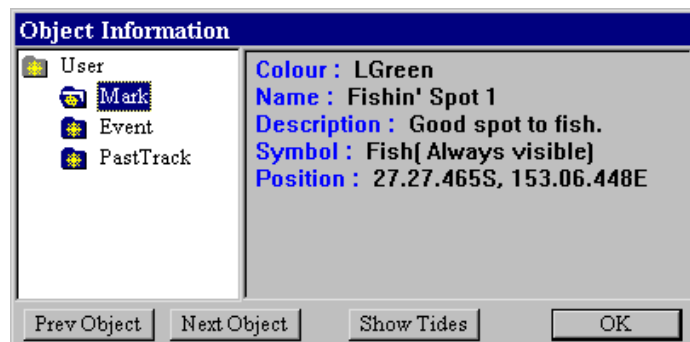
Access Sequences:

  →  On the desired object



 Press the 'Info' button on the desired object

 Press the 'Insert' button on the desired object

Any of these sequences will invoke the 'Object Information' dialogue box.



The 'Object Information' dialogue box displays the information relating to the object that was selected. The Object tree can be navigated as follows:

  Click the desired folder, or click the 'Prev Object' and 'Next Object' buttons.



Use the arrow buttons.



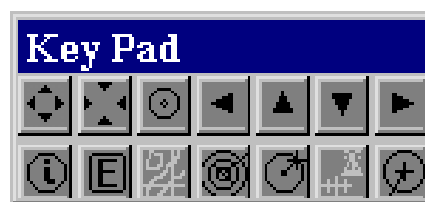
Use the arrow keys.










The 'Show Tides' button invokes the Tide Table dialogue box. More information can be found on this utility in Appendix F.


2.1.3 The Key Pad Explained

The Key Pad is a tool that allows common functions of the main window to be accessed by simply clicking the appropriate button with the mouse cursor. The function performed by each of the buttons is explained below.



Symbol	Description	Function
	Zoom In	Decreases the scale of the chart
	Zoom Out	Increases the scale of the chart
	Home	Display the chart so that the vessel is centered.
	Arrow Keys	Move the chart 1/3 of the screen in desired direction.
	Information/ Main Menu	Changes the cursor to the Question Mark. Next click displays Main Menu
	Event	Place an event at the current vessel position.
	Load Chart	Load the most appropriate HCRF chart for a selected point. The cursor appearance will change () allowing the desired

		point to be selected by clicking on the chart area. The best chart for the selected point will then be loaded.
	Range Rings	Show adjustable range rings around the vessel. 
	Bearing and Distance	Show the distance from a selected point. The cursor appearance will change () . Using this cursor, click on the point on the chart to measure 'From', and then move the cursor to the point to measure 'To'. The distance will be shown in nautical miles (NM) and the bearing from the first point is shown in degrees. Click on the chart to return to normal cursor mode.
	Chart Updates	Clicking this button will temporarily (for approx. 2 seconds) display the charts without updates, and then return to the updated charts. If the current chart does not contain updates this button will not be accessible.
	Distance Ring	Shows adjustable distance ring from cursor. 

 For 'Range Rings' and 'Distance Rings' the radial distance can be modified using the following control that appears automatically when one of these functions is activated.

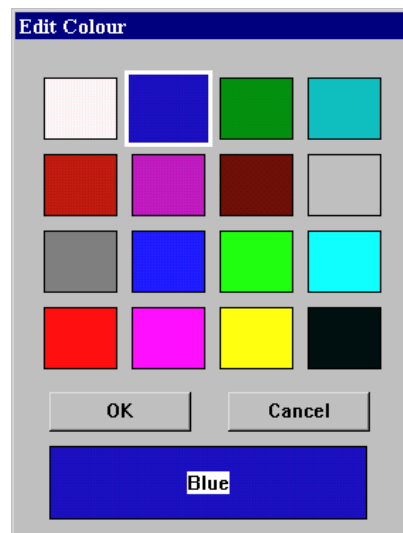


2.2 Selecting Colours and Symbols

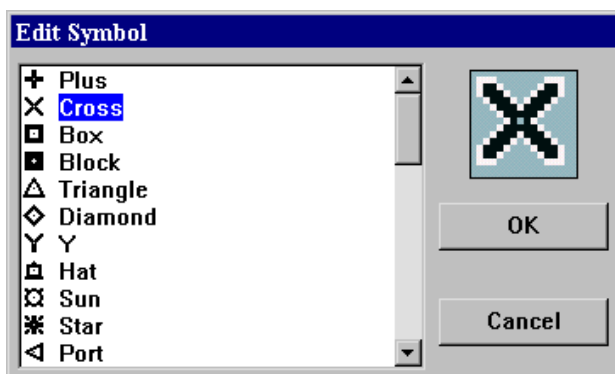
There are a number of functions in C-Plot that call for the selection of colours and/or symbols. The method for selecting these parameters is identical for all such functions.

2.2.1 Selecting a Colour

To select a colour simply click on the desired colour and click 'OK'. Clicking the 'Cancel' button will close the 'Edit Colour' dialogue box without selecting a colour.



2.2.2 Selecting a Symbol



To select a symbol simply click on the desired symbol in the list and click 'OK'. Clicking the 'Cancel' button will close the 'Edit Symbol' dialogue box without selecting a symbol.

2.3 Navigating the Menu System

A majority of C-Plot functionality is accessed through the use of menus and sub-menus. The menu system can be navigated with a mouse or joystick using a point-and-click approach or with a keyboard or C-Panel using numeric prefixes. The following section provides a detailed description of the menu structure of C-Plot along with easy to follow input sequences to provide carefree navigation.

2.3.1 The Main Menu

The **Main Menu**, as the name suggests, is the entry point to the menu system. All other menus are accessed through it. Accessing the **Main Menu** can be done several ways.

Access Sequences:



Right Click → Right Click.



Press the 'Menu' button.



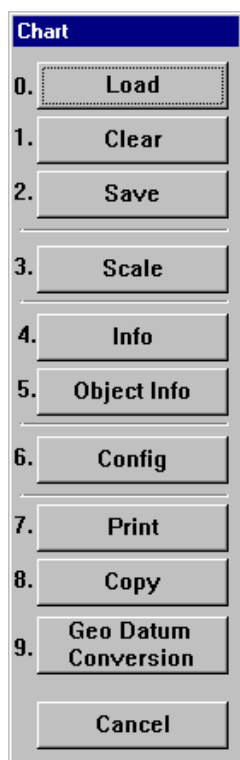
Press Alt+M

The **Main Menu** is simply a column of buttons; each button will invoke a sub-menu. Clicking the desired button with the mouse, or pressing the corresponding numeric prefix on either the keyboard or C-Panel can access the sub-menus. Clicking on the 'Cancel' button of this menu will return C-Plot to Normal Chart display mode.

3.0 Charts

3.1 The Chart Menu

C-Plot is able to display C-Map (Pro version), HCRF and TMQ Charts as the main chart. The **Chart Menu** facilitates access to all C-Plot functions pertaining to charts. It can be accessed from the main chart display using one of the following access sequences.



Access Sequences:



→ → → 'Chart'.



Press 'Menu' → 0.



Press Alt+M → 0.

Selecting a function from the **Chart Menu** is exactly the same as selecting a sub-menu from the **Main Menu**. Simply click the desired function with the mouse or choose its numbered prefix on the keyboard or C-Panel. The following sections deal with all aspects of the **Chart Menu**.

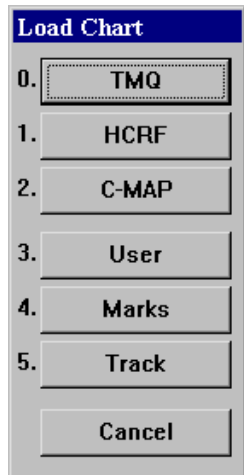
Before the charts can be loaded they must be installed on the Hard Drive of the computer.

Appendix B, indicates the procedure required to install the HCRF (ARCS or Seafarer) and/or C-MAP CM-93/3 databases.

Charts cannot be loaded until the Databases are configured.

3.2 The 'Chart - Load' Function

This function enables Charts to be loaded for display as the main chart. The **Load Chart** menu can be accessed from the main chart display using any one of the following access sequences.



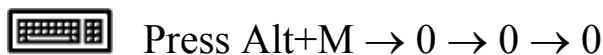
Access Sequences:



3.2.1 Loading TMQ Charts

This function will load TMQ Charts if they are installed on the system.

Access Sequences:



The 'Load Chart' dialogue-box shown in figure 3.1 displays a list of the TMQ charts that have been installed. The top most data field displays the selected chart. In order to change the loaded chart, simply select the desired chart from the list of installed charts. The selected chart will now appear in the top most data field. Clicking on 'OK' will load the selected

chart, while clicking on 'Cancel' will return to the main chart display without loading the selected chart.

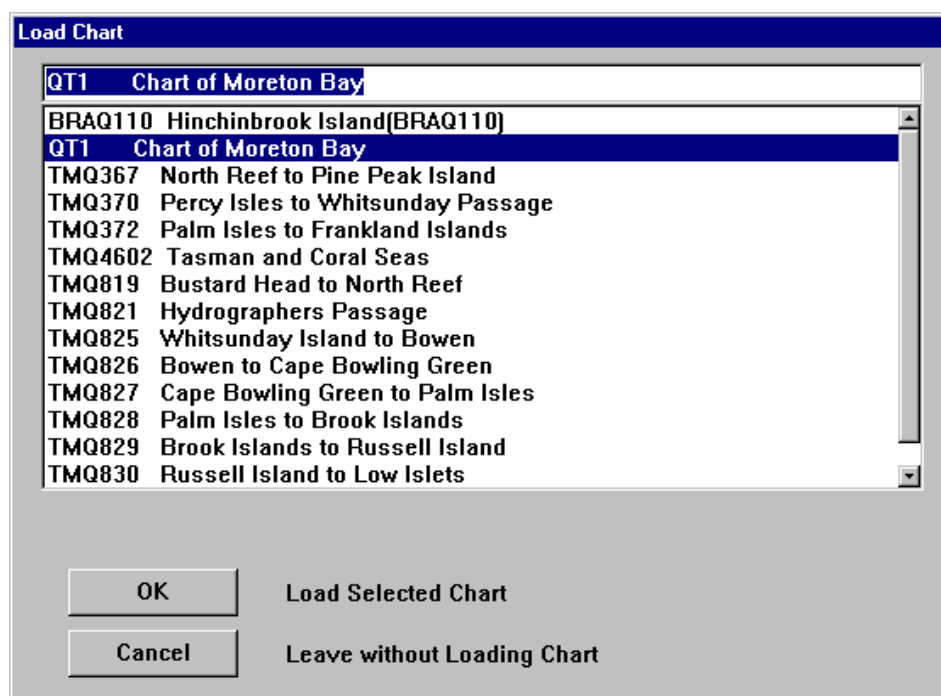


Figure 3.1

3.2.2 Loading HCRF Charts

This function will load HCRF Charts if they and the permits are installed on the system.

Access Sequences:



Press 'Menu' → 0 → 0 → 1



Press Alt+M → 0 → 0 → 1

The 'Load Chart' dialogue-box depicted in figure 3.2 displays a list of the HCRF charts that have been installed. The top most data field displays the selected chart. In order to change the loaded chart, simply select the desired chart from the list of installed charts. The selected chart will now appear in the top most data field. Clicking on 'OK' will load the

selected chart, while clicking on 'Cancel' will return to the main chart display without loading the selected chart. In 'Auto Loading' mode the system picks the best chart by vessel position. In 'Seamless Loading' mode the system selects the appropriate chart by center screen position and scale level. When either of these features are enabled there is no longer a need to load charts 'manually'.

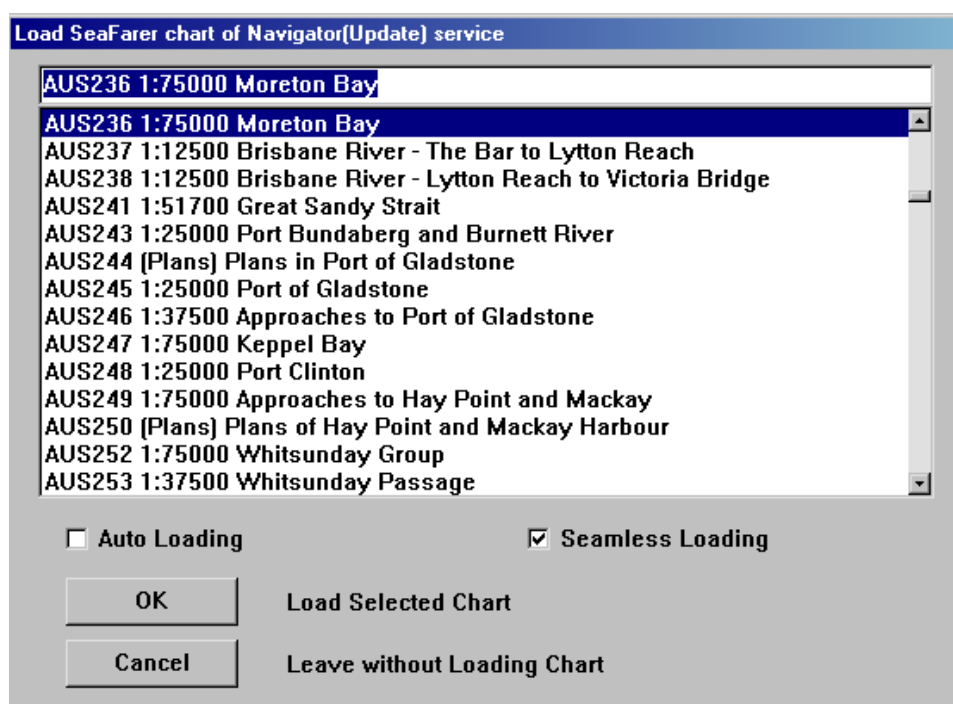







Figure 3.2



3.2.3 Loading C-Map Charts


This function will load C-Map CM-93/3 charts if they have been installed on the system.

Access Sequences:

 →  →  'Charts' →  'Load' →  'C-MAP'

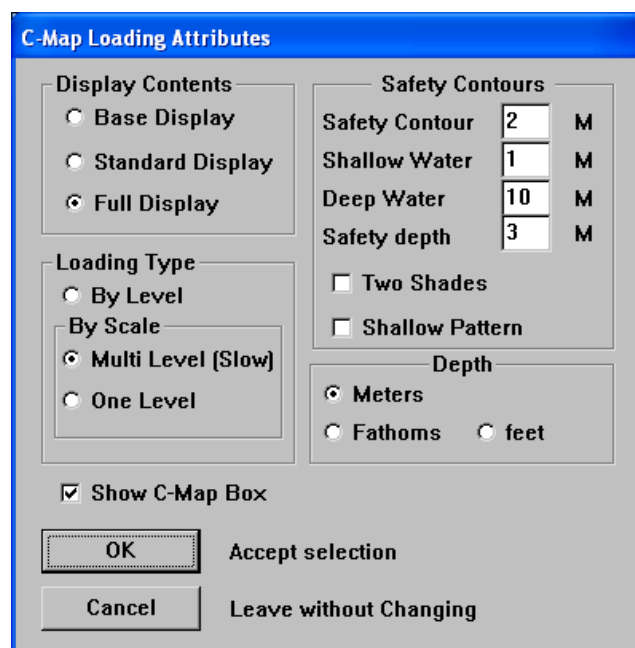
 Press 'Menu' → 0 → 0 → 2

 Press Alt+M → 0 → 0 → 2

 When using C-Map charts directly from the CD, please ensure that the appropriate CD is in the CD-ROM drive, before loading these charts.

C-Map charts are ‘Auto loading’ by default. However it is possible to configure the display properties of these charts. The ‘Display Contents’ choice box allows the amount of detail shown in the chart to be set. ‘Base Display’ shows little detail, while ‘Full Display’ shows all details.

The Loading Type section allows the loading of the charts to be configured to load by ‘Scale’ or ‘Level’. If charts are to be loaded by scale, a level parameter should be specified. One level provides fast performance, while multi-level provides greater detail at the expense of speed. The Safety Contours can be set to display at the required depth (or the closest depth available to that entered, this depends on the actual chart information) Select either ‘Two Shades’ or ‘Shallow Pattern’ depending on your preferred visualization. Select the Depth scale to be displayed, Meters, Fathoms or Feet.



The ‘Show C-Map Box’ box enables the C-Map keypad to appear on the main chart display. When this box is ticked (☒) the C-Map keypad will appear on the main display, when this box is not ticked (☐) the C-Map keypad will not appear on the main display.







3.2.3.1 The C-Map Keypad



The C-Map keypad appears on the main display when C-Map charts are loaded and the ‘Show C-Map Box’ box is ticked (☒). The C-Map keypad enables trouble-free configuration of the C-Map charts.

The Basic C-Map Keypad performs the same functions as the circular selectors in the ‘C-Map Loading Attributes’ dialogue box. The following table outlines the functionality of each button.







Symbol	Function	Description
	Charts by Level	Displays only charts of one level (see extended C-Map Keypad)
	Charts of one level by Scale	Displays charts one level at a time depending on the current scale.
	All Charts by Scale	Displays charts of all levels if it is visible at the current scale
	Base Contents	Displays the basic details of the chart
	Standard Contents	Displays the standard details of the chart
	Full Contents	Displays the full details of the chart

Extended C-Map Keypad:

The Extended C-Map Keypad appears when in 'Charts by Level' mode. Each of the extended C-Map Keypad buttons represents one 'Level'.



Symbol	Function	Description
	World Charts	1:3,500,000 to 1:1,500,000
	General Charts	1:1,500,000 to 1:500,000
	Coastal Charts	1:500,000 to 1:150,000
	Intermediate Coastal/Approach Charts	1:50,000 to 1:50,000

E	Approach Charts	1:50,000 to 1:15,000
F	Harbour Charts	1:15,000 to 1:5,000
G	Plan Charts	Larger then 1:7,500
W	Global Charts	1:20,000,000

3.2.4 Loading User Charts

User charts contain additional objects that a user has placed on the main chart, such as Areas, Lines, Marks and Events.

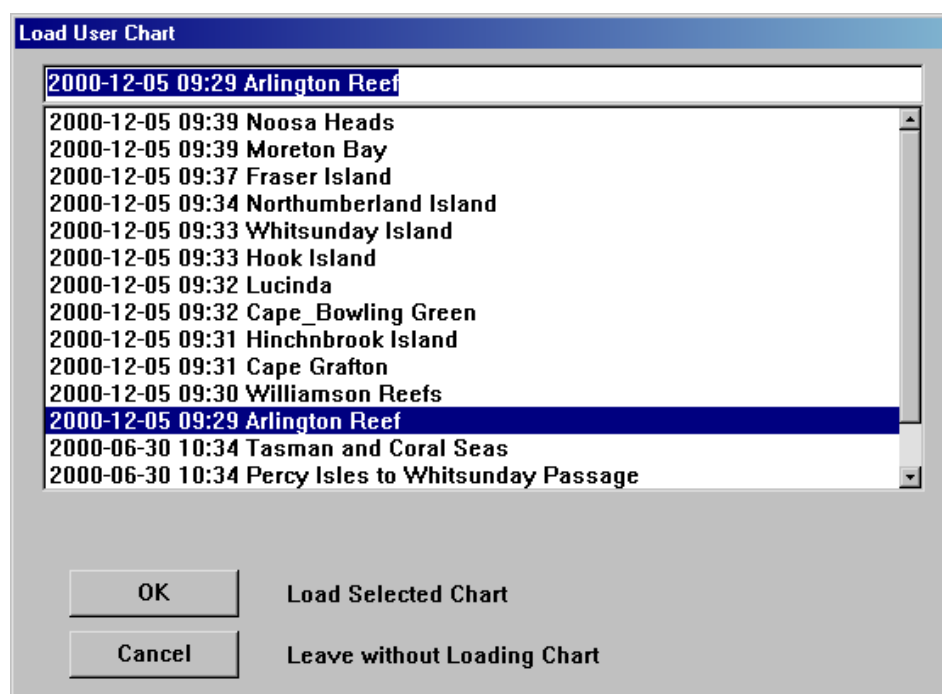


Figure 3.3

Access Sequences:

  →  →  'Charts' →  'Load' →  'User'

 Press 'Menu' → 0 → 0 → 3

 Press Alt+M → 0 → 0 → 3

3.2.5 Loading Marks Charts

Marks Charts contain only Marks and Events that have been placed on the main chart by the user.

Access Sequences:

  →  →  'Charts' →  'Load' →  'Marks'



Press 'Menu' → 0 → 0 → 4



Press Alt+M → 0 → 0 → 4

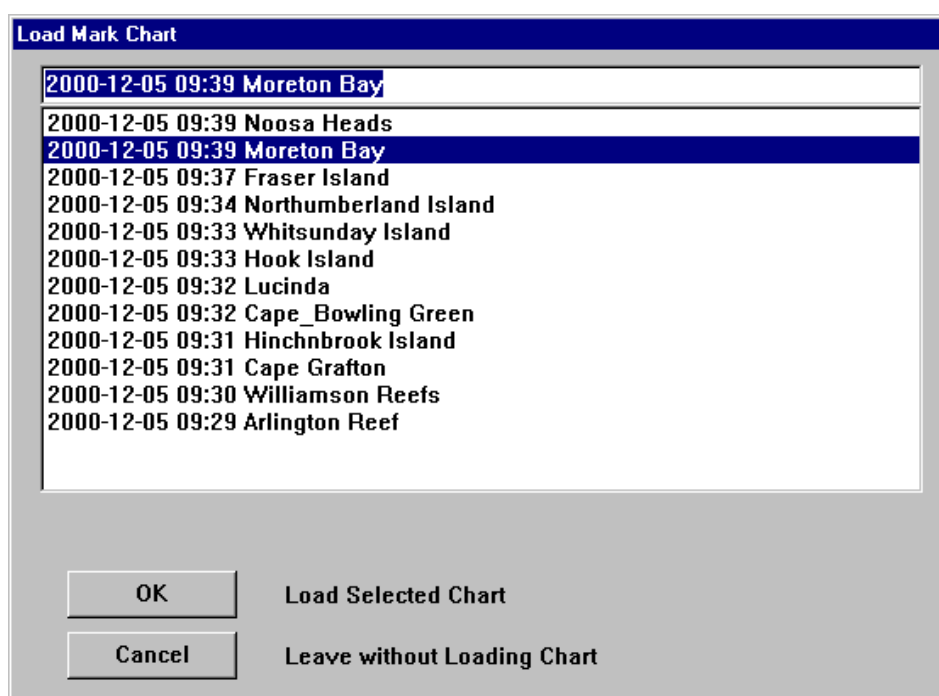




Figure 3.4


3.2.6 Loading Track Charts

Track charts contain one or more past tracks of the vessel. Previously saved track charts can be reloaded using this function.

Access Sequences:

  →  →  'Charts' →  'Load' →  'Track'

 Press 'Menu' → 0 → 0 → 5

 Press Alt+M → 0 → 0 → 5

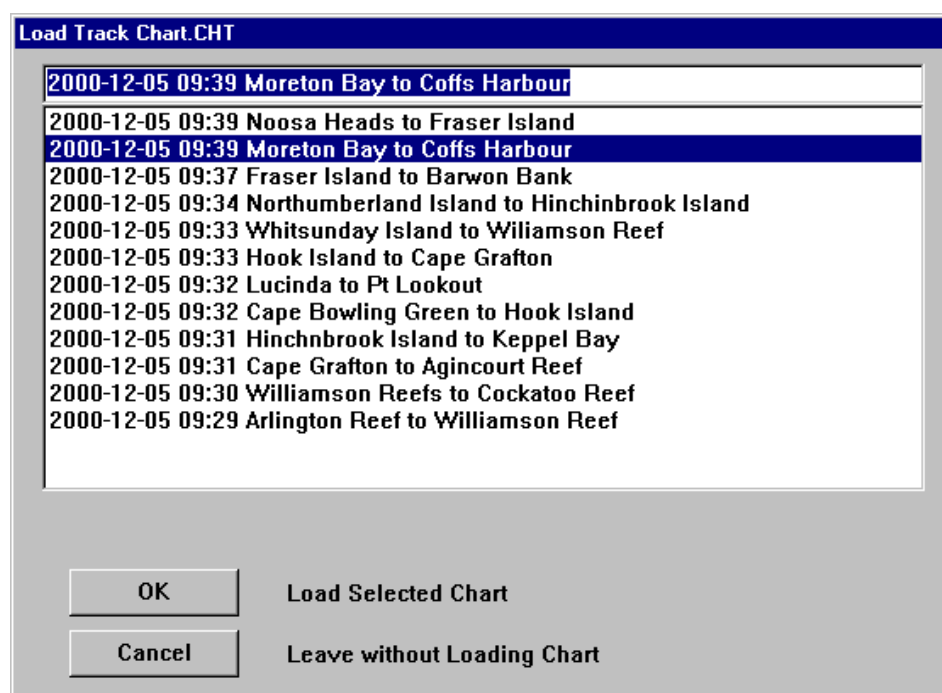
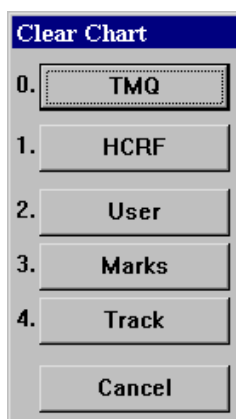







Figure 3.5

3.3 The 'Chart - Clear' Function



The **Clear** function removes displayed Charts from the main chart display. The **Clear Chart** menu can be accessed from the main chart display using any one of the following access sequences.

Access Sequences:

  →  →  'Charts' →  'Clear'



Press 'Menu' → 0 → 1








Press Alt+M → 0 → 1

3.3.1 Clearing TMQ Charts

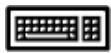
Access Sequences:



 →  →  'Charts' →  'Clear' →  'TMQ'



Press 'Menu' → 0 → 1 → 0








Press Alt+M → 0 → 1 → 0

This sequence will remove the currently displayed TMQ Chart. If no TMQ Charts are currently being displayed, this function will effectively do nothing.

3.3.2 Clearing HCRF Charts

Access Sequences:



 →  →  'Charts' →  'Clear' →  'HCRF'



Press 'Menu' → 0 → 1 → 1



Press Alt+M → 0 → 1 → 1

This sequence will remove the currently displayed HCRF Chart. If no HCRF Charts are currently being displayed, this function will effectively do nothing.

3.3.3 Clearing User Charts


Access Sequences:

  →  →  'Charts' →  'Clear' →  'User'

 Press 'Menu' → 0 → 1 → 2







 Press Alt+M → 0 → 1 → 2

This sequence will remove the currently displayed User Chart. If some user data has not been saved it will not be cleared. Please ensure that all data is saved prior to clearing the chart. If no User Charts are currently being displayed, this function will effectively do nothing.

 *It is recommended that all saved charts be cleared before creating and saving new charts.*

3.3.4 Clearing Marks Charts


Access Sequences:

  →  →  'Charts' →  'Clear' →  'Marks'

 Press 'Menu' → 0 → 1 → 3

 Press Alt+M → 0 → 1 → 3

This sequence will remove the currently displayed Marks Chart. If some mark data has not been saved it will not be cleared. Please ensure that all data is saved prior to clearing the chart. If no Marks Charts are currently being displayed, this function will effectively do nothing.

 *It is recommended that all saved charts be cleared before creating and saving new charts.*

3.3.5 Clearing Track Charts


Access Sequences:

  →  →  'Charts' →  'Clear' →  'Track'

 Press 'Menu' → 0 → 1 → 4

 Press Alt+M → 0 → 1 → 4

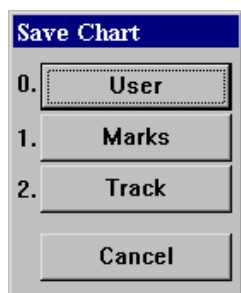
This sequence will remove the currently displayed Track Chart. If some track data has not been saved it will not be cleared. Please ensure that all data is saved prior to clearing the chart. If no Track Charts are currently being displayed, this function will effectively do nothing.






 *It is recommended that all saved charts be cleared before creating and saving new charts.*

3.4 The 'Chart - Save' Function

This function stores (saves) displayed Charts from the main chart display. The **Save Chart** menu can be accessed from the main chart display using any one of the following access sequences.

Access Sequences:




  →  →  'Charts' →  'Save'

 Press 'Menu' → 0 → 2

 Press Alt+M → 0 → 2

Save dialogue boxes allow marks, events or tracks to be saved according to colour, only Marks can be saved according to time of creation. If all marks and events or tracks are to be saved, simply ensure that the 'All Colours' box is 'ticked' and that 'All' has been chosen from the 'By time, for' drop down list. Clicking in the 'Colour' data field and choosing the desired colour from the palette can alter the colour selection criteria. The 'By time, for' selection criteria can be altered by choosing the desired time frame from the drop down list.

Example: If only 'Blue' coloured marks and events, created in the last hour are to be saved. Click in the 'Colour' data field and choose the colour 'Blue', then choose 'Last One Hour' from the 'By time, for' drop down list (See Figure 3.6).

 *In order to save marks and events of only one particular colour, ensure that the 'All Colours' box is not ticked.*

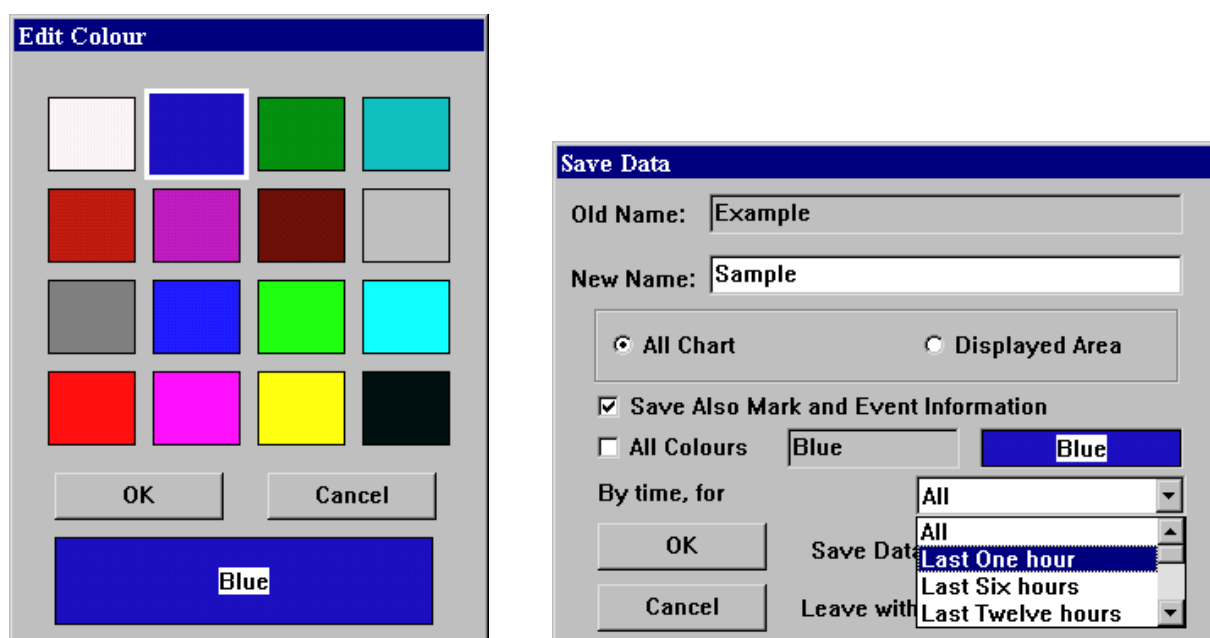


Figure 3.6

3.4.1 Saving User Charts

Access Sequences:

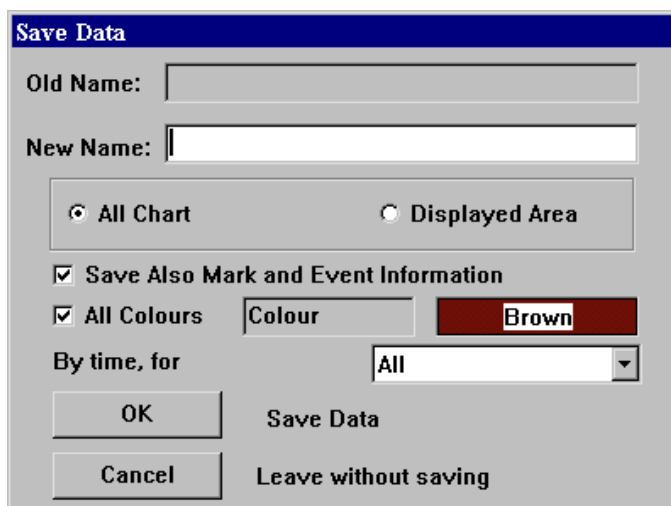
  →  →  'Charts' →  'Save' →  'User'

 Press 'Menu' → 0 → 2 → 0


 Press Alt+M → 0 → 2 → 0

User charts contain the following object information:


- Lines
- Areas
- Marks (Optional)
- Events (Optional)



When saving User Charts, the file that is created must have a meaningful name. If the chart is being saved over an old User file (i.e. one that is currently loaded) the name of that file will appear in the 'Old Name' data field. Simply type the desired name in the 'New Name' data field. The next choice box allows the whole chart or just the

currently displayed area to be saved. Ticking the 'Save Also Mark and Event Information' box () will also save the marks and events as well as lines and areas for the selected area. Marks can be saved according to colour and events can be saved according to colour and creation time criteria. To select all colours ensure that the 'All Colours' box is 'ticked' (☒) . In order to choose objects of a particular colour click in the colour data field and choose the desired colour (See figure 3.6). Time criteria for event

objects can be chosen from the 'By time, for' drop down list (See Figure 3.6).


 *In order to save marks and events of only one particular colour, ensure that the 'All Colours' box is not ticked (☐.*

3.4.2 Saving Marks Charts

Access Sequences:

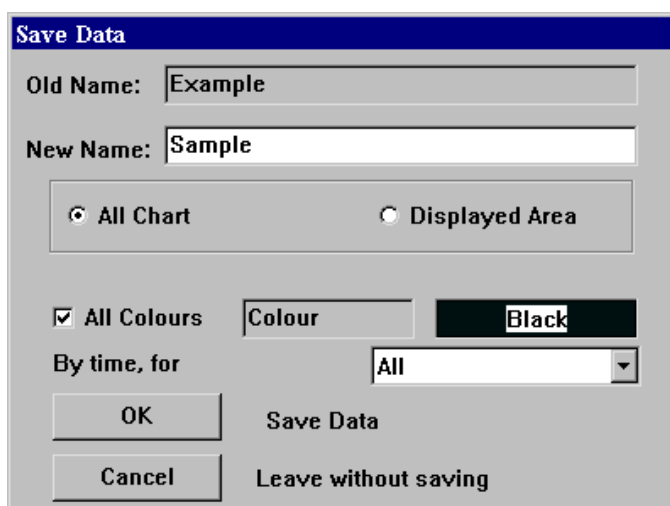
  →  →  'Charts' →  'Save' →  'Marks'

 Press 'Menu' → 0 → 2 → 1

 Press Alt+M → 0 → 2 → 1

Marks charts contain the following object information:


- Marks
- Events



When saving Mark Charts, the file that is created must have a meaningful name. Simply type the desired name in the 'New Name' data field. If the chart is being saved over an old Marks file (i.e. one that is currently loaded) the name of that file will appear in the 'Old Name' data field. The next choice box allows the whole

chart or just the currently displayed area to be saved. Marks can be saved according to colour and events can be saved according to colour and creation time criteria. To select all colours ensure that the 'All Colours' box is 'ticked' (☒). In order to choose marks and events of a particular colour,

click in the colour data field and choose the desired colour (See figure 3.6). Time criteria for event objects can be chosen from the 'By time, for' drop down list (See Figure 3.6).

 *In order to save marks and events of only one particular colour, ensure that the 'All Colours' box is not ticked (☐.*

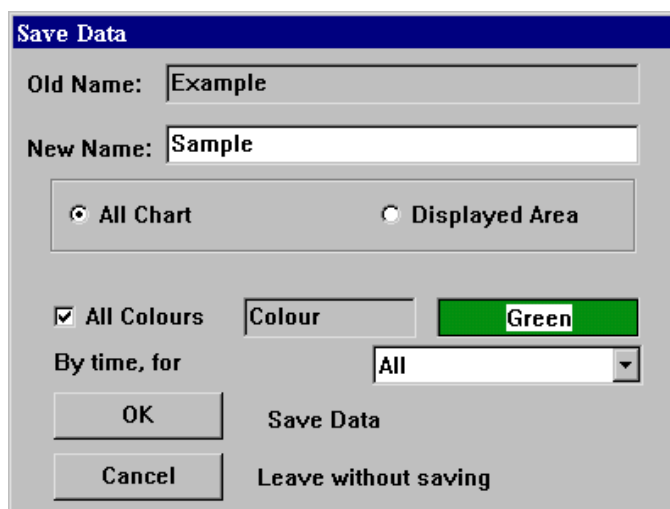
3.4.3 Saving Track Charts

Access Sequences:

  →  →  'Charts' →  'Save' →  'Track'

 Press 'Menu' → 0 → 2 → 2

 Press Alt+M → 0 → 2 → 2



The 'Save Data' dialog box has a title bar 'Save Data'. It contains two text input fields: 'Old Name:' with the text 'Example' and 'New Name:' with the text 'Sample'. Below these are two radio buttons: 'All Chart' (selected) and 'Displayed Area'. Further down are a checked checkbox 'All Colours', a 'Colour' label, a green button labeled 'Green', and a 'By time, for' label next to a dropdown menu showing 'All'. At the bottom are four buttons: 'OK', 'Cancel', 'Save Data', and 'Leave without saving'.

When saving Track Charts, the file that is created must have a meaningful name. Simply type the desired name in the 'New Name' data field. If the chart is being saved over an old Track file (i.e. one that is currently loaded) the name of that file will appear in the 'Old Name' data field. The next choice box allows the whole

chart or just the currently displayed area to be saved. Tracks can be saved according to colour and creation time criteria. To select all colours ensure that the 'All Colours' box is 'ticked'. In order to choose marks and events of a particular colour, click in the colour data field and choose the desired colour (See figure 3.6). Time criteria can be chosen from the 'By time, for' drop down list (See Figure 3.6).

3.5 The ‘Chart - Scale’ Function

The **Scale** function allows adjustment of the scale of the chart currently being displayed. In effect it allows the chart to be zoomed in or out accurately.

Access Sequences:



→ → → ‘Charts’ → → ‘Scale’



Press ‘Menu’ → 0 → 3



Press Alt+M → 0 → 3

The 'Edit Scale' dialog box has a title bar 'Edit Scale'. It contains two input fields: 'Old' with the value '49.99' and 'NM' to its right, and 'New' with the value '25.00' and 'NM' to its right. Below these fields are two buttons: 'OK' and 'Cancel'. To the right of the 'OK' button is the text 'Accept new Scale', and to the right of the 'Cancel' button is the text 'Leave without changing Scale'.

The current scale of the chart being displayed is shown in the ‘Old’ data field. Simply type the desired scale in nautical miles in the ‘New’ data field. Click ‘OK’ to accept the new scale or ‘Cancel’ to return to the main chart display

without changing the scale.

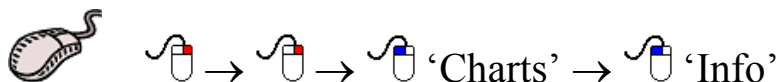


*The **Scale** function cannot be used with HCRF charts.*

3.6 The ‘Chart - Info’ Function

The **Info** function allows chart information for the currently loaded chart to be displayed. Chart information can only be shown for TMQ charts and HCRF charts. The access sequences are identical for both types of charts, however the dialogue box that is displayed is unique.

Access Sequences:

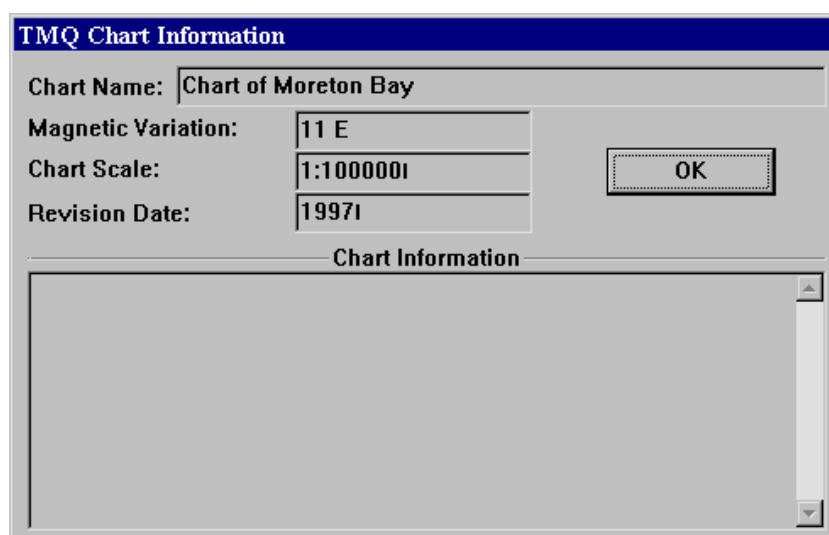


Press 'Menu' → 0 → 4



Press Alt+M → 0 → 4

3.6.1 TMQ Chart Information

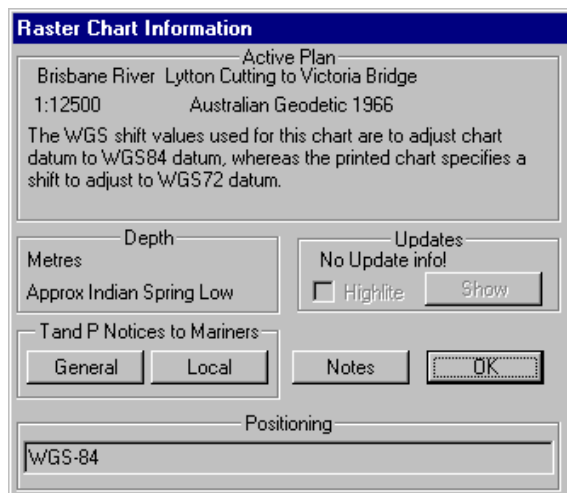


TMQ Chart information can be displayed for any TMQ chart that is currently loaded as the main chart. The dialogue box that appears contains:

- Chart Name
- Magnetic Variation
- Chart Scale
- Revision Date
- Chart Information

Click 'OK' to return to the main chart display.

3.6.2 HCRF Chart Information



HCRF Chart information can be displayed for any HCRF chart that is currently loaded as the main chart. The Raster Chart Information dialogue box contains several buttons:

- Temporary Notices & Preliminary to mariners
 - 'General'
 - 'Local'
- 'Notes' (Chart Notes)

Clicking on any one of these buttons displays an appropriate list. Clicking on any item on the list will show the information corresponding to that item.

Temporary and Preliminary Notices to Mariners:

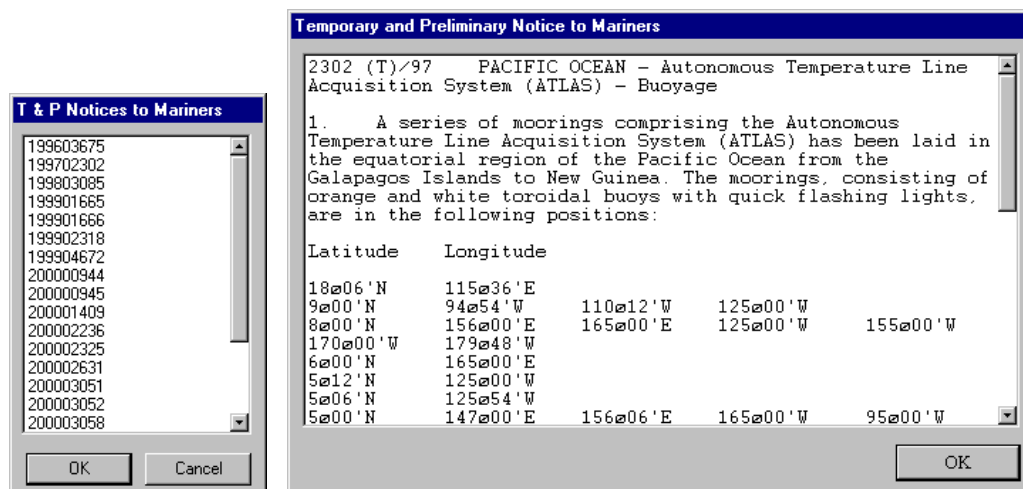
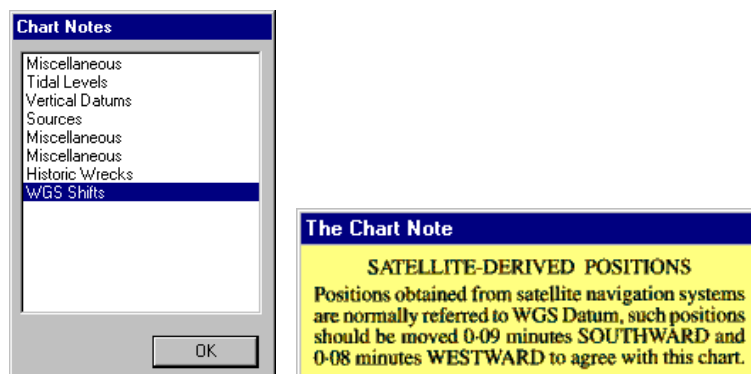

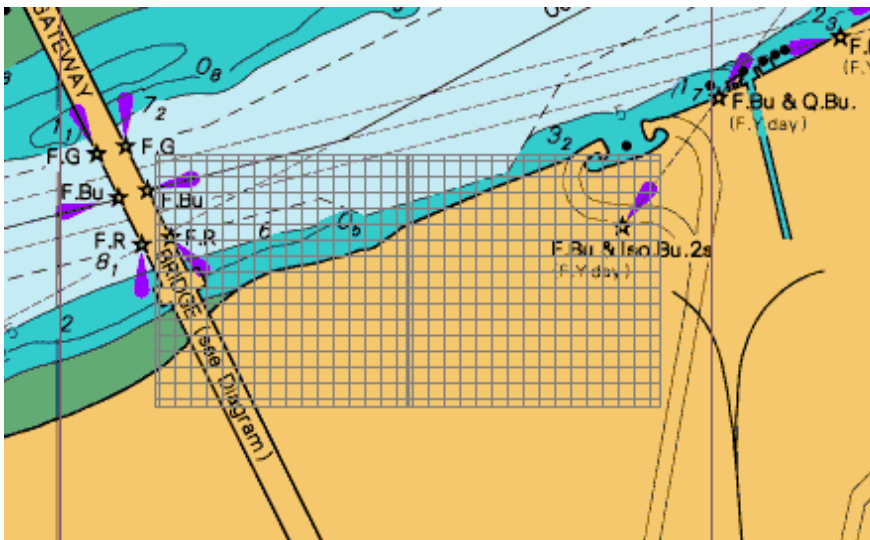


Chart Notes:



The Updates Section:

This section allows the updated areas of the chart to be highlighted, so they can be easily found. Highlighted areas appear as square grids on the chart. To highlight the updated information tick  the 'Hightlite' box. Clicking on the 'Show' button will temporarily (for approx. 2 seconds) display the charts without updates.



3.7 The 'Chart - Object Info' Function

The **Object Info** function allows information on marks or events to be displayed. The access sequences for this function are as follows.

Access Sequences:



 →  →  'Charts' →  'Object Info'



Press 'Menu' → 0 → 5



Press Alt+M → 0 → 5

The **Object Info** function displays a coloured bar at the bottom of the screen. To display the information for a mark or event simply position the cursor over the desired object and click the left mouse button, or press

select on the C-Panel. To return to normal chart mode, click 'Cancel' on the coloured bar.

Coloured 'Object Info' bar:

OBJECT INFO. Place Cursor on Mark/Event, Press SELECT, or CANCEL to Exit Cancel

3.8 The 'Chart - Config' Function

The **Config** function facilitates modifying the database of C-MAP and HCRF charts. The following tasks can be performed through this function.

HCRF Charts:

- + Installing and uninstalling charts
- + Updating existing charts
- + Loading removing, and editing of Chart Permits

C-Map Charts:

- + Select C-Map Database
- + Creating order 'User Code'
- + Entering the C-Map 'Authorisation Code'
- + Updating C-Map Limit Files

Access Sequences:



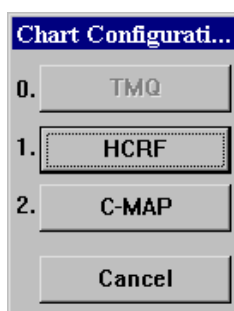
→ → → 'Charts' → → 'Config'



Press 'Menu' → 0 → 6



Press Alt+M → 0 → 6








The Chart configuration of C-Plot is a rather involved process and cannot be acceptably addressed in this section of the C-Plot User Manual. A detailed description of Chart Configuration, including easy-to-follow flowcharts, is provided in the accompanying appendices. Please consult these appendices when configuring charts.

3.9 The 'Chart - Print' Function

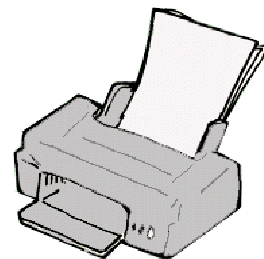
The **Print** function enables a hardcopy (Printed on paper) to be made of the currently displayed chart.


Access Sequences:

  →  →  'Charts' →  'Print'

 Press 'Menu' → 0 → 7

 Press Alt+M → 0 → 7








 *The print job is sent to the default printer. If your default printer is not ready, or not set up correctly, the print function will fail. Consult Windows help if printing problems occur.*

3.10 The 'Chart - Copy' Function

The **Copy** function allows User, Marks and Track charts to be backed up on a floppy disc, or stored elsewhere on the computer's hard drive.

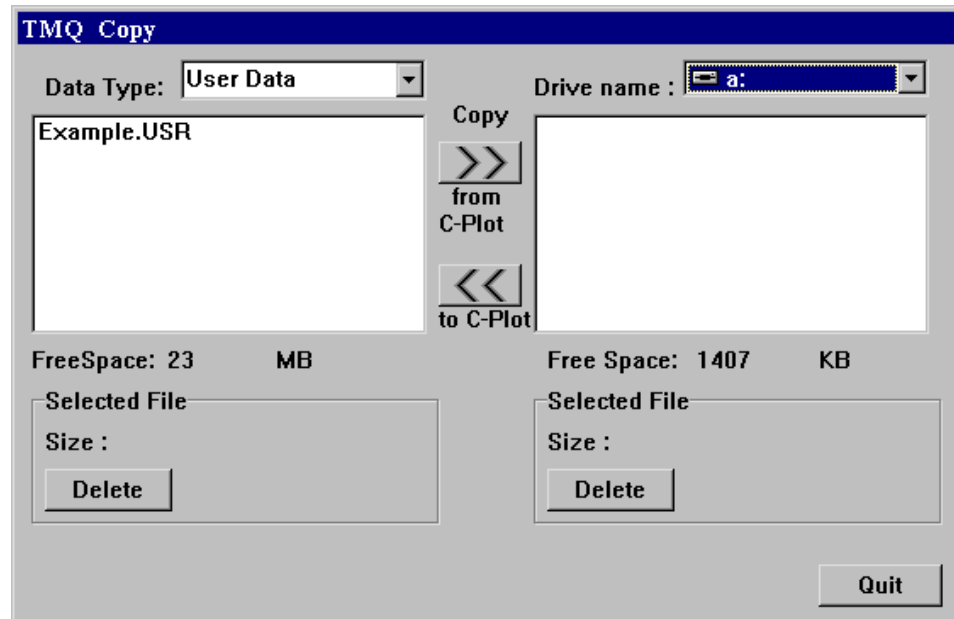
Access Sequences:

  →  →  'Charts' →  'Copy'

 Press 'Menu' → 0 → 8

 Press Alt+M → 0 → 8





The 'Data Type' can be selected by the use of the drop down list. The destination drive can be selected by use of the 'Drive name' drop down list. The list of files on the left-hand side of the dialogue box shows the files of the selected 'Data type' that are stored in C-Plot. The list on the right-hand side of the dialogue box displays the files in the currently selected drive. The 'Free Space' parameters display the amount of unused disc space in both the C-Plot and destination drives. The selected file section outlines the size of the file selected and provides a button for deleting the selected file.

File Backup procedure:

1. Select the desired 'Data Type'
2. Select the desired destination drive (Drive Name)
3. Select the file to be backed up from the left-hand list
4. Click the 'Copy from C-Plot' button (>>)
5. Repeat steps 3 & 4 until all desired files of this data type are backed up
6. Repeat Steps 1-5 until all desired file types are backed up



File Restoration procedure:

1. Select the desired 'Data Type'
2. Select the desired Source drive (Drive Name)

3. Select the file to be restored from the right-hand list
4. Click the 'Copy to C-Plot' button (<<)
5. Repeat steps 3 & 4 until all desired files of this data type are restored
6. Repeat Steps 1-5 until all desired file types are restored

3.11 The 'Chart – Geo Datum Conversion' Function

Access Sequences:

  →  'Charts' →  'Geo Datum Conversion'

 Press 'Menu' → 0 → 9

 Press Alt+M → 0 → 9

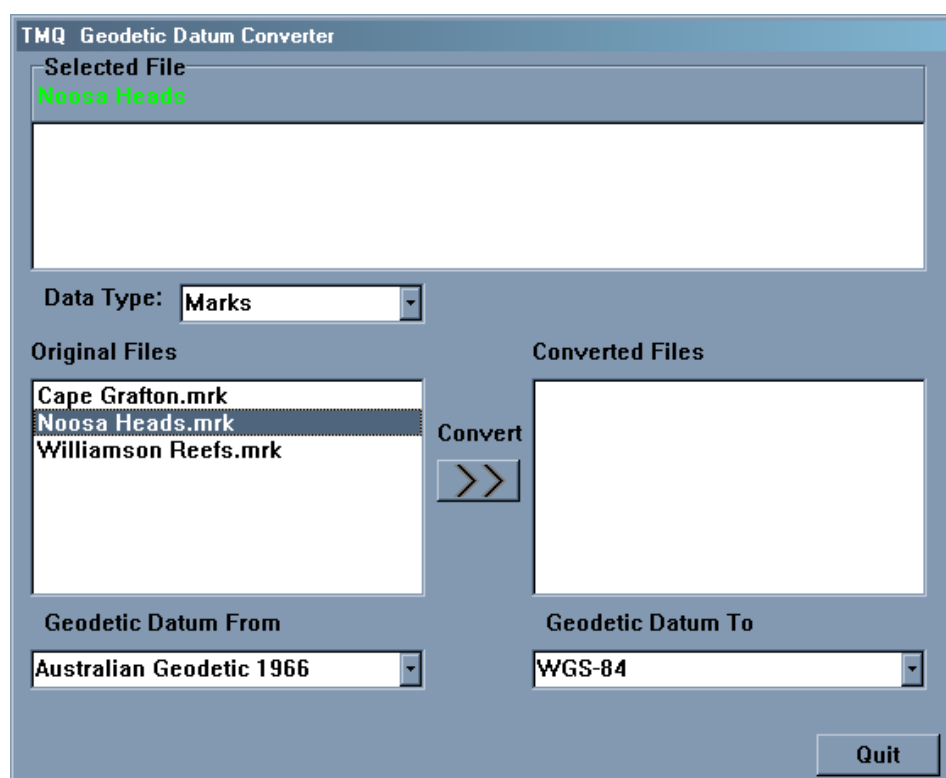
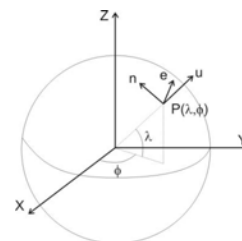



Figure 3.7

The **Geo Datum Conversion** function enables User Charts, Marks Charts and Track Charts to be converted from one Geodetic Datum to another (e.g. Australian Geodetic 1966 to WGS-84).

The TMQ Geodetic Datum Converter dialogue box is similar to the TMQ Copy dialogue box from section 3.10, and the manner in which they are used is also similar. The converter dialogue box contains a section labeled 'Selected File' this section lists any previous conversion that may have been performed on the selected file. It can be seen from figure 3.7 that the 'Noosa Heads.mrk' Marks chart has not undergone any conversions.

The following sequence should be used when converting the geodetic datum of files.

1. Select the 'Type' of file that is to be converted from the 'Data Type' drop down list.
2. Select the desired file from the 'Original Files' section and choose the current geodetic datum for this file from the 'Geodetic Data From' drop down list.
3. Now select the geodetic datum that the selected file should be converted to, from the 'Geodetic Datum To' drop down list.
4. Click 'Convert'. The converted file will now appear in the 'Converted Files' section. (See Figure 3.8)
5. Repeat steps 2 – 4 until all desired files are converted.
6. Repeat steps 1-5 until all desired data types have been converted.

 *Whenever a file is converted a '^' symbol is appended to the filename. The details of the conversions that have been performed on such a file can be viewed in the 'Selected File' section of the converter dialogue box, when the file is selected (see figure 3.9).*

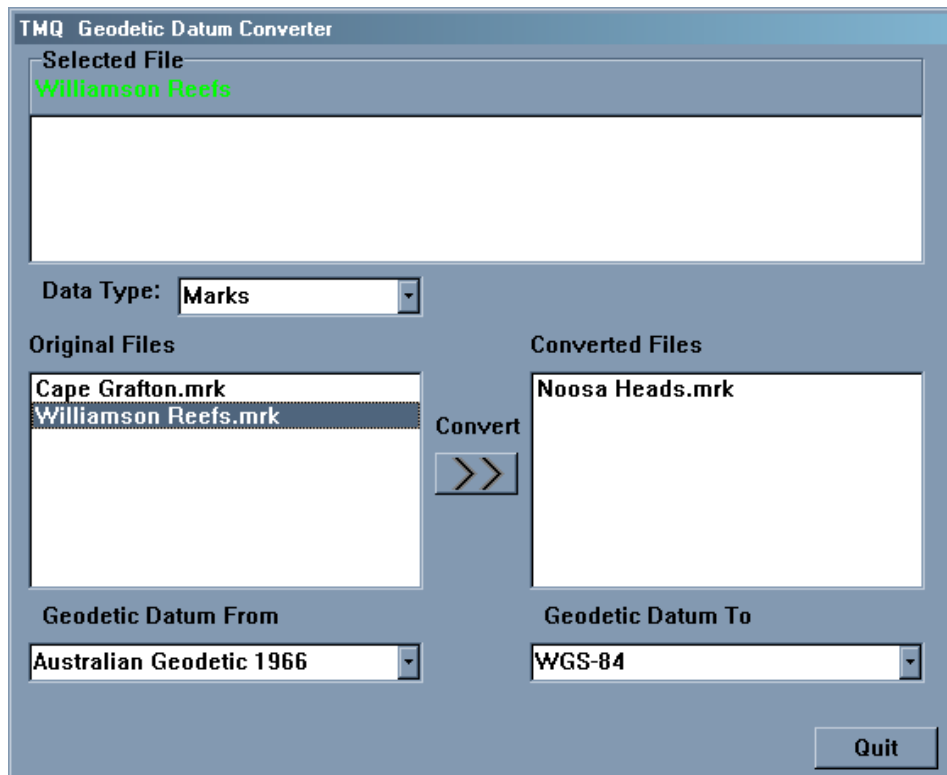


Figure 3.8

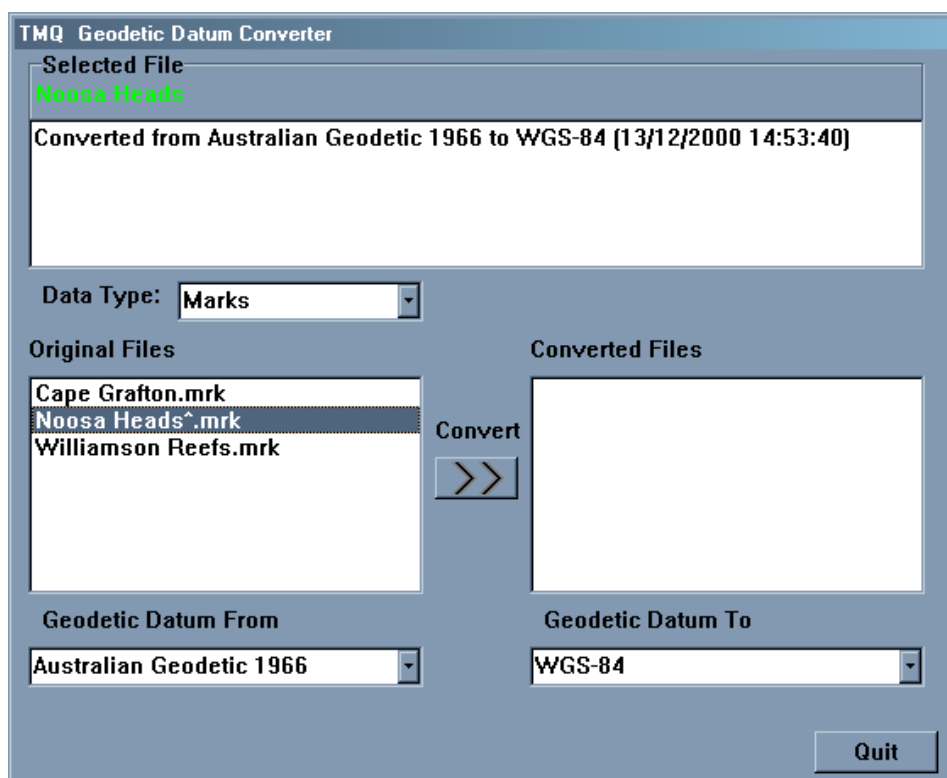


Figure 3.9

4.0 Marks & Events

4.1 The Marks/Events Menu

The **Marks/Events Menu** facilitates access to all C-Plot functions pertaining to marks and events. Marks and events are symbols that can be positioned on the main chart display to allow the user to record the position of relevant information (i.e. fruitful fishing areas, location of pots, etc). This menu can be accessed from the main chart display using one of the following access sequences.



Access Sequences:



→ → → 'Marks/Events'.



Press 'Menu' → 1.



Press Alt+M → 1.

Selecting a function from the **Marks/Events Menu** is exactly the same as selecting a sub-menu from the **Main Menu**. Simply click the desired function with the mouse or choose its numbered prefix on the keyboard or C-Panel. Clicking on the 'Cancel' button will return to the **Main Menu**.

4.2 The ‘Marks – Add at Cursor’ Function

The **Add at Cursor** function enables marks to be added according to the position of the cursor.

Access Sequences:



→ → ‘Marks/Events’ → ‘Add at Cursor’



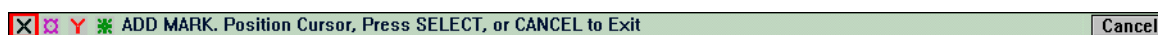
Press ‘Menu’ → 1 → 0



Press Alt+M → 1 → 0

Upon accessing this function a coloured ‘ADD Mark’ bar will appear at the bottom of the screen. To add a mark, simply position the cursor at the desired position of the mark and click the left mouse button. The symbol of the mark can be modified by choosing () one of the 4 symbols shown in the ‘ADD Mark’ bar. Once all desired marks have been added click the ‘Cancel’ button to return to normal chart display mode.

‘ADD Mark’ Bar:



4.3 The ‘Marks – Add at Lat/Lng’ Function

The **Add at Lat/Lng** function enables marks to be placed on the main chart display according to Latitude and Longitude co-ordinates.

Access Sequences:



→ → ‘Marks/Events’ → ‘Add at Lat/Lng’



Press ‘Menu’ → 1 → 1



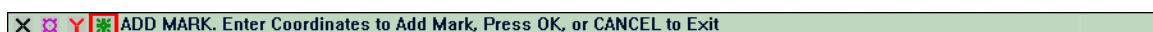
Press Alt+M → 1 → 1

Coordinates	
Latitude:	27° 26.704' S
Longitude:	153° 04.404' E
OK	Add Mark with the Coordinates
Cancel	Leave Add Mode

Upon accessing this function a dialogue box will appear accompanied by an 'ADD Marks' coloured bar. To add a mark, input the geographic co-ordinates in the dialogue box and click 'OK'. The symbol used to indicate the marks position can be selected from the 'ADD Marks' bar before the mark

is added. Click 'Cancel' to return to normal chart display mode.

The coloured 'ADD Marks' bar:



4.4 The 'Marks - Delete Marks' Function

The **Delete Marks** function allows a mark, or collection of marks, to be removed. This function deletes both saved and unsaved marks i.e. it will delete marks from a loaded Marks Chart as well as marks that have not been saved. In order to remove marks permanently from a saved Marks chart, it is important to save the Marks chart once the desired marks have been deleted.

Access Sequences:



→ → → 'Marks/Events' → 'Delete Marks'




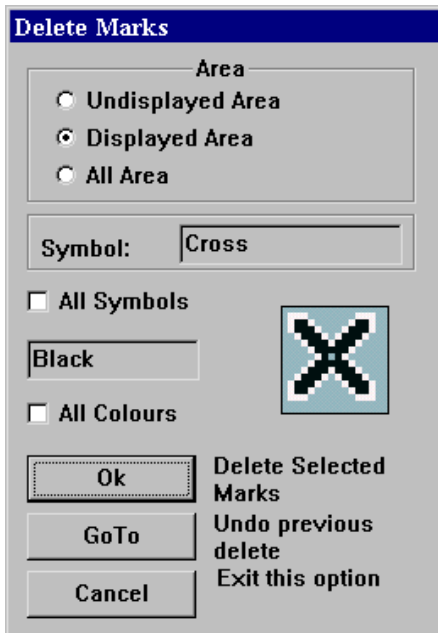
Press 'Menu' → 1 → 2




Press Alt+M → 1 → 2

Marks can be selected and deleted according to a number of selection criteria, position, symbol and colour. The **Area** section allows marks to be selected by position, simply click on the desired area type. The **Symbol** field allows the marks to be selected by symbol type. Clicking on the symbol field will invoke a symbol selection dialogue. To select a certain symbol type simply click on the desired symbol type and click

‘OK’. Clicking ‘Cancel’ in the ‘Edit Symbol’ dialogue box will return to the ‘Delete Marks’ dialogue box. Ticking () the ‘All Symbols’ box will select all symbol types. Marks can also be selected by colour. Clicking in the colour data field will invoke the ‘Edit Colour’ dialogue box. Simply choose the desired colour and click ‘OK’ or ‘Cancel’ to return to the ‘Delete Marks’ dialogue box. Ticking the ‘All Colours’ box will select marks of any colour.



To accept the selection criteria and delete the selected marks, click ‘OK’. Clicking the ‘GoTo’ button will undo the last delete that was performed, while clicking ‘Cancel’ will return to normal chart display mode.

 *The ‘All Symbols’ and ‘All Colours’ tick boxes override any other symbol and colour selections. In order to select marks by only one symbol or colour, ensure that the appropriate tick box is not ticked (i.e. Does not contain a tick).*

4.5 The ‘Events – Add at Ship’ Function

The **Events – Add at Ship** function adds an event symbol at the vessel’s current position. To perform this function use one of the following access sequences.

Access Sequences:



 →  →  ‘Marks/Events’ →  ‘Add at Ship’



Press ‘Menu’ → 1 → 3



Press Alt+M → 1 → 3

The symbol used for the event is a ‘plus’ symbol by default. Once an event has been positioned its properties can be altered using the **Edit** function outlined in section 4.7.

4.6 The ‘Events - Delete Events’ Function

The **Delete Events** function allows an event, or collection of events, to be removed. This function deletes both saved and unsaved events i.e. it will delete events from a loaded Marks Chart as well as events that have not been saved. In order to remove events permanently from a saved Marks chart, it is important to save the Marks chart once the desired events have been deleted.

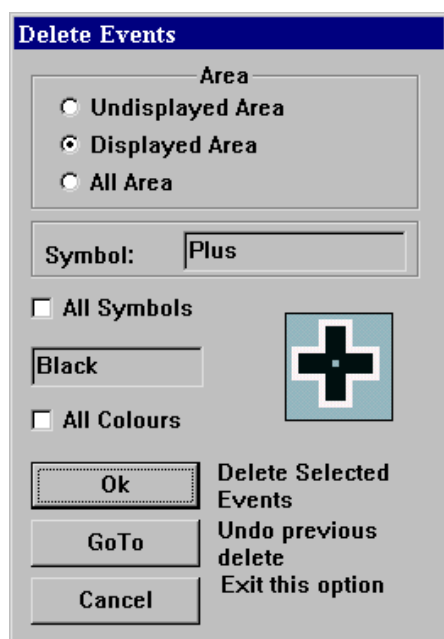
Access Sequences:



‘Marks/Events’ →




‘Delete Events’



Press ‘Menu’ → 1 → 4




Press Alt+M → 1 → 4

Events can be selected and deleted according to a number of selection criteria, position, symbol and colour. The **Area** section allows events to be selected by position, simply click on the desired area type. The **Symbol** field allows the events to be selected by symbol type. Clicking on the symbol field will invoke an ‘Edit Symbol’ dialogue box. To select a certain symbol type simply click on the desired symbol type and click ‘OK’. Clicking ‘Cancel’ in the ‘Edit Symbol’ dialogue box will return to the ‘Delete Events’ dialogue box. Ticking () the ‘All Symbols’ box will select all symbol types. Events can also be selected by colour. Clicking in the colour data field will invoke the ‘Edit Colour’ dialogue box. Simply choose the desired colour and click ‘OK’ or ‘Cancel’ to return to the

‘Delete Events’ dialogue box. Ticking the ‘All Colours’ box will select marks of any colour.

To accept the selection criteria and delete the selected events click ‘OK’. Clicking the ‘GoTo’ button will undo the last delete that was performed, while clicking ‘Cancel’ will return to normal chart display mode.

 *The ‘All Symbols’ and ‘All Colours’ tick boxes override any other symbol and colour selections. In order to select events by only one symbol or colour, ensure that the appropriate tick box is not ticked (i.e. Does not contain a tick).*

4.7 The ‘Marks/Events - Edit’ Function

The **Edit** function allows the properties of Marks and Events to be altered.

Access Sequences:



 →  →  ‘Marks/Events’ →  ‘Edit’



Press ‘Menu’ → 1 → 5



Press Alt+M → 1 → 5

When this function is performed a coloured ‘EDIT MARK/EVENT’ bar will appear at the bottom of the screen.

‘EDIT MARK/EVENT’ Bar:

EDIT MARK/EVENT. Place Cursor on Mark/Event, Press SELECT, or CANCEL to Exit

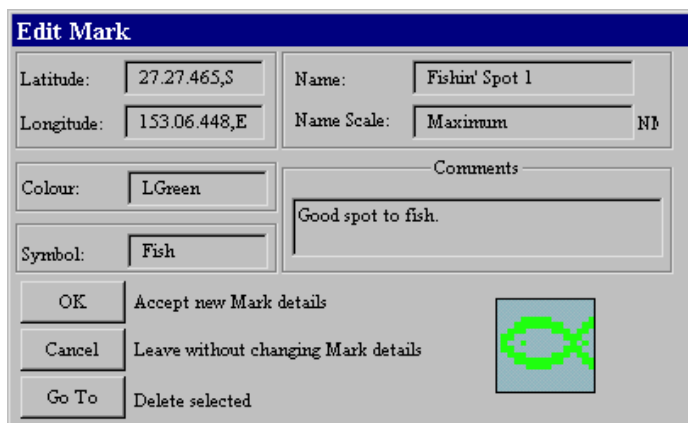
Cancel

Now, simply move the cursor over the mark or event to be edited and left click on the mouse (‘Select’ on the C-Panel). Depending on which type of object was clicked, an edit dialogue box will appear.

4.7.1 Editing Marks

The **Edit Marks** dialogue box allows the following properties of marks to be modified:

- ✓ Latitude and Longitude of the mark's position
- ✓ The name of the mark
- ✓ The size (scale) of the mark's name
- ✓ The colour of the mark
- ✓ The symbol used to represent the mark
- ✓ A comment for the mark



Edit Mark	
Latitude:	27.27.465,S
Longitude:	153.06.448,E
Name:	Fishin' Spot 1
Name Scale:	Maximum
Colour:	LGreen
Symbol:	Fish
Comments Good spot to fish.	
OK	Accept new Mark details
Cancel	Leave without changing Mark details
Go To	Delete selected

To make changes to any of these properties simply click (🖱️) in the appropriate data field. In each case an edit box will appear displaying the current data ('Old Data') and a data field to input the 'New'. Click 'OK' to accept any changes or 'Cancel' to return to


the 'Edit Mark' dialogue box. The colour and symbol properties are modified using the appropriate dialogue box, which appears when either of those fields is clicked.

4.7.2 Editing Events

The **Edit Marks** dialogue box allows the following properties of marks to be modified:

- ✓ The name of the event
- ✓ The size (scale) of the name of the event
- ✓ The symbol used to represent the event
- ✓ The colour of the symbol
- ✓ A comment for the event

Edit Event			
Symbol:	Anchor	Colour:	Black
Name:	Example		
Name Scale:	Maximum	NM	
Comments			
Anchor Point			
Latitude:		27.26.705,S	
Longitude:		153.04.404,E	
UTC:		22:53:15 19/11/00	
LTC:		08:53:15 20/11/00	
OK	Accept new Event details		
Cancel	Leave without changing Event		
Go To	Delete selected		



To make changes to any of these properties simply click (🖱️) in the appropriate data field. In each case an edit box will appear displaying the current data ('Old Data') and a data field to input the 'New'. Click 'OK' to accept any changes or 'Cancel' to

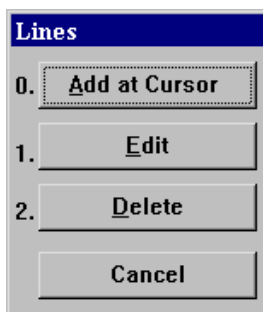
return to the 'Edit Event' dialogue box. The colour and symbol properties are modified using the appropriate dialogue box, which appears when either of those fields is clicked.

5.0 Lines

5.1 The Lines Menu

Lines are used to indicate boundaries or danger areas on any chart. Lines can also be converted into Areas and Routes. The **Lines Menu** facilitates access to all C-Plot functions pertaining to lines. This menu can be accessed from the main chart display using one of the following sequences.

Access Sequences



→ → → 'Lines'.



Press 'Menu' → 2.



Press Alt+M → 2.

Selecting a function from the **Lines Menu** is exactly the same as selecting a sub-menu from the **Main Menu**. Simply click the desired function with the mouse or choose its numbered prefix on the keyboard or C-Panel. Choosing 'Cancel' will return to the **Main Menu**.

5.2 The ‘Lines – Add at Cursor’ Function

The **Add at Cursor** function allows a line to be added to the main chart display using the cursor to position each segment.

Access Sequences



→ → ‘Lines’ → ‘Add at Cursor’



Press ‘Menu’ → 2 → 0



Press Alt+M → 2 → 0

While in Line draw mode a coloured ‘ADD LINE’ bar will appear at the bottom of the screen. Position the cursor on the chart display where you want to begin drawing the line and click the left mouse button to draw. Continue moving the cursor and clicking the left mouse button until a satisfactory line has been drawn, then click the ‘OK’ button on the ‘ADD LINE’ bar to save the line, or ‘Cancel’ to return to normal chart display mode.

Coloured ‘ADD LINE’ Bar:

ADD LINE. Add Points with SELECT, to save Line press OK, or CANCEL to Exit

OK

Cancel

5.3 The ‘Lines - Edit’ Function

The **Edit** function allows properties of a line to be modified. It also provides a means of converting Lines in to Areas or Routes.

Access Sequences



→ → Click ‘Lines’ → Click ‘Edit’



Press ‘Menu’ → 2 → 1

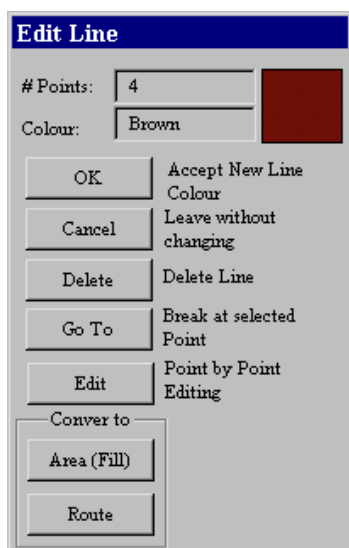


Press Alt+M → 2 → 1

Initially an 'EDIT LINE' Bar appears at the bottom of the screen. To select a line to edit simply position the cursor over the desired line and left click on the mouse (☞).

EDIT LINE Bar:

EDIT LINE. Place Cursor on Line, Press SELECT, or CANCEL to Exit Cancel

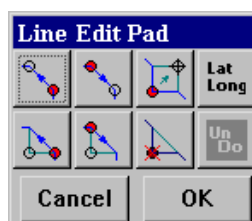










The '# Points' field contains the number of points that are contained in the line; this value cannot be altered from here (see Section 5.3.1). Clicking on the 'Colour' field invokes an 'Edit Colour' dialogue box. Choose a new colour and click 'OK' or click 'Cancel' to return to the 'Line Edit' dialogue box. Clicking 'OK' in the 'Edit Line' dialogue box will save the current line properties, while clicking 'Cancel' will return to normal chart display mode.

Clicking 'Delete' will remove the selected line from the chart. Clicking 'GoTo' will split the line at the selected point and create a new line. Clicking the Edit button will invoke a Point-by-Point Editing dialogue box (See section 5.3.1). Clicking either of the buttons in the 'Convert to' area will convert the line to the appropriate object (Area or Route).

5.3.1 Point-by-Point Editing

Point-by-Point Editing enables precise editing of the selected line. The following table describes the functions performed by the 'Line Edit Pad'.



Symbol	Function	Description
	Go Forward	This button causes the next point on the line to become the selected point.
	Go Backward	This button causes the previous point on the line to become the selected point.
	Drag & Drop	This button allows the position of the selected point to be changed using the cursor. Simply place the cursor on the new position for the point and click the left mouse button.
	Edit Lat/Lng	This button invokes a 'Line Editing Table' enabling the line to be edited by modifying the Geographic position of the start and end of each line section. (See Figure 5.1)
	Insert Forward	This button inserts a new section of line between the selected point and the next point. (i.e. Inserts a new point between the current point and the next point)
	Insert Backward	This button inserts a new section of line between the selected point and the previous point. (i.e. Inserts a new point before the current point)
	Delete Point	This button removes the selected point from the line.
	Undo Last	This button reverses the last operation performed on the line. This function can be repeated until all operations performed on the line have been reversed. When the button appears with light text in a darker box, there have been no operations on the line and therefore this button is disabled.

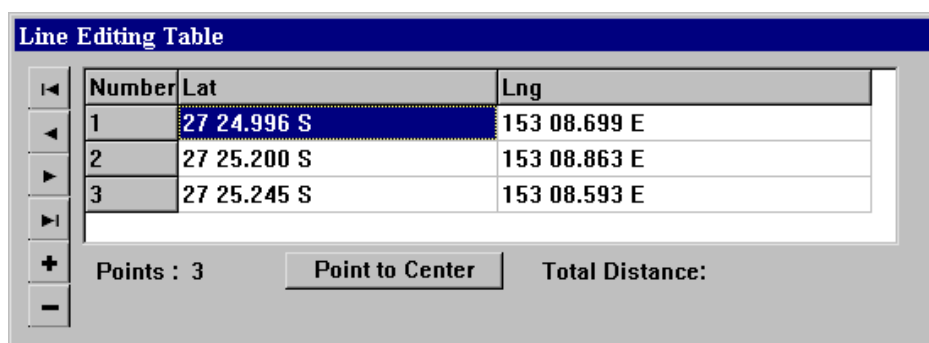








Figure 5.1

Symbol	Function	Description
	First Point	This button selects the First point in the list
	Previous Point	This button selects the Previous point in the list
	Next Point	This button selects the Next point in the list
	Last Point	This button selects the Last point in the list
	Insert Point	This button Inserts a new point before the selected point
	Delete Point	This button Removes the selected point

To modify the Latitude and Longitude of a point on the selected line, simply click the parameter to be changed in the table and type the new co-ordinates. The 'Point To Centre' button shifts the chart display so that the selected point is in the centre of the screen.

To accept changes to the line when in Point-by-Point Edit mode click 'OK' on the line Edit Pad. Clicking 'Cancel' will return to normal display mode without saving changes.

5.4 The 'Lines - Delete' Function

The **Delete** function allows lines to be deleted according to one or more of the following criteria, position and colour. It also allows the last delete operation to be reversed. This function deletes both saved and unsaved lines i.e. it will delete lines from a loaded User Chart as well as lines that have not been saved. In order to remove lines permanently from a saved User chart, it is important to save the User chart once the desired lines have been deleted.

Access Sequences



→ → 'Lines' → 'Delete'

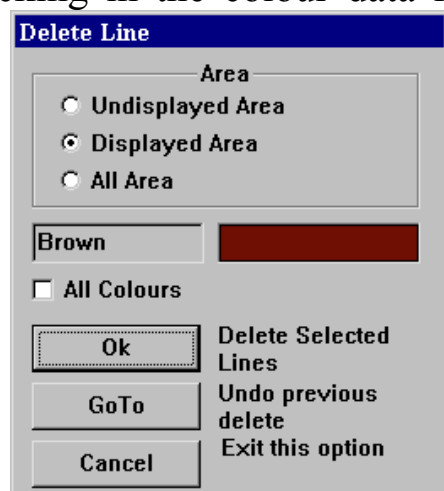


Press 'Menu' → 2 → 2



Press Alt+M → 2 → 2

The **Area** section allows lines to be selected according to position. Clicking in the colour data field invokes an 'Edit Colour' dialogue box, allowing lines to be selected by colour. Ticking (☒) the 'All Colours' box will select all the lines in the selected area.



Clicking 'OK' performs the delete operation on the lines that meet the selection criteria. 'GoTo' reverses the previous 'Delete' operation performed on one or more lines. 'Cancel' returns C-Plot to chart display mode.



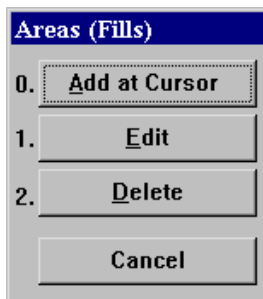
The 'All Colours' tick box overrides any other colour selection. In order to select lines by only one colour, ensure that the 'All Colours' tick box is not ticked (☐).

6.0 Areas & Fills

6.1 *The Areas (Fills) Menu*

Areas can be used to indicate restricted regions and danger zones on any chart. The **Areas (Fills) Menu** facilitates access to all C-Plot functions pertaining to areas and fills. This menu can be accessed from the main chart display using any one of the following sequences.

Access Sequences:



→ → → 'Areas (Fills)'.



Press 'Menu' → 3.



Press Alt+M → 3.

Selecting a function from the **Areas (Fills) Menu** is exactly the same as selecting a sub-menu from the **Main Menu**. Simply click the desired function with the mouse or choose its numbered prefix on the keyboard or C-Panel. Clicking the 'Cancel' button will return C-Plot to the **Main Menu**.

6.2 The 'Area – Add at Cursor' Function

The **Add at Cursor** function enables the cursor to be used to draw an area onto the chart display.

Access Sequences



→ → → 'Area (Fills)' → 'Add at Cursor'





Press 'Menu' → 3 → 0



Press Alt+M → 3 → 0

While in Area draw mode a coloured 'ADD AREA (fill)' bar will appear at the bottom of the screen. Position the cursor on the chart display where you want to draw the area boundary and click the left mouse button to draw. Continue moving the cursor and clicking the left mouse button until a satisfactory area boundary has been drawn, then click the 'OK' button on the 'ADD AREA (fill)' bar to save the area, or 'Cancel' to return to normal chart display mode.

 *When drawing an Area, C-Plot automatically joins the start and the end of the boundary to ensure that the area is closed.*

 *If an area is added with a 'Red' or 'Maroon' border it is classed as a 'Prohibited Zone'.*

'ADD AREA (fill)' Bar:

ADD AREA(Fill). Add Points with SELECT, to save Area press OK, or CANCEL to Exit

OK


Cancel

6.3 The 'Area - Edit' Function

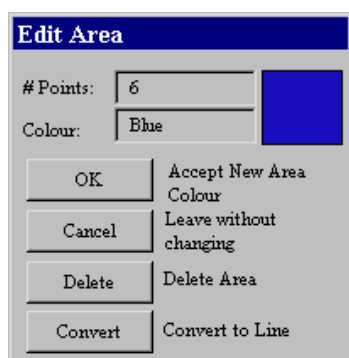
The **Edit** function enables the properties of existing areas to be modified.

Access Sequences



Initially an 'EDIT FILL' Bar appears at the bottom of the screen. To select an area to edit simply position the cursor over the boundary of the desired area and left click on the mouse () . Clicking 'Cancel' will return C-Plot to normal chart display mode.

'EDIT FILL' Bar:



The '# Points' data field contains the number of points contained in the boundary of the area. The 'Colour' field enables the boundary colour of the area to be set. Clicking the 'Colour' data field invokes an 'Edit Colour' dialogue box. Simply choose the desired colour and click 'OK' or 'Cancel' to return to the 'Edit Area' dialogue box. Clicking 'Cancel' returns C-Plot to normal display mode without changing the area properties. The 'Delete' button removes the area from the chart display. The 'Convert' button changes the boundary of the area into a line.

6.4 The 'Area – Delete' Function

The **Delete** function enables an area or group of areas to be removed from the chart display. Areas can be selected according to positional and colour criteria. This function deletes both saved and unsaved areas i.e. it will delete lines from a loaded User Chart as well as areas that have not been saved. In order to remove areas permanently from a saved

User chart, it is important to save the User chart once the desired areas have been deleted.

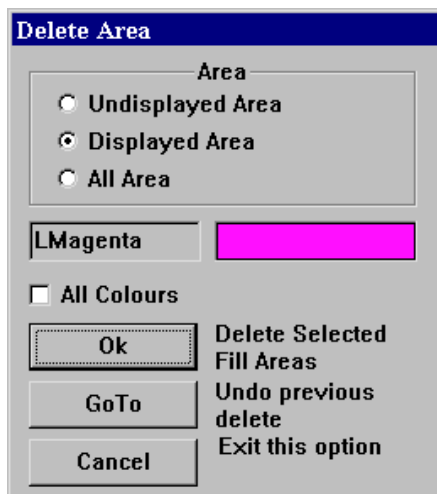
Access Sequences

  →  →  'Area (Fills)' →  'Delete'

 Press 'Menu' → 3 → 2

 Press Alt+M → 3 → 2

The **Area** section allows areas to be selected according to position.



Clicking in the colour data field invokes an 'Edit Colour' dialogue box, allowing areas to be selected by colour. Ticking (☒) the 'All Colours' box will select all the areas in the selected area.

Clicking 'OK' performs the delete operation on the areas that meet the selection criteria. 'GoTo' reverses the previous 'Delete' operation performed on one or more areas. 'Cancel' returns C-Plot to chart display mode.

7.0 Track

7.1 The Track Menu

The track is the coloured line that indicates the past course of the vessel. It can be configured to display additional information such as temperature, depth, hardness, etc. The **Track Menu** facilitates access to all C-Plot functions pertaining to the vessel's track. This menu can be accessed from the main chart display using any one of the following sequences.



Access Sequences:



→ → → 'Track'.



Press 'Menu' → 4.



Press Alt+M → 4.

Selecting a function from the **Track Menu** is exactly the same as selecting a sub-menu from the **Main Menu**. Simply click the desired function with the mouse or choose its numbered prefix on the keyboard or C-Panel.



7.2 The 'Track – Interval' Function

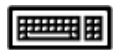
Access Sequences:



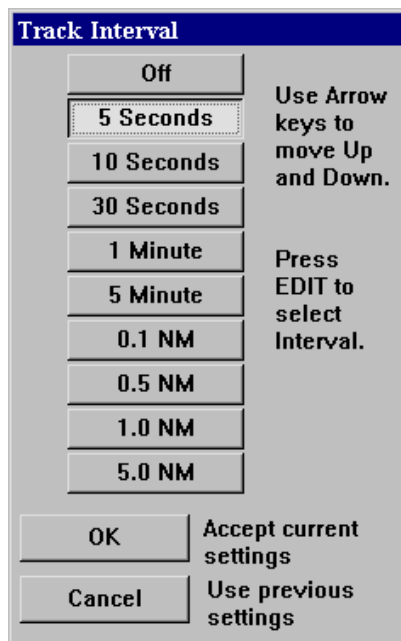
→ → → 'Track' → → 'Interval'



Press 'Menu' → 4 → 0




Press Alt+M → 4 → 0




The **Interval** function enables the rate at which the track data is saved to be set. For example: if the track interval is set to '5 seconds', track data will be saved every 5 seconds.

The track interval parameter can be set according to time elapsed or distance traveled. To change the track interval simply click on the desired setting.

 *Setting the track interval to 'OFF' will de-activate the track display. This means that no track information will be displayed/stored.*

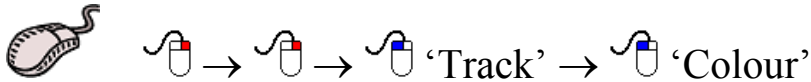
 *The recommended setting for the track interval is '5 seconds'.*

 *The track is drawn on the screen at the same rate as the connected GPS antenna updates the positional information. If the screen is redrawn (i.e. the chart is moved), the track will revert to the saved data when it redraws.*

7.3 The ‘Track - Colour’ Function

The **Colour** function enables the colour of the current track to be modified.

Access Sequences:



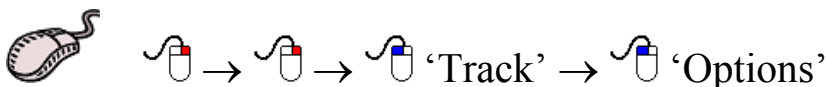
This function invokes an ‘Edit Colour’ dialogue box. In order to modify the colour of the current track simply click the desired colour and then ‘OK’ or ‘Cancel’ to return C-Plot to normal chart display mode.

7.4 The ‘Track - Options’ Function

The **Options** function allows the track to be configured to represent incoming data. The type of input data that can be represented by the track includes:

- Temperature
- Depth
- Hardness

Access Sequences:



Track Display Options

Set Shift C*10

Set Scale C*10

Set Width Pixels

Set Mode

☐ Colour

☐ Depth

☐ Hardness

☒ Temperature

☒ Display Colour Table

Current Settings are accepted

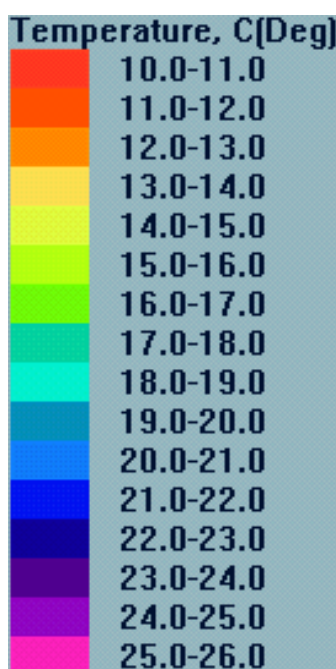
Previous settings are not changed

The 'Set Shift' data field allows the lowest value, represented by the track, to be set. To modify this value simply click in the data field to invoke the 'Edit Value' dialogue box. Enter the new value in the 'New Data' field and click 'OK' to accept the new value or 'Cancel' to return to the 'Track Display Options' dialogue box without changing the value.

The 'Set Scale' data field displays the current value of the step-size between the values represented by the track. To modify this value simply click in the data field to



invoke the 'Edit Value' dialogue box. Enter the new value in the 'New Data' field and click 'OK' to accept the new value or 'Cancel' to return to the 'Track Display Options' dialogue box without changing the value.


The 'Set Width' data field displays the current width (in pixels) of the track. To modify this value simply click in the data field to invoke the 'Edit Value' dialogue box. Enter the new value in the 'New Data' field and click 'OK' to accept the new value or 'Cancel' to return to the 'Track Display Options' dialogue box without changing the value.



Temperature Mode Only: 1 unit = 0.1 °C - The 'Shift' and 'Scale' properties are multiplied by a factor of ten. This means that when the value of these properties is inputted it should be ten times the desired value (i.e. Inputting a value of 10 in the 'Set Scale' actually causes the step-size (scale) to be 1 °C).

The 'Set Mode' section allows the type of data that the track represents to be configured. The colour option simply displays the track as the selected colour (See section 7.3). While in colour mode only the 'Set Width' property can be modified.

When the 'Display Colour Table' box is ticked () a coloured bar will appear in the bottom-left corner of the main chart display (Track Display area). This Bar displays the type of input data being displayed and the colour which represents a certain range of values. (i.e. In this example the 'Magenta' colour () represents the range of temperatures from 25.0°C to 26.0°C).

 *The coloured bar is not displayed when the track has been set to 'Colour' mode.*

Once the desired modifications to the track options have been made click 'OK' to accept them or 'Cancel' to return C-Plot to normal chart display mode without changing the track options.

7.5 The 'Track - Edit' Function

The **Edit** function allows the current track and past tracks to be altered.

Access Sequences:




 →  →  'Track' →  'Edit'



Press 'Menu' → 4 → 3



Press Alt+M → 4 → 3

When this function is performed initially an 'EDIT TRACK' Bar appears at the bottom of the screen setting C-Plot into 'Track Select mode'. To select a track to edit simply position the cursor over the desired track and left click on the mouse (). Clicking 'Cancel' will return C-Plot to normal chart display mode.

'EDIT TRACK' Bar:

EDIT TRACK. Place Cursor on Track, Press SELECT, or CANCEL to Exit

Cancel



The ‘# Points’ data field displays the number of points contained in the selected track. The ‘Colour’ data field displays the selected track’s colour. Clicking in this field invokes an ‘Edit Colour’ dialogue box, simply click on the desired colour and then click ‘OK’ to accept the change or ‘Cancel’ to return to the ‘Edit Track’ dialogue box.

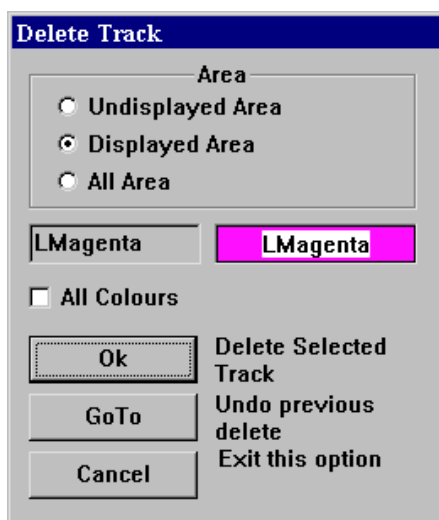
Clicking on the ‘Delete’ button will remove the selected track from the chart display. Clicking the ‘GoTo’ button will split the track at the selected point to become two separate tracks.

Click ‘OK’ to accept all modifications to the current track or ‘Cancel’ to return to ‘Track Select Mode’.

7.6 The ‘Track – Delete’ Function

The **Delete** function enables a track or group of tracks to be removed from the chart display according to the selection criteria. The selection criterion has two components, position and colour.

Access Sequences:



Press ‘Menu’ → 4 → 4



Press Alt+M → 4 → 4

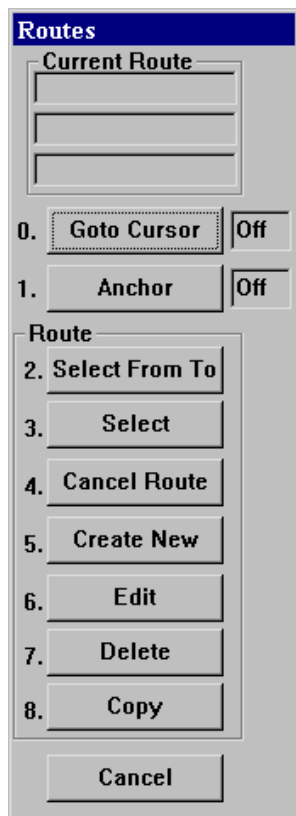
The **Area** section allows tracks to be selected according to position. Clicking in the colour data field invokes an ‘Edit Colour’ dialogue box, allowing tracks to be selected by colour. Ticking (☒) the ‘All Colours’ box will select all the tracks in the selected area.

Clicking 'OK' performs the delete operation on the tracks that meet the selection criteria. 'GoTo' reverses the previous 'Delete' operation performed on one or more tracks. 'Cancel' returns C-Plot to chart display mode.

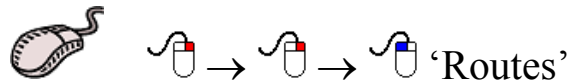
8.0 Routes

8.1 The Routes Menu

A route is the desired path of the vessel. If an autopilot is connected to the system C-Plot can provide steering information to the autopilot so that the vessel will follow the route automatically. The **Route Menu** facilitates access to all C-Plot functions pertaining to routes. This menu can be accessed from the main chart display using any one of the following sequences.



Access Sequences:



Selecting a function from the **Routes Menu** is exactly the same as selecting a sub-menu from the **Main Menu**. Simply click the desired function with the mouse or choose its numbered prefix on the keyboard or C-Panel. Clicking 'Cancel' will return C-Plot to normal chart display mode.

The 'Current Route' section at the top of the **Routes Menu** displays information relating to the selected route. This information includes the name of the route, and the position of the current waypoint in the route to which the vessel is heading.

8.2 The 'Routes - Goto Cursor' Function

The **Goto Cursor** function enables a single waypoint to be placed using the cursor.

Access Sequences:



When this function is performed initially a 'GOTO' Bar appears at the bottom of the screen.

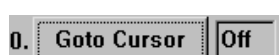
'GOTO' Bar:

GOTO. Position Cursor, Press SELECT

Simply position the cursor over the desired position of the waypoint on the chart and click the left mouse button. A waypoint will appear with a single route leg between the vessel's current position and the waypoint (See figure 8.1). The **Route Menu** will show that **Goto Cursor** mode is 'ON' and the 'Current Route' section will display the position of the waypoint.



Selecting the **Goto Cursor** while it is 'ON' will disable **Goto Cursor** mode (i.e. Set it to 'OFF').



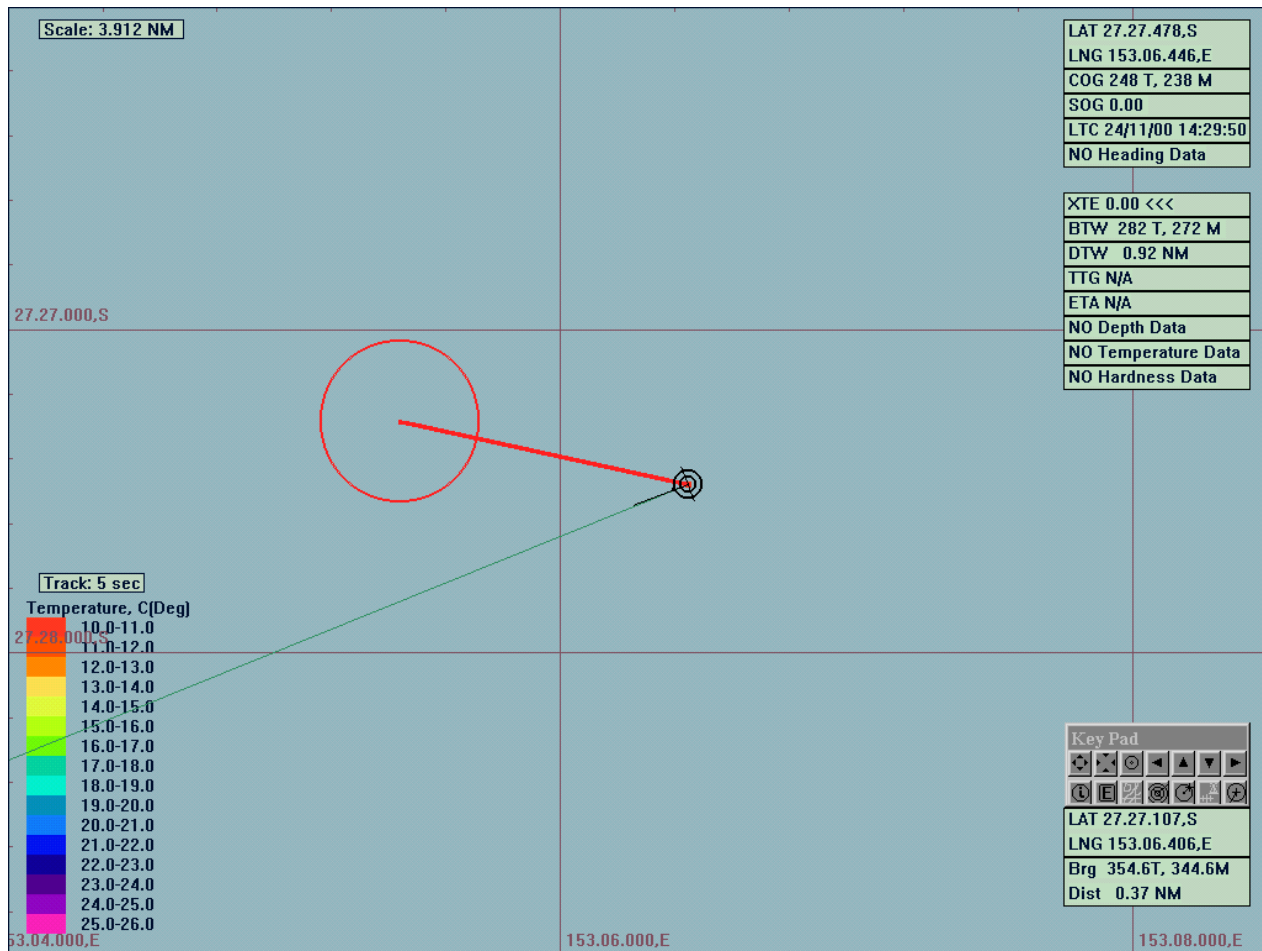


Figure 8.1

8.3 The 'Routes - Anchor' Function

The **Anchor** function sets C-Plot into **Anchor** mode.

Access Sequences:



→ → → 'Routes' → → 'Goto Cursor'



Press 'Menu' → 5 → 1



Press Alt+M → 5 → 1

While in anchor mode an 'ANCHOR MODE' bar will appear at the bottom of the screen and a circular zone will be displayed on the main chart

display. This zone is the ‘Anchor Zone’ (See Figure 8.2). The size of the anchor zone can be set via the **Settings** menu (Section 9.6). While in **Anchor** mode, if the vessel strays outside of the ‘Anchor Zone’ an alarm will sound. To disable **Anchor** mode, simply click on the ‘Cancel’ button in the ‘ANCHOR MODE’ bar.

‘ANCHOR MODE’ Bar:

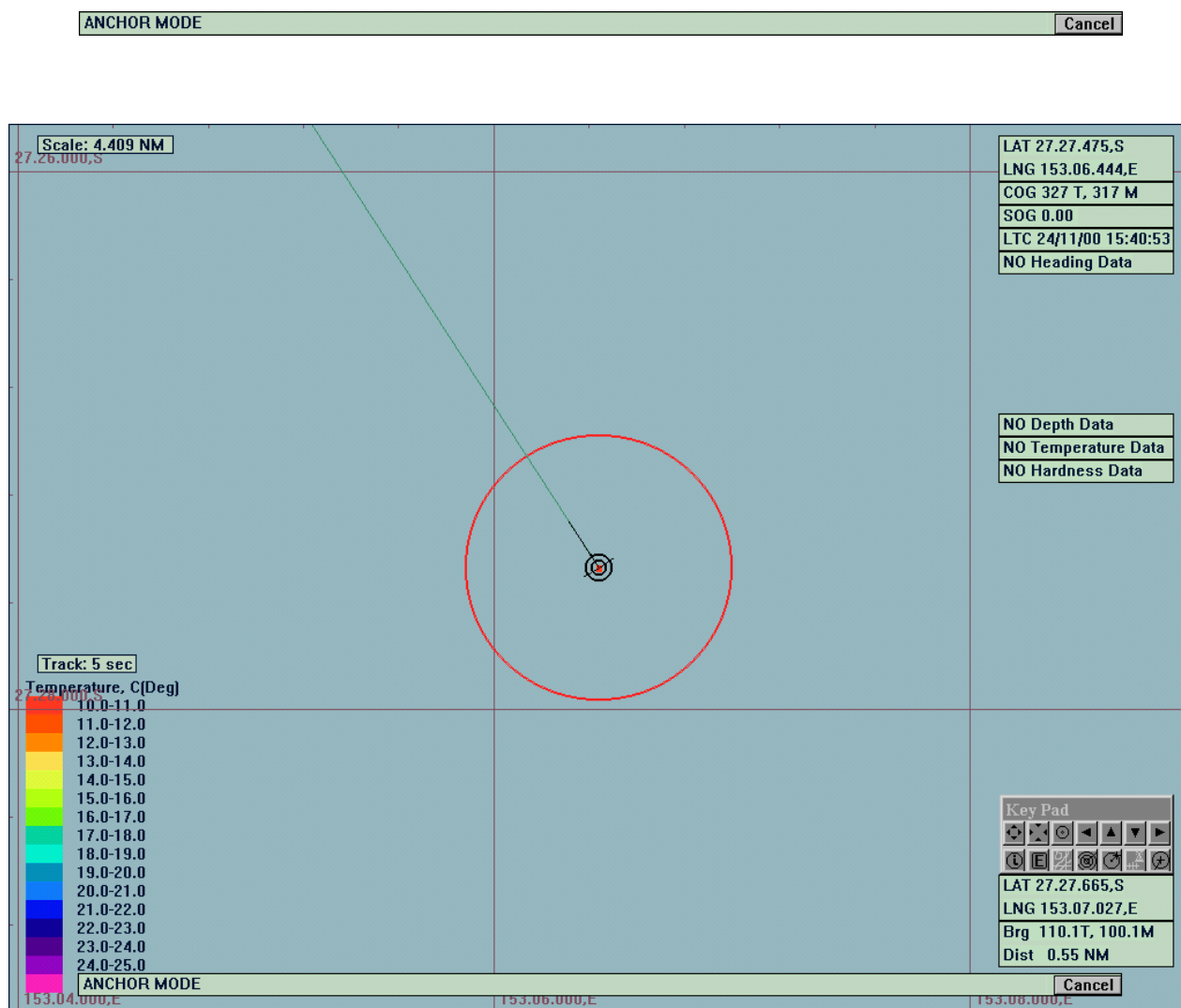


Figure 8.2

8.4 The ‘Routes – Select From To’ Function

The **Select From To** function enables a route, or portion of a route, to be traversed in either direction. This function also creates the first leg of the route between the vessel’s current position and the first chosen waypoint.

Access Sequences:



Initially a 'Select Route' dialogue box will be displayed. Select the desired route by clicking it, ensuring that it is highlighted, then click 'OK'. The desired route will now be displayed on the main chart display along with a 'SELECT START ROUTE WP' Bar at the bottom of the screen. Simply choose any waypoint on the route as the first waypoint to travel toward. Now a 'SELECT END ROUTE WP' Bar will appear at the bottom of the screen. Choose any waypoint on the route as the final waypoint.

After performing the above operations there are two details to notice:

1. The first leg of the route is from the vessel's current position to the first chosen waypoint.
2. The route will be traversed 'From' the first waypoint 'To' the last chosen waypoint, regardless of the initial route direction.

An example of the **Select From To** function can be seen in figure 8.3.

'SELECT START ROUTE WP' Bar:

SELECT START ROUTE WP. Place Cursor on Start WP, Press SELECT, or CANCEL to Exit Cancel

'SELECT END ROUTE WP' Bar:

SELECT END ROUTE WP. Place Cursor on End WP, Press SELECT, or CANCEL to Exit Cancel

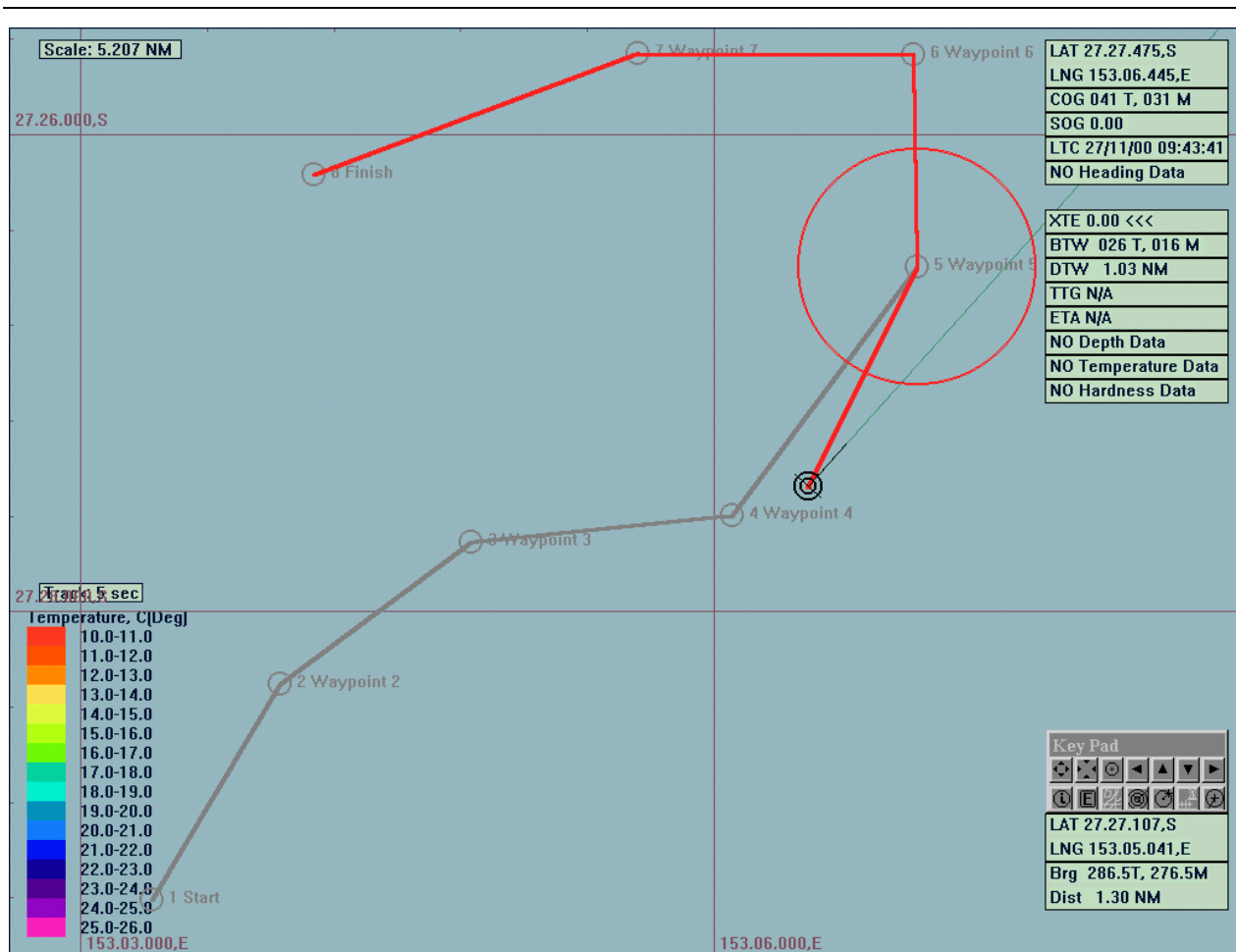


Figure 8.3

8.5 The 'Routes - Select' Function

The **Select** function enables a route, or portion of a route, to be traversed in ONLY the forward direction. This function automatically selects the closest waypoint and includes the remainder of the forward route (See figure 8.4).

Access Sequences:



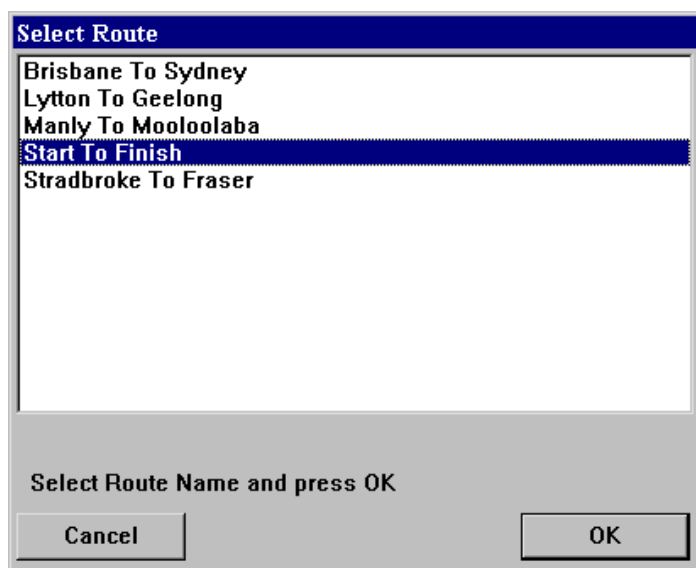
→ → → 'Routes' → 'Select'



Press 'Menu' → 5 → 3



Press Alt+M → 5 → 3



Initially a 'Select Route' dialogue box will be displayed. Select the desired route by clicking it ensuring that it is highlighted, then click 'OK'. The selected route will now appear on the main chart display and C-Plot will automatically choose the closest waypoint in the forward direction as the first waypoint. The route will include all

waypoints from the automatically chosen one to the last waypoint.

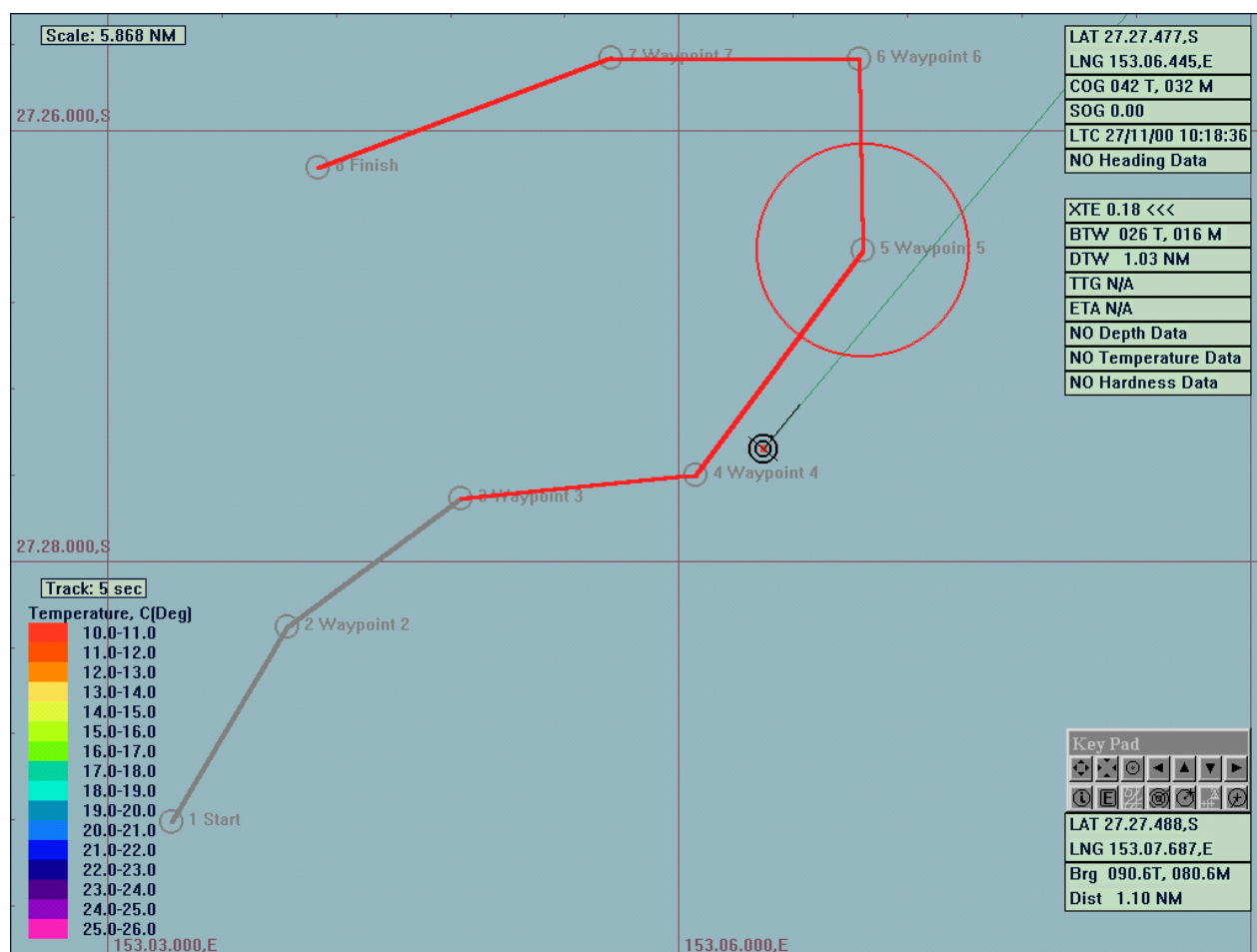


Figure 8.4

8.6 The 'Routes – Cancel Route' function

The **Cancel Route** function removes the currently selected route from the main chart display.

Access Sequences:



8.7 The 'Routes – Create New' Function

The **Create New** function allows new routes to be entered into C-Plot.

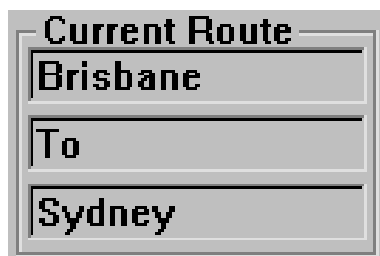
Access Sequences:



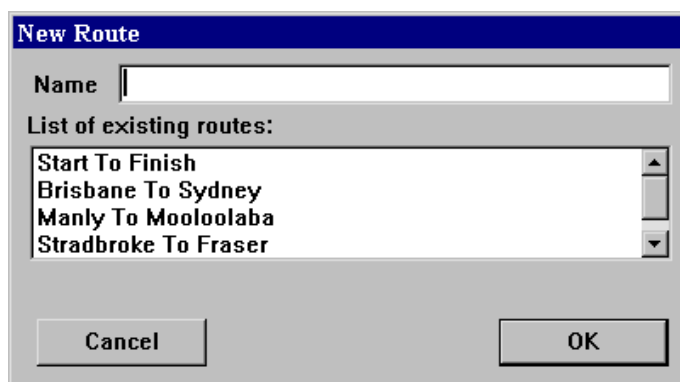
The first detail to be considered when creating a new route is its name. It is advised that the naming of a route abide by the following convention:

Start Point Name followed by the word 'To' then the Destination Name

For example: If the new route to be entered were from Brisbane to Sydney the appropriate route name would be – Brisbane To Sydney. Therefore when this route is selected, the name of the route will appear in the ‘Current Route’ area of the **Route Menu**.



To name the new route simply enter the desired name into the ‘Name’ field on the ‘New Route’ dialogue box. A list of existing routes is provided so that identical route names can be avoided. Before entering the name for a new route it may be wise to check that the desired name for the new route isn’t already being used.



After choosing an appropriate name for the new route click ‘OK’, this will invoke an ‘ADD ROUTE’ Bar at the bottom of the screen. All that remains is to draw the route on the main chart display. To do this simply position the cursor over the point on the chart where a waypoint is desired and click the left mouse button. Continue adding ‘legs’ in this manner until all desired waypoints have been entered. Click ‘OK’ on the ‘ADD ROUTE’ bar to accept the new route or ‘Cancel’ to return to the main chart display without creating a new route.

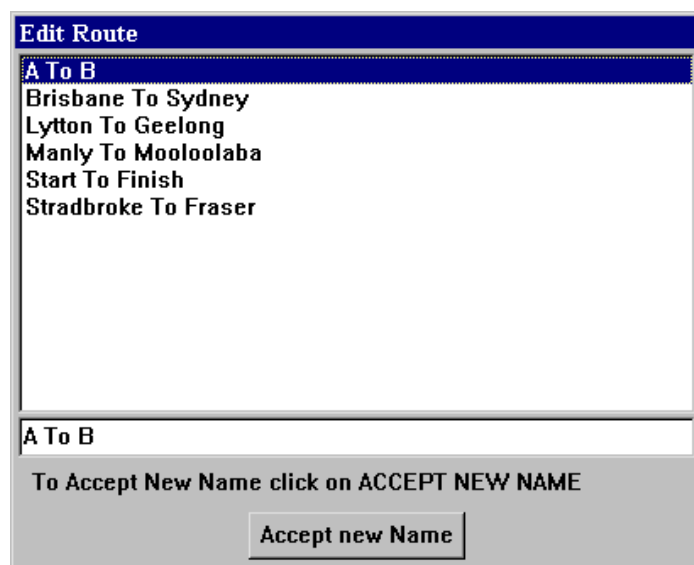
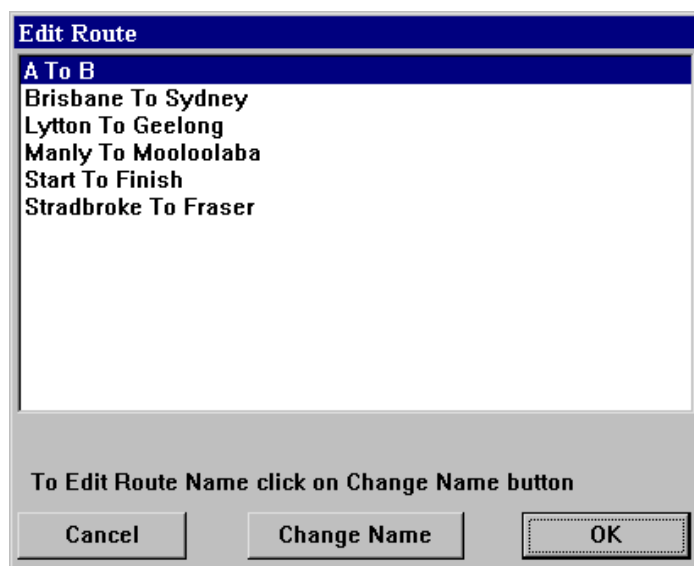
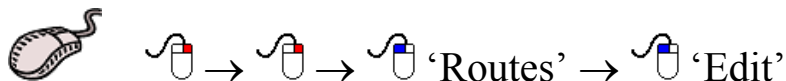
‘ADD ROUTE’ Bar:



8.8 The 'Routes - Edit' Function

The **Edit** function enables existing routes to be modified.

Access Sequences:



Initially the **Edit** function invokes an 'Edit Route' dialogue box. To select a route to modify, simply highlight the desired route and click 'OK'. Clicking cancel will return C-Plot to normal main chart display mode. If the name of the route is to be changed, this can be done from the 'Edit Route' dialogue box by clicking on 'Change Name'. Enter the new name in the field provided and click 'Accept new Name'.

Once the desired route has been selected click 'OK' to continue editing. Clicking 'Cancel' will return C-Plot to normal chart display mode. Route editing is almost identical to line editing, consult **Point-by-Point** line editing (Section 5.3.1) for more

information on editing the selected route. The only notable difference between route editing and line editing is the ability to name each individual waypoint on the route. This information can be entered using the Route edit table shown in figure 8.5. To enter a name for a particular waypoint, select the 'Name' column of the point in the Route Table and enter the new name.

Route : Start To Finish						
	Number	Name	Lat	Lng	Brg (Deg)	Dist NM
1		Start	27 29.211 S	153 03.338 E		
2		Waypoint 2	27 28.306 S	153 03.946 E	30.8	1.055 NM
3		Waypoint 3	27 27.711 S	153 04.851 E	53.5	1.002 NM
4		Waypoint 4	27 27.599 S	153 06.089 E	84.2	1.106 NM
Points : 8			Point to Center		Total Distance: 7.978 NM	

Figure 8.5

8.9 The 'Routes - Delete' Function

The **Delete** function allows the selected route to be removed.

Access Sequences:



→ → 'Routes' → 'Delete'

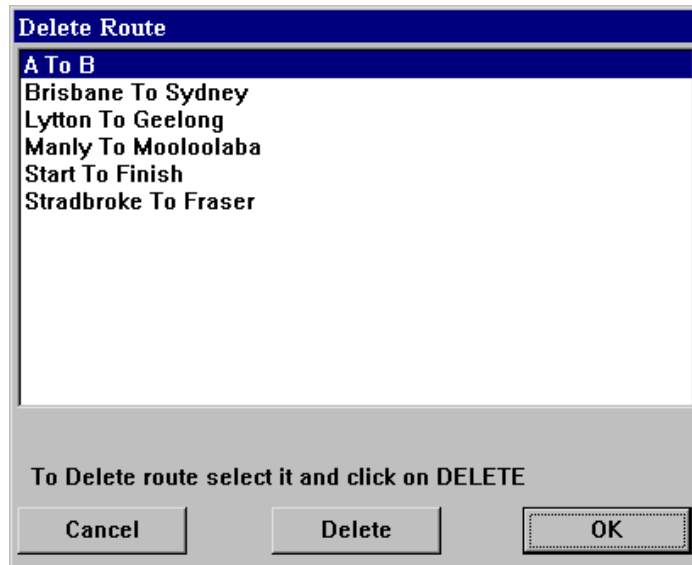


Press 'Menu' → 5 → 7



Press Alt+M → 5 → 7

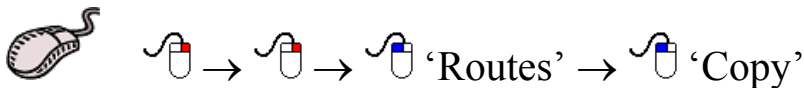
Simply select the route to be removed in the 'Delete Route' dialogue box and click on the 'Delete' button. Clicking 'Cancel' will return C-Plot to normal chart display mode.



8.10 The 'Routes - Copy' Function

The **Copy** function allows Routes to be backed up on a floppy disc, or stored elsewhere on the computer's hard drive.

Access Sequences:

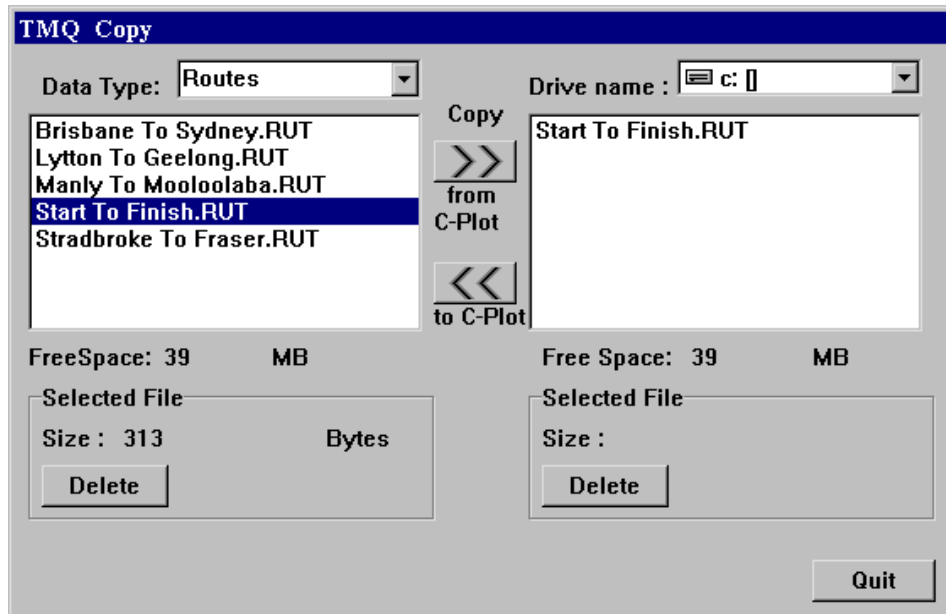


Press 'Menu' → 5 → 8



Press Alt+M → 5 → 8

The 'Data Type' is set to Routes and cannot be changed. The destination drive can be selected by use of the 'Drive name' drop down list. The list of files on the left-hand side of the dialogue box shows the route files that are stored in C-Plot. The list on the right-hand side of the dialogue box displays the files in the currently selected destination drive. The 'Free Space' parameters display the amount of unused disc space in both the C-Plot and destination drives. The selected file section outlines the size of the file selected and provides a button for deleting the selected file.



File Backup procedure:

1. Select the desired destination drive (Drive Name)
2. Select the file to be backed up from the left-hand list
3. Click the 'Copy from C-Plot' button (>>)
4. Repeat steps 3 & 4 until all desired files of this data type are backed up

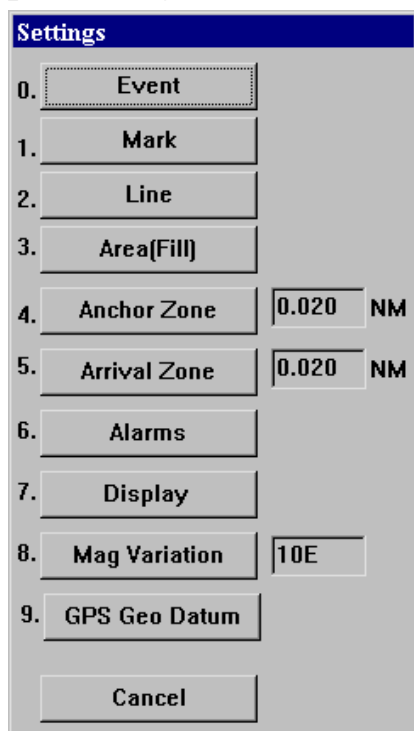
File Restoration procedure:

1. Select the desired Source drive (Drive Name)
2. Select the file to be restored from the right-hand list
3. Click the 'Copy to C-Plot' button (<<)
4. Repeat steps 3 & 4 until all desired files of this data type are restored

9.0 Settings

9.1 The Settings Menu

The **Settings Menu** facilitates access to all C-Plot function pertaining to the internal settings of C-Plot. Settings such as mark & event symbols, line & area colour, etc. can all be adjusted from this sub-menu. This menu can be accessed from the main chart display using any one of the following sequences.



Access Sequence:



→ → → 'Settings'.



Press 'Menu' → 6



Press Alt+M → 6

Selecting a function from the **Routes Menu** is exactly the same as selecting a sub-menu from the **Main Menu**. Simply click the desired function with the mouse or choose its numbered prefix on the keyboard or C-Panel. Clicking 'Cancel' will return C-Plot to normal chart display mode.

9.2 The 'Settings - Event' Function

The **Event** function enables the default settings for events to be modified.

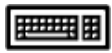
Access Sequence:



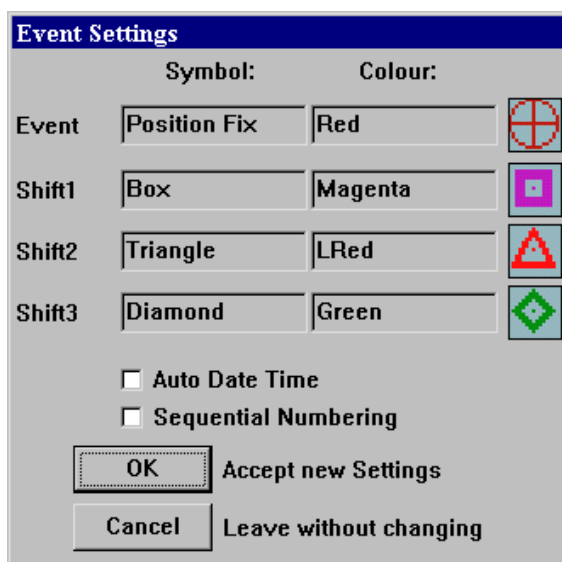
→ → → 'Settings' → → 'Event'



Press 'Menu' → 6 → 0



Press Alt+M → 6 → 0



The 'Event Settings' dialogue box allows the 4 default symbol/colour combinations to be set. To change any of the symbols simply click in the appropriate symbol field to invoke a 'Symbol Edit' dialogue box. To change any of the symbols colours simply click in the appropriate colour field to invoke a 'Colour Edit' dialogue box.

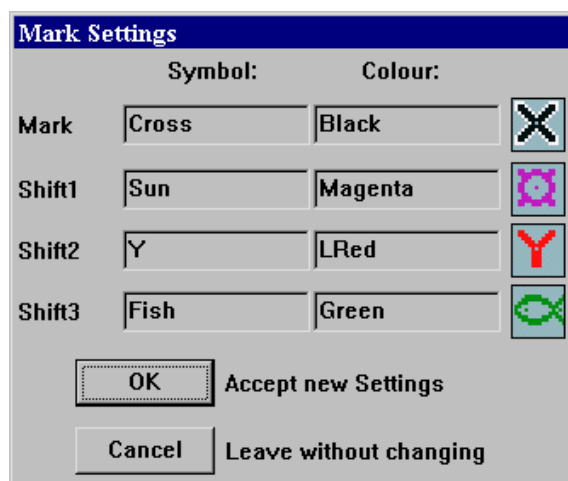
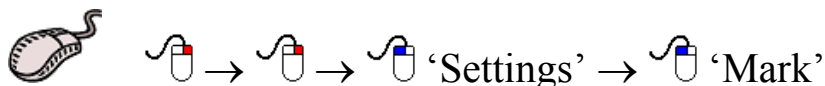
The 'Auto Date Time' box allows the time and the date to be automatically entered into an event's information at the time of creation. To enable this feature simply 'tick' the box (☒). If this box is not ticked (☐) this feature has been disabled. The 'Sequential Numbering' feature automatically numbers the events sequentially as they are created.

Click 'OK' to accept any changes to the event settings or 'Cancel' to return C-Plot to normal display mode without accepting the changes.

9.3 The 'Settings - Mark' Function

The **Mark** function enables the default settings for marks to be modified. These symbols appear in the 'ADD Mark' bar when adding marks at the cursor (See Section 4.2).

Access Sequence:



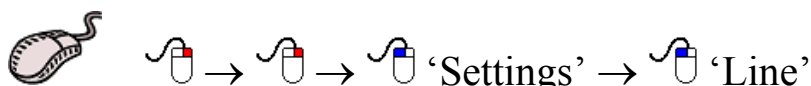
The 'Mark Settings' dialogue box allows the 4 default symbol/colour combinations to be set. To change any of the symbols simply click in the appropriate symbol field to invoke a 'Symbol Edit' dialogue box. To change any of the symbols colours simply click in the appropriate colour field to invoke a 'Colour Edit' dialogue box.

Click 'OK' to accept any changes to the mark settings or 'Cancel' to return C-Plot to normal display mode without accepting the changes.

9.4 The 'Settings - Line' Function

The **Line** function allows the default line colour to be set.

Access Sequence:

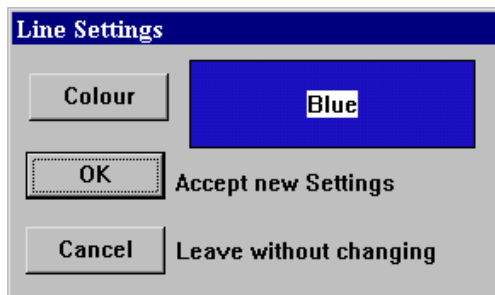




Press 'Menu' → 6 → 2



Press Alt+M → 6 → 2



To change the default colour of lines in C-Plot simply click the colour button. This will invoke an 'Edit Colour' dialogue box. Click on the desired colour and then 'OK'. Clicking 'Cancel' will return to the 'Line Settings' dialogue box. Click 'OK' on the 'Line Settings' dialogue

box to accept the line settings, or 'Cancel' to return C-Plot to normal chart display mode.

9.5 The 'Settings – Area (Fill)' Function

The **Area** function allows the default line colour to be set.

Access Sequence:



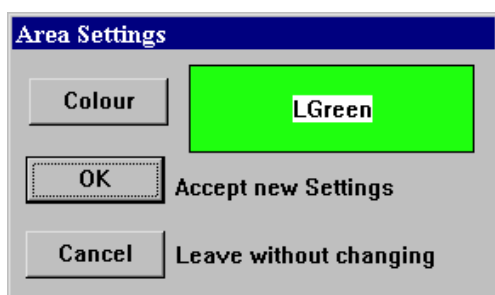
→ → → 'Settings' → 'Area (Fills)'



Press 'Menu' → 6 → 3



Press Alt+M → 6 → 3



To change the default colour of areas in C-Plot simply click the colour button. This will invoke an 'Edit Colour' dialogue box. Click on the desired colour and then 'OK'. Clicking 'Cancel' will return to the 'Area Settings' dialogue box. Click 'OK' on the 'Area Settings' dialogue

box to accept the area settings, or 'Cancel' to return C-Plot to normal chart display mode.

9.6 The 'Settings – Anchor Zone' Function

The **Anchor Zone** function allows the radius of the anchor zone to be set. The anchor zone radius must be between 0.02NM and 10NM. The anchor zone size is used while in anchor mode (See Section 8.3).

Access Sequence:



→ → 'Settings' → 'Anchor Zone'



Press 'Menu' → 6 → 4



Press Alt+M → 6 → 4



The current radius of the anchor zone is shown next to the 'Anchor Zone' function access button in the settings menu.

4. **Anchor Zone** | 0.005 NM

When modifying the radius of the anchor zone an 'Edit Value' dialogue box will be displayed. Simply enter the new anchor zone radius in the 'New Data' field and click 'OK' or 'Cancel' to leave the current radius.

Anchor Zone	
Old Data:	10 NM
New Data:	0.02 NM
<input type="button" value="OK"/>	Accept new Data
<input type="button" value="Cancel"/>	Leave without changing

9.7 The 'Settings – Arrival Zone' Function

The **Arrival Zone** function allows the radius of the arrival zone to be set. The arrival zone radius must be between 0.02NM and 10NM. The arrival zone size is used when traversing a route; it is centered on each waypoint in the route in turn. As the vessel enters the final arrival zone of the route C-Plot can be configured to issue an audible alert.(See Section 9.8)

Access Sequence:



Press 'Menu' → 6 → 5

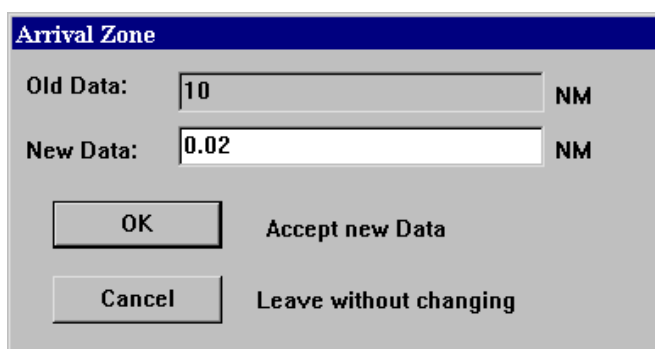


Press Alt+M → 6 → 5

The current radius of the arrival zone is shown next to the 'Arrival Zone' function access button in the settings menu.



When modifying the radius of the arrival zone an 'Edit Value' dialogue box will be displayed. Simply enter the new arrival zone radius in the 'New Data' field and click 'OK' or 'Cancel' to leave the current radius.



9.8 The 'Settings - Alarms' Function

The **Alarms** function allows the audible alerts included in C-Plot to be enabled or disabled.

Access Sequence:

  →  →  'Settings' →  'Alarms'

 Press 'Menu' → 6 → 6

 Press Alt+M → 6 → 6



Alarms		
0.	GPS	Off
1.	Vessel Passed	On
2.	Zone Entered	On
3.	Incorrect Dir	Off
4.	Time	Off
5.	Heading	Off
6.	Depth	Off
7.	Temperature	Off
8.	Hardness	Off
9.	External Alarm	On
OK		

The concept of setting the alarm parameters is straightforward. Simply clicking the appropriate function access button with the mouse, or inputting the numbered prefix using the C-Panel or keyboard can toggle each alarm parameter.

0. **GPS** – This alarm will be activated if GPS data is no longer being refreshed.
1. **Vessel Passed** – This alarm will be activated if the vessel passes through the final arrival zone on a selected route.
2. **Zone Entered** – This alarm will be activated when the vessel enters an arrival zone around a waypoint.
3. **Incorrect Direction** – This alarm will be activated if the vessel's heading is greater than 90° from the heading needed to reach the next waypoint.
4. **Time** – This alarm will be activated if Time data is no longer being refreshed.
5. **Heading** – This alarm will be activated if Heading data is no longer being refreshed.
6. **Depth** – This alarm will be activated if Depth data is no longer being refreshed.

7. **Temperature** - This alarm will be activated if Temperature data is no longer being refreshed.
8. **Hardness** - This alarm will be activated if Hardness data is no longer being refreshed.
9. **External Alarm** – This parameter enables or disables the External alarm on the C-Panel. The external alarm will be triggered when any of the above alarms have been activated.

Once the alarm parameters have been set click 'OK' to accept the settings.

9.9 The 'Settings - Display' Function

The **Display** function allows the items that are displayed in the Ship Position Data and the Input Data areas of the main chart display to be enabled or disabled.

Access Sequence:



→ → → 'Settings' → 'Display'



Press 'Menu' → 6 → 7



Press Alt+M → 6 → 7

Ship Position Data:

LAT 27.27.475,S
LNG 153.06.447,E
COG 063 T, 053 M
SOG 0.00
LTC 28/11/00 10:44:16
HDT 50.20

Input Data :

Depth 29.90 M
Temp 22.88 C
NO Hardness Data

Key Pad:









The concept of setting the display parameters is straightforward. Simply clicking the appropriated function access button with the mouse, or inputting the numbered prefix using the C-Panel or keyboard can toggle each display parameter.

9.9.1 The ‘Chart Display Settings’ Function

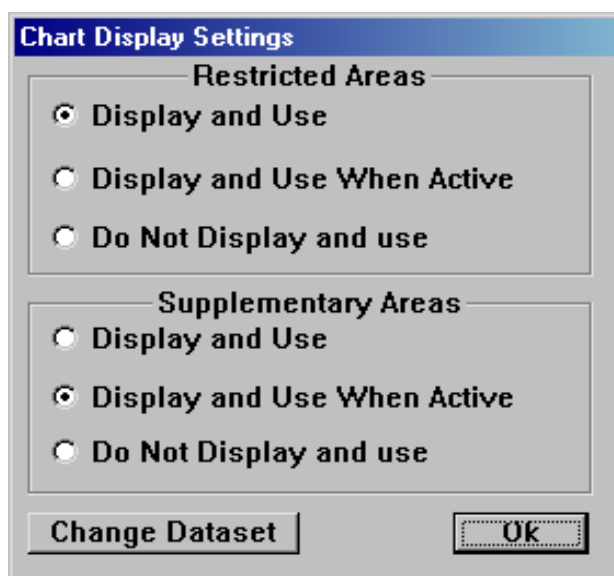
The **Chart Display** function allows the Special purpose areas that are displayed on top of the main chart to be enabled, activated or disabled.

Access Sequence:

  →  →  ‘Settings’ →  ‘Display’ →  ‘Chart Display’

 Press ‘Menu’ → 6 → 7 → 8

 Press Alt+M → 6 → 7 → 8



There are two types of Special Areas they are the following:

- Restricted Areas;
- Supplementary Areas;

Restricted Areas are semitransparent light red zones with special prohibition conditions like “Fishing Prohibited”, “Navigation Prohibited”, “Entry prohibited” etc.

Supplementary Areas are semi-transparent non-red zones with special warning or information conditions like “Gear Trial Area”, “Assembly Area”, “Transit Corridor” or “Daylight fishing area” etc.

If time interval(s) is specified for the object, it can be active and inactive according to current time (UTC) of displaying the object. If current time is inside of specified time interval it will be active otherwise inactive.

Difference between “Restricted Areas” and “Supplementary Areas” is that the “Restricted Area” object at “Display and Use” mode will be change its colour to yellow when it is inactive. Also when Restricted Area active C-Plot will produce verbal alarm “Zone Entered” and will bring an Alarm Message box.

If you as a skipper do not need any alarm warnings, let’s say your boat is a pleasure boat or you do not care about restrictions at all you can switch this alarm off by selecting in appropriate group box “Do not Display and use” option.

Shown below are a few examples of displaying such objects:

Chart Display Settings: Display and Use when active for both Restricted and Supplementary Areas. 26/05/2001 15:13

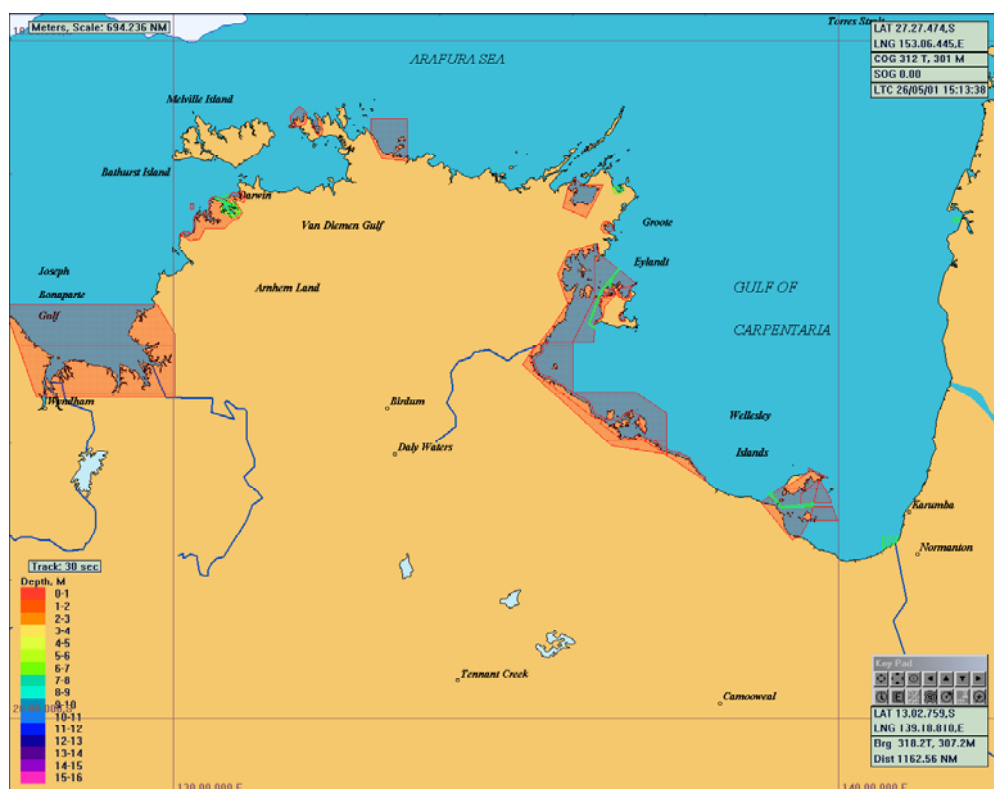


Chart Display Settings: Display and Use when active for both Restricted and Supplementary Areas. 28/05/2001 15:13.

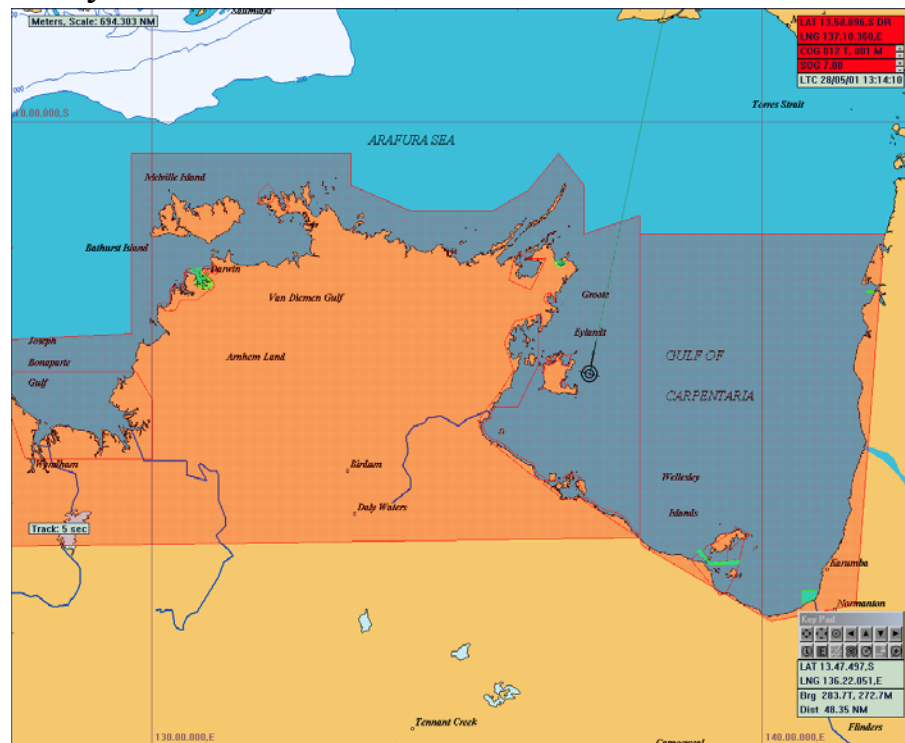


Chart Display Settings: Display and Use when active for both Restricted and Supplementary Areas. 1/04/2001 14:13. Entry to the Closure Area is prohibited in the area marked by green fishing and anchoring is prohibited.

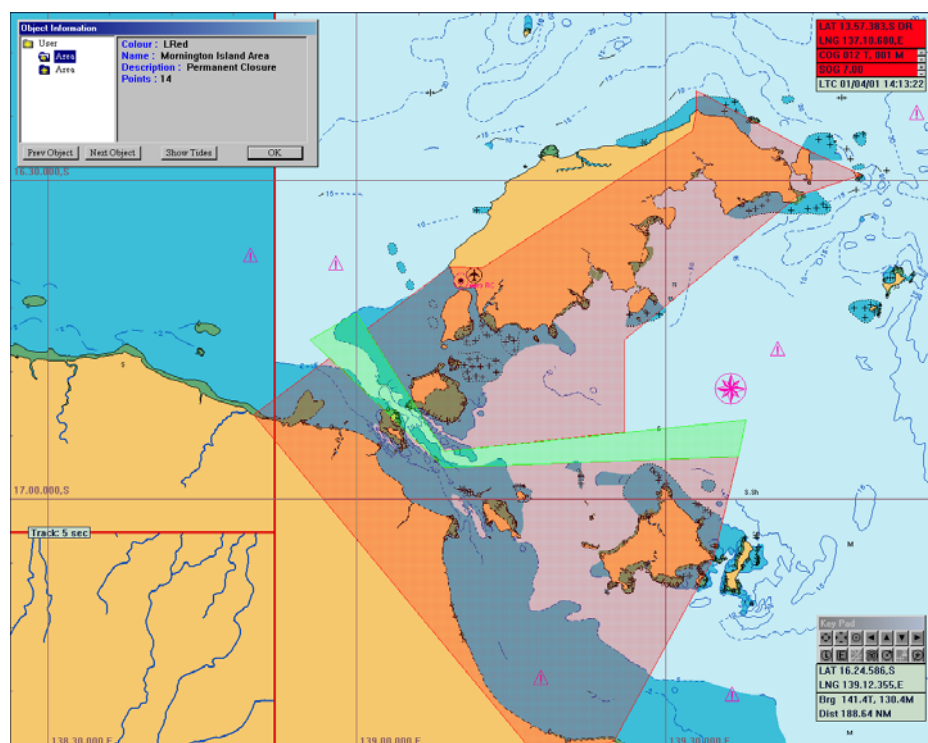


Chart Display Settings: Display and Use when active for both Restricted and Supplementary Areas. 1/04/2001 20:13. Night Time Warning. It means you can stay inside of Magenta Area but that time fishing is prohibited.

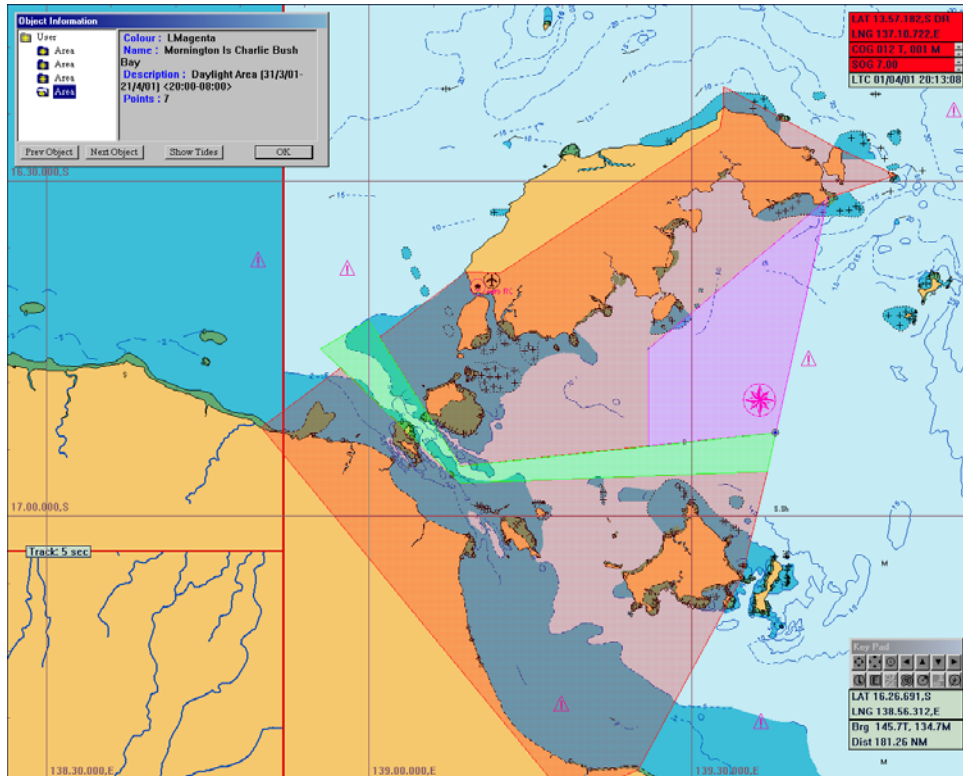


Chart Display Settings: Display and Use when active for both Restricted and Supplementary Areas. 1/04/2001 20:13

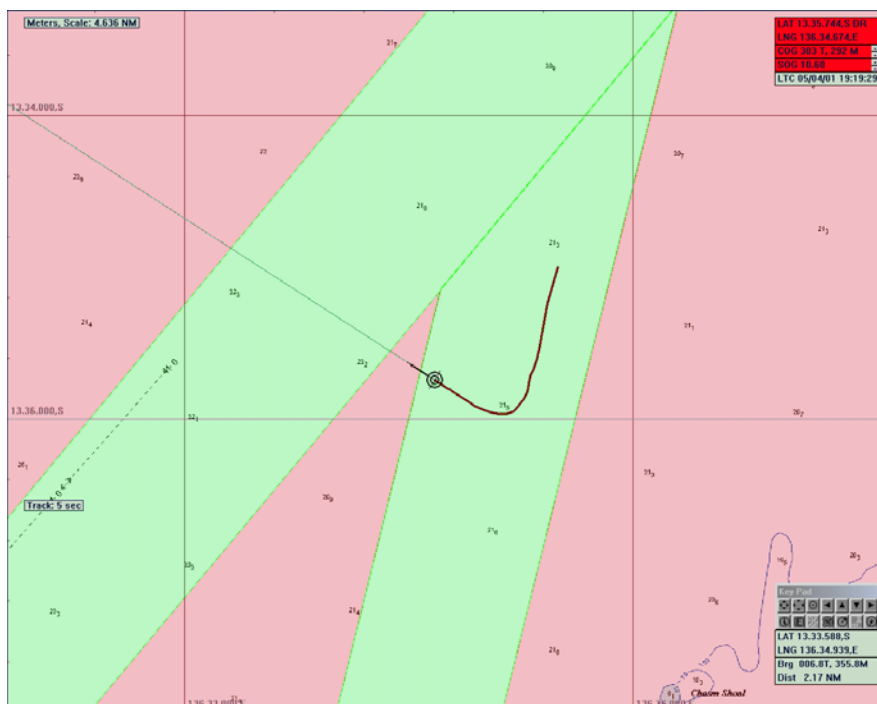
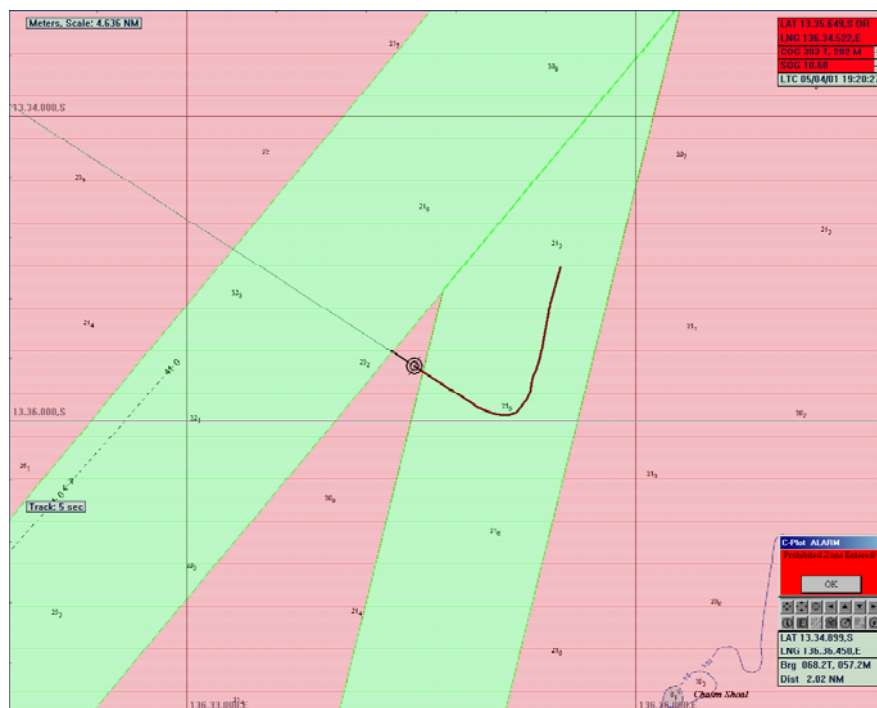


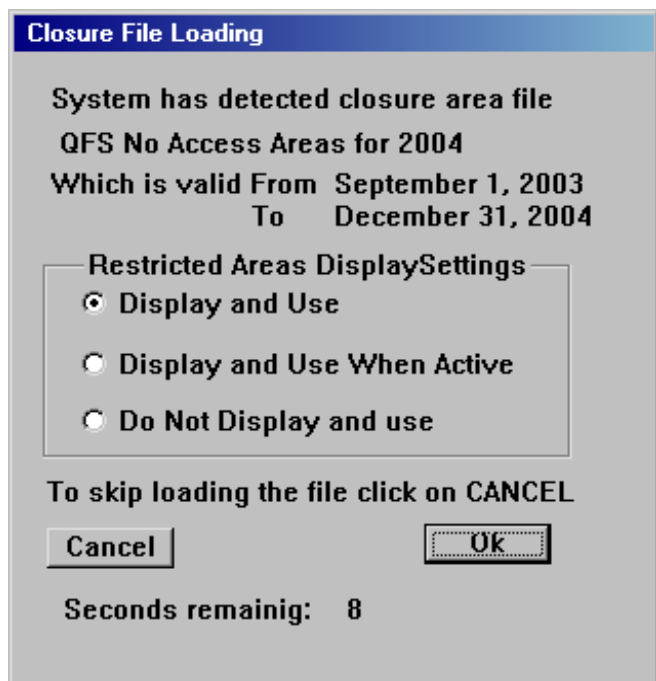
Chart Display Settings: Display and Use when active for both Restricted and Supplementary Areas. 1/04/2001 20:13. Alarm will appear when vessel occurs inside of restriction area.



9.9.2 QFS and NPF Dataset Activation / Selection

C-Plot automatically identifies encrypted supplementary data such as Closure Areas information. This data can be installed from a dedicated CD, e.g. QFS (East Coast Trawl Closure- Queensland DPI), or from the original C-Plot Installation Disc for NPF (North Prawns Fisheries) Authorities Closure files. ***This zone closure data will be available only during the subscription time specified.***

QFS closure periods are set by Qld Government Regulations, usually for a calendar year. NPF closures are from 1 March of the current year to 1 March of the following year.(For more information contact the Dept. Primary Industries – Fisheries Management Plan)



Once the zone closure data is installed, C-Plot will confirm that the data is available each time you start the C-Plot application and correct UTC Time/Date information is detected.

The Dialogue box above will appear for 10 seconds only. During this time you can either skip loading, by clicking on the Cancel button, or change Restricted Areas Display Settings as required.

QFS Closure Data base has six different Closure Data Sets:

1. Deep Water Net Areas
2. Lake /Lagoon Closures
3. No Access Areas
4. Trawl Closures
5. Trawl Endorsement Areas
6. Water Way Closures

During installation of QFS data or from C-Plot

Access Sequence:



→ → → 'Settings' → → 'Chart Display'

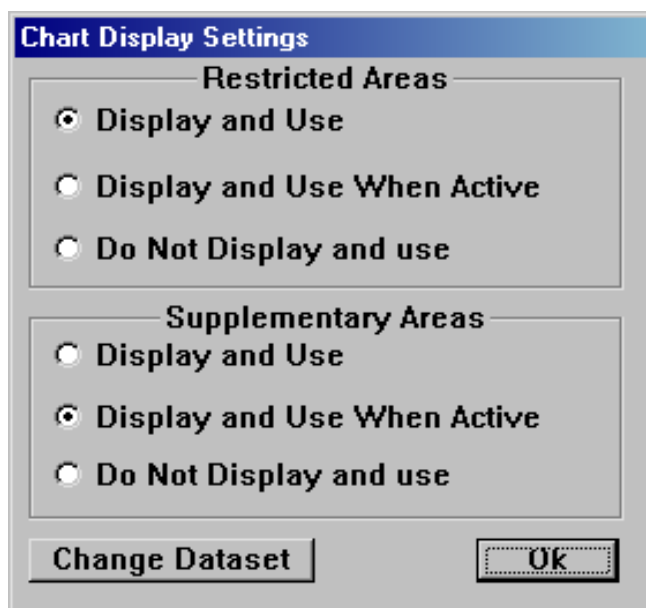


Press 'Menu' → 6 → 7→8



Press Alt+M → 6 → 7→8

clicking on “Change Dataset” button as shown in Dialogue Box below Closure Zones Dataset Manager Dialogue Box will be displayed.



Simply by selecting (clicking on) one of the datasets it is possible to activate or disable it. After leaving the dialogue box, by clicking the “OK” button, C-Plot will reset all Closure Zone information for display accordingly.

TMQ Closure Zone Dataset Manager			
Dataset Name	Status	Active From	To
AFMA NPF 03	Not Active	12.02.2003	29.02.2004
QFS Deep Water Net Area for 2004	Not Active	01.09.2003	31.12.2004
QFS Lake Lagoon Closures for 2004	Not Active	01.09.2003	31.12.2004
QFS No Access Areas for 2004	Active	01.09.2003	31.12.2004
QFS Trawl Closures for 2004	Active	01.09.2003	31.12.2004
QFS Trawl Endorsement Areas for 2004	Not Active	01.09.2003	31.12.2004
QFS Water Way Closures for 2004	Not Active	01.09.2003	31.12.2004
To Anable/Disable one of the Closure files just click on it			
			OK

Also C-Plot has a special Data Interface capability with Seabed Mapping Ltd. (SMI) Piscatus application. Data from C-Plot like Active Route, Closure Zones, Lines, Areas, Marks and Events can be displayed on both C-Plot and Piscatus applications. Also from Piscatus C-Plot can get so called “Fish Mark” data. Refer to your Piscatus Manual if you are an owner.

9.10 The 'Settings – Magnetic Variation' Function

The **Magnetic Variation** function allows the magnetic variation used by C-Plot to be entered. This parameter can be set manually or automatically.

Access Sequence:



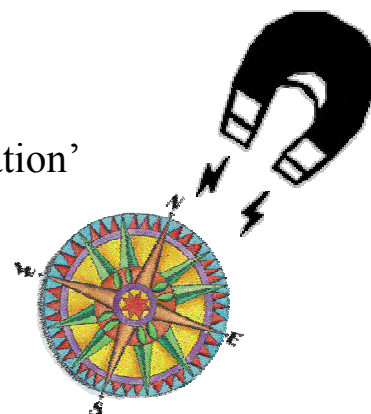
→ → → 'Settings' → 'Mag Variation'



Press 'Menu' → 6 → 8



Press Alt+M → 6 → 8



The current magnetic variation is shown next to the 'Mag variation' function access button in the settings menu.

Edit Magnetic Variation

Old Value: 10E

New Value: 10E

OK Accept New

Cancel Leave without Changing

Use From

☐ TMQ Chart

☐ External[NMEA 0183]Source

8. Mag Variation 10E

To modify the magnetic variation manually simply enter the desired value in the 'New Data' field and click 'OK'.

The magnetic variation can be extracted automatically from two sources:

- TMQ Charts
- An external (NMEA 0183) source

To set magnetic variation to be automatically extracted from either of these sources, simply tick (☑) the appropriate box.

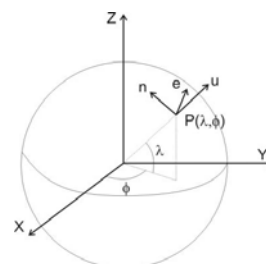
9.11 The 'Settings – Geodetic Datum' Function

The **Geodetic Datum** function allows the geodetic datum settings used by C-Plot to be modified.

Access Sequence:



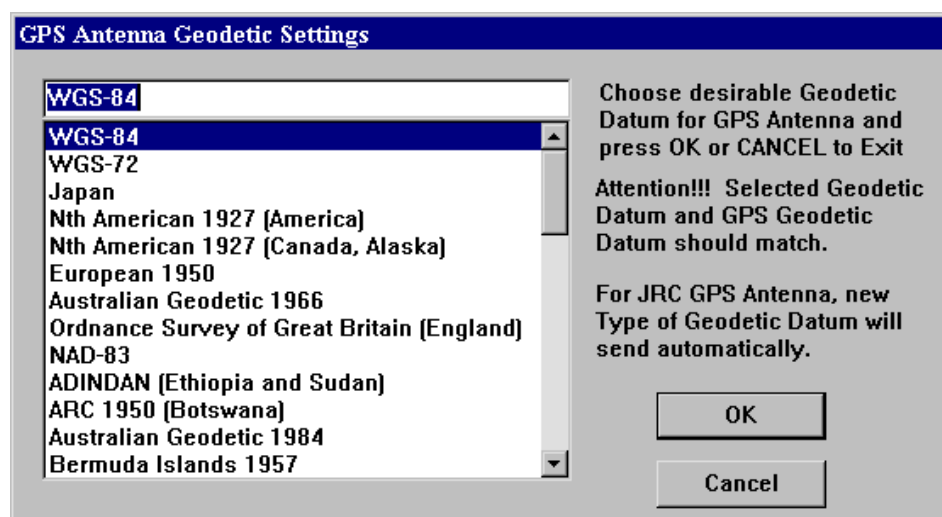
→ → → 'Settings' → → 'GPS Geo Datum'



Press 'Menu' → 6 → 9



Press Alt+M → 6 → 9



To modify the geodetic datum, choose the desired type so that it appears in the topmost data field then click 'OK'. Clicking 'Cancel' will return C-Plot to normal chart display mode.

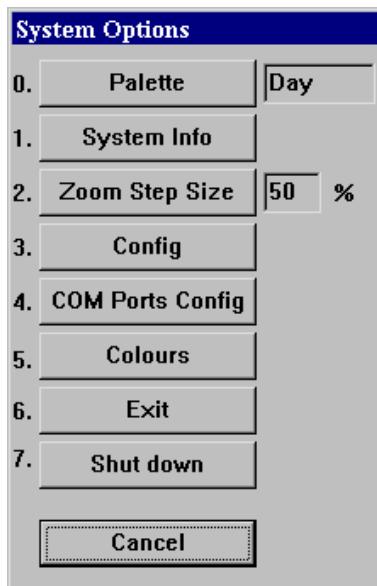


For certain JRC GPS antennas any change in the geodetic datum will be automatically conveyed to the antenna. For this feature to operate effectively the C-Com Communications Server should have its Output configuration set correctly (See Section 10.6).

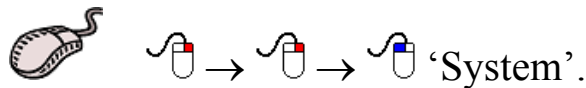
10.0 System

10.1 The System Menu

The **System Menu** allows the system settings to be adjusted; these include the colour palette, Zoom step size, C-Plot configuration, and communications port configuration. It is also possible to ‘Exit’ C-Plot or ‘Shutdown’ the computer via this sub-menu. The **System Menu** can be accessed using any one of the following sequences.



Access Sequences:



Selecting a function from the **System Menu** is exactly the same as selecting a sub-menu from the **Main Menu**. Simply click the desired function with the mouse or choose its numbered prefix on the keyboard or C-Panel. Clicking ‘Cancel’ will return focus to the **Main menu**.

10.2 The 'System - Palette' Function

The **Palette** function enables the colour scheme of the overall main chart display to be altered, depending the amount of ambient light. The palettes are named according to what time of the day they should be used.

Access Sequences:



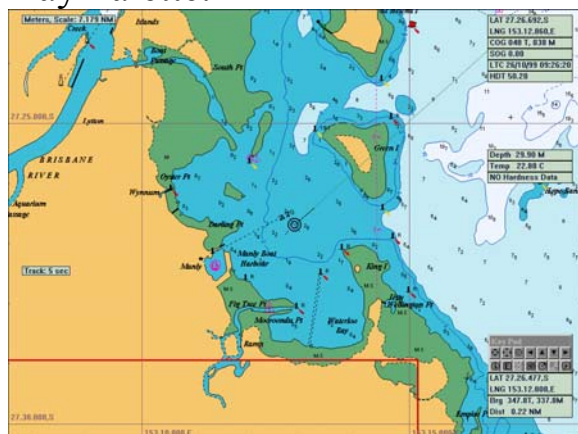
Press 'Menu' → 7 → 0



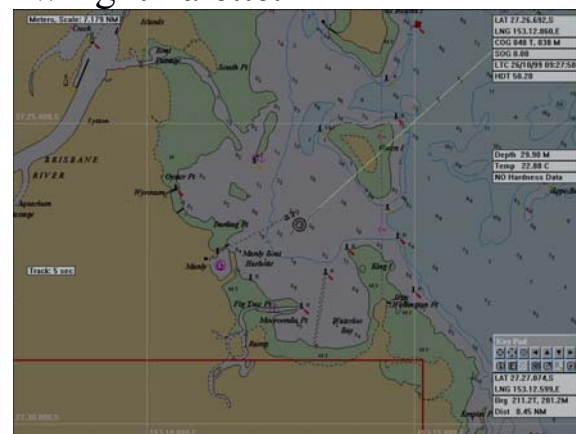
Press Alt+M → 7 → 0



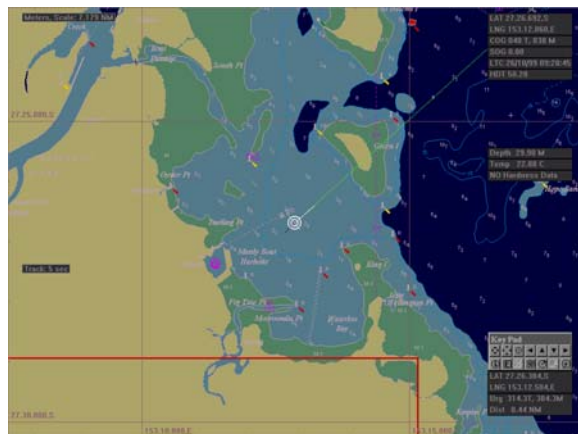
Day Palette:



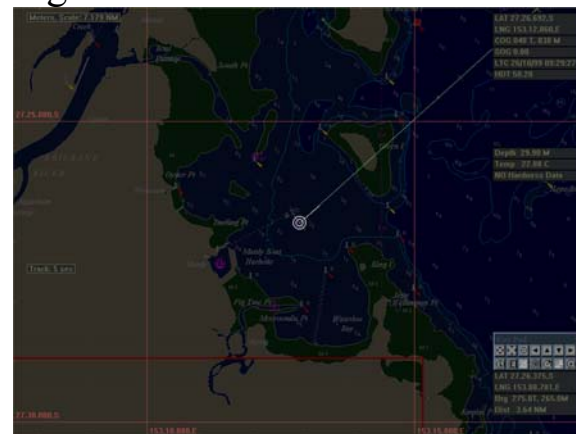
Twilight Palette:

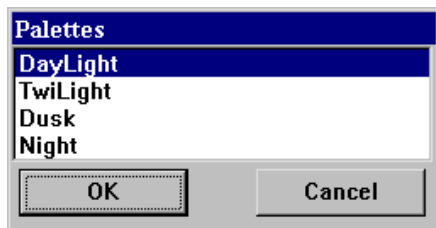


Dusk Palette:



Night Palette:





To change the current colour palette, simply highlight the desired palette and click 'OK'. Clicking 'Cancel' will return C-Plot to normal chart display mode, without changing the palette.

10.3 The 'System – System Info' Function

The **System Info** function displays the current resources of the system and the extent to which they are being used.

Access Sequences:



→ → → 'System' → 'System Info'



Press 'Menu' → 7 → 1



Press Alt+M → 7 → 1

System Information			
Number of TMQ Data Points:	0		
Number of User Data Points:	21		
Number of Mark Points:	163		
Number of Track Points:	4757		
TMQ Chart Loaded:			
User Chart Loaded:	Example		
Mark Chart Loaded:	Example		
Track Chart Loaded:	Example		
Memory in use:	35	%	
	Total	Available	
Physical Memory:	196088	90192	KB
Page File Size:	313600	313600	KB
Virtual Memory:	2093056	2046336	KB
OK			

Reading the information displayed in this dialogue box is straightforward. Once the required information has been noted, click 'OK' to return C-Plot to normal chart display mode.

10.4 The 'System – Zoom Step Size' Function

The **Zoom Step Size** function enables the amount of zoom per zoom button press, to be set. The default value for the step size is 50%.

Access Sequences:

  →  →  'System' →  'Zoom Step Size'

 Press 'Menu' → 7 → 2

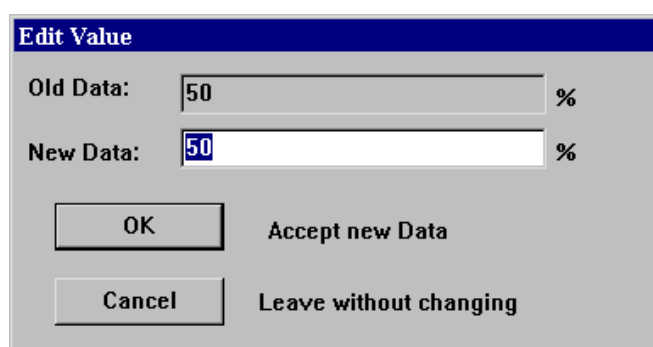
 Press Alt+M → 7 → 2



The current zoom step size is shown next to the 'Zoom Step Size' function access button in the settings menu.

2. Zoom Step Size 50 %

When modifying zoom step size an 'Edit Value' dialogue box will be displayed. Simply enter the zoom step size in the 'New Data' field and click 'OK' or 'Cancel' to leave the current zoom step size.






The 'Edit Value' dialog box has a blue title bar. It contains two input fields: 'Old Data:' with the value '50' and a '%' symbol, and 'New Data:' with the value '50' and a '%' symbol. Below these fields are two buttons: 'OK' and 'Cancel'. To the right of the 'OK' button is the text 'Accept new Data', and to the right of the 'Cancel' button is the text 'Leave without changing'.

 *Zoom Step Size cannot be modified when using HCRF Charts.*

10.5 The ‘System - Config’ Function

The **Config** function enables the system settings of C-Plot to be configured.

Access Sequences:

  →  →  ‘System’ →  ‘Config’

 Press ‘Menu’ → 7 → 3

 Press Alt+M → 7 → 3

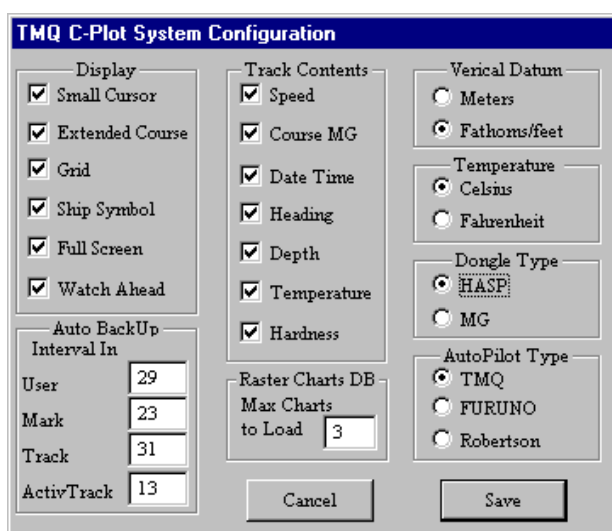



Figure 10.1

There are a number of system settings that can be configured in C-Plot. These are logically grouped into several sections, each of which will be discussed in turn.

 *The Time Offset, between GMT and Local time, can be set by clicking on the Time field in the ‘Ship Position Data’ section of the main display. Simply highlight the hour or minute field in the ‘Set New Time Offset’ dialogue box, and either input the new data via the keyboard or the*

up/down arrows in the box. Click 'OK' to accept the changes or 'Cancel' to return C-Plot to normal chart display mode, without changing.



10.5.1 The 'Track Contents' Section

The **Track Contents** section determines what parameters are saved to disc at each point on a track. Ticking any of the boxes in this section will include the associated information in each saved track point. Types of information that can be included are:

- | | |
|---------------|---------------|
| ✓ Speed | ✓ Depth |
| ✓ Course | ✓ Temperature |
| ✓ Date & Time | ✓ Hardness |
| ✓ Heading | |

10.5.2 The 'Display' Section

The **Display** section enables certain aspects of the main chart display to be altered.

1. **Small Cursor** – This tick box toggles the size of the cursor. When this box is ticked (☒) the cursor appears a small crosshair (This is the default setting). When this box is not ticked (☐) the cursor appears as a large crosshair with its horizontal and vertical lines extending to the edge of the screen.
2. **Extended Course** –When this box is ticked (☒) the extended course line will be displayed. When this box is not ticked (☐) the extended course line will not be displayed.
3. **Grid** – This tick box toggles the Lat/Long grid display. When this box is ticked (☒) the Lat/Long grid will be displayed. When this box is not ticked (☐) the Lat/Long grid will not be displayed.

-
4. **Ship Symbol** – This tick box toggles the ship symbol display. When this box is ticked (☒) the ship symbol will be displayed. When this box is not ticked (☐) the ship symbol will be displayed as a flashing dot.
 5. **Full Screen** - This tick box toggles Full Screen mode. When this box is ticked (☒) full screen mode will be enabled. When this box is not ticked (☐) full screen mode will be disabled.
 6. **Watch Ahead** - This tick box toggles Watch Ahead mode. Watch ahead mode positions the vessel on the screen in such a way as to display more of the chart in front of the vessel (i.e. if the vessel is heading due north, the position of the vessel on the screen will be closer to the bottom, rather than center. Therefore the displayed chart will show more of the chart ‘ahead’ of the vessel than it does behind the vessel.). While in ‘Watch Ahead’ mode any attempt to center the vessel will result in the vessels position moving toward the opposite edge of the screen to which the vessel is headed.

10.5.3 The ‘Raster Charts DB’ section

This section allows the amount of charts loaded into memory to be entered. The larger the number of charts in memory the less memory is available for other functions, however loading charts will be quicker. The default value for this parameter is 3.

10.5.4 The ‘Auto BackUp’ Section

The ‘Auto BackUp’ section allows the time interval between saving particular types of file to be entered. The unit for the time interval is minutes. The types of files that can be set to back up automatically are:

- User Chart
- Mark Chart
- Track File
- Active Track File

For Example: To set user charts to back up every half hour, enter ‘30’ (minutes) in the ‘User’ data field.

10.5.5 The ‘Vertical Datum’ Section

This section allows the units for vertical datum, such as depth, to be configured. Simply click on the desired unit.



If the vertical datum units are set to fathoms the colour of the land area on C-Map charts will change to Grey.

10.5.6 The ‘Temperature’ Section

This section allows the units for temperature to be configured. Simply click on the desired unit.

10.5.7 The ‘Dongle Type’ Section

This section allows the type of dongle being used as the security key to be configured. Simply click on the appropriate dongle type.

10.5.8 The ‘Autopilot Type’ Section

This section allows the type of autopilot that is connected to the system to be configured. Simply click on the appropriate autopilot from the types given.

10.6 The ‘System - Com Ports Config’ Function

The **Com Ports Config** function allows for the configuration of input and output data that is connected to the computer’s communications ports. This function invokes a Communications Server called ‘C-Com’. C-Plot is a ‘C-Com Enabled’ application, which means that this server is not a part of C-Plot, its simply used by C-Plot to access the communications ports of the computer.

Please refer to Appendix C



TMQ C-Com (Communications Server)

Access Sequences:



→ → 'System' → 'Com Ports Config'



Press 'Menu' → 7 → 4



Press Alt+M → 7 → 4

10.7 The 'System - Colour' Function

The **Colour** function enables a number of colour palettes used by C-Plot to be customized.

Access Sequences:



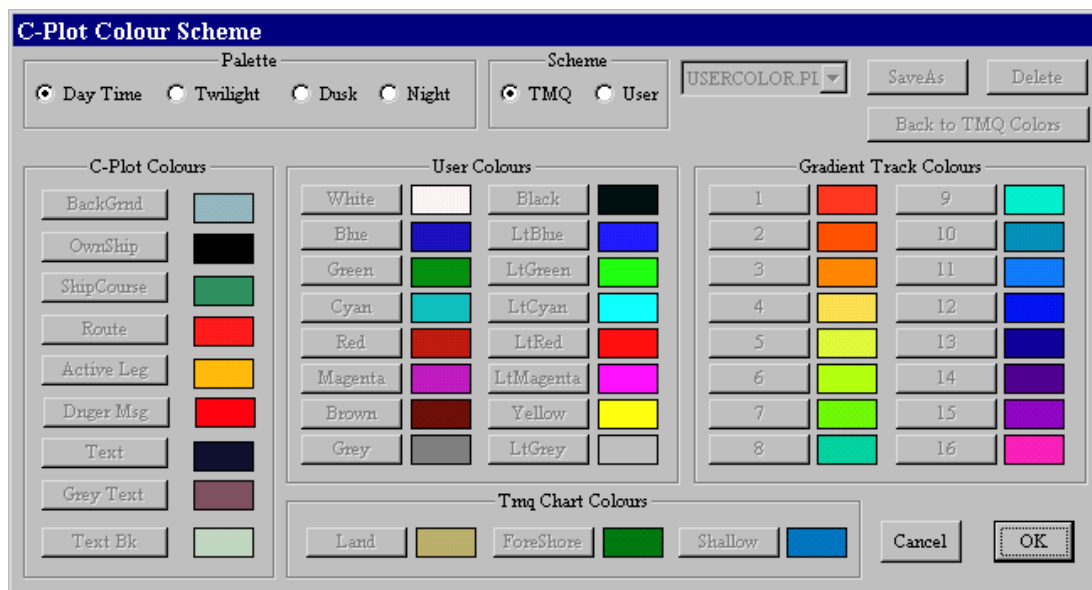
→ → 'System' → 'Colours'



Press 'Menu' → 7 → 5



Press Alt+M → 7 → 5



The 'C-Plot Colour Scheme' dialogue box is divided into a number of different sections, each of which will be described in turn. Once the desired changes have been made click 'OK' to accept the changes, or 'Cancel' to return to normal display mode without accepting the changes.

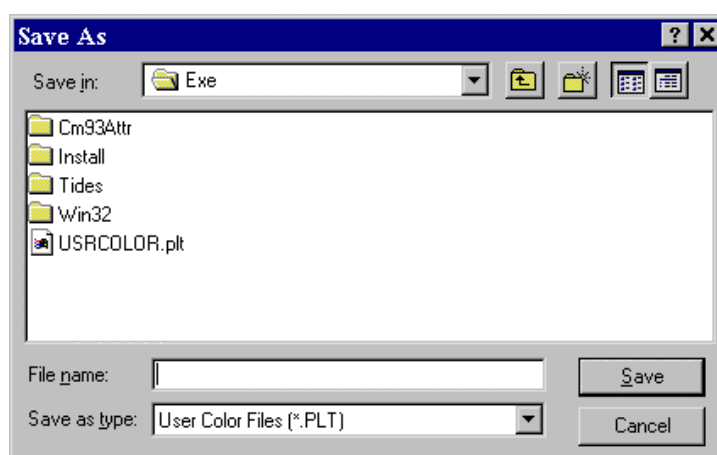
10.7.1 The 'Palette' Section

The **Palette** section allows a particular palette to be chosen for customization. To choose a palette to modify, simply click the appropriate circular selector.

10.7.2 The 'Scheme' Section

The **Scheme** section allows a particular colour scheme to be imposed. In order to customize the colour scheme the 'User' circular selector should be chosen. The colour scheme can be set back to the default scheme at any time, simply by choosing the 'TMQ' circular selector.

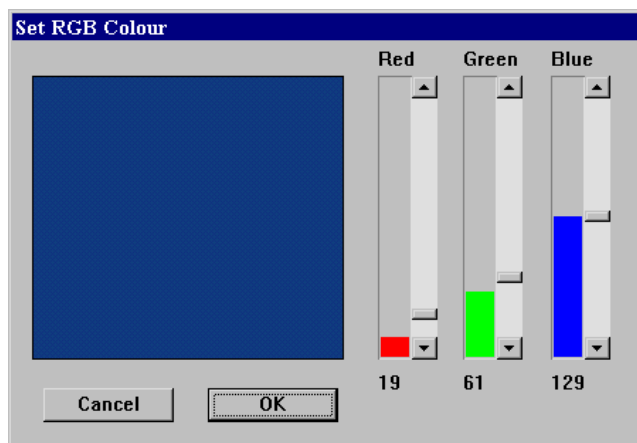
 *The 'TMQ' colour scheme **cannot** be changed. Only 'User' colour schemes can be customized.*



The drop down list to the right of the scheme section contains a list of currently saved user palettes. To select an existing user palette simply choose it from this list. The 'Save As' button allows the currently customized palette to be saved to disc. After clicking this button a 'Save As' dialogue box will appear, simply choose the desired location, enter the

name of the new scheme and click 'OK'. The 'Delete' button removes the currently selected scheme from the disc. The 'Back To TMQ Colours' button changes the colour scheme back to the default TMQ scheme.

10.7.3 The 'Edit Colour' Dialogue Box



All colours are modified using the 'Set RGB Colour' dialogue box. The 'Red', 'Green' and 'Blue' bars represent the amount of these colours that are used to generate the colour shown in the colour preview square. These bars can be modified in two ways. The first method is to click on the up and down arrows of the

bar until the desired level is achieved. Another method for modifying the level of these bars is to drag the level position indicator to the desired level. Once the desired colour appears in the colour preview box click 'OK' to accept the new colour or 'Cancel' to leave accepting the new colour.

10.7.4 The 'C-Plot Colours' Section

The **C-Plot Colours** section allows the look of the C-Plot display areas and controls to be customized. Each of these areas is described below.

- ⌘ **BackGrnd** – This colour represents the background colour of the chart (i.e. the colour of normal water).
- ⌘ **OwnShip** – This colour represents the colour of the ship symbol used to show the vessel's position on the chart.
- ⌘ **ShipCourse** – This colour represents the colour of the course line.
- ⌘ **Route** – This colour represents the colour of a route when it is displayed on the chart.
- ⌘ **Active Leg** – This colour represents the colour used to signify the active leg of a route.
- ⌘ **Danger Msg** – This colour represents the colour of the 'Danger' dialogue box that appears above the keypad.
- ⌘ **Text** – This colour represents the colour of the text that appears in the Ship Position Data, Input Data, and etc. areas.

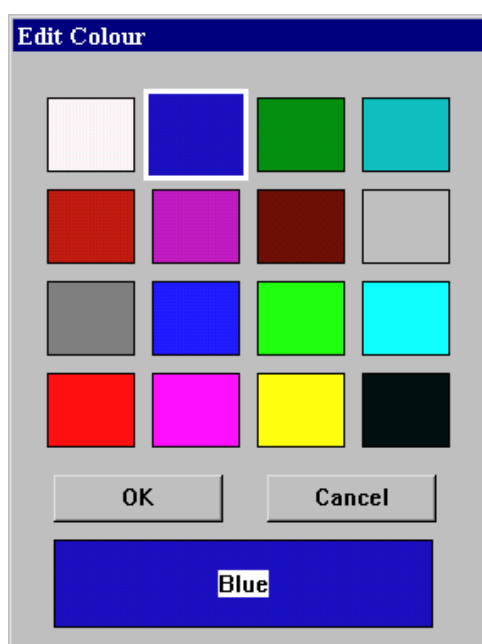
- ⌘ **Grey Text** – This colour represents the colour of the text and lines used to display the Lat/Long grid.
- ⌘ **Text Bk** – This colour represents the colour of the background in the Ship Position Data, Input Data, and etc. areas.

10.7.5 The ‘User Colours’ Section

The **User Colours** section allows the selection of colours that appear in the ‘Edit Colour’ dialogue box, to be modified. (See Figure 10.1)

10.7.6 The ‘Gradient Track Colours’ Section

The **Gradient Track Colours** section allows the colours that appear in the ‘Track Colour Table’ to be modified. (See Figure 10.1)



‘Edit Colour’ Dialogue Box

Temperature, C[Deg]	
	10.0-11.0
	11.0-12.0
	12.0-13.0
	13.0-14.0
	14.0-15.0
	15.0-16.0
	16.0-17.0
	17.0-18.0
	18.0-19.0
	19.0-20.0
	20.0-21.0
	21.0-22.0
	22.0-23.0
	23.0-24.0
	24.0-25.0
	25.0-26.0

Track Colour Table

Figure 10.1

10.7.7 The ‘TMQ Chart Colours’ Section

The **TMQ Chart Colours** section allows the colour of the land, the foreshore and shallow regions on TMQ charts, to be customized.

10.8 The ‘System – Exit’ Function

The **Exit** function will end the C-Plot application. A dialogue box will appear confirming this function. To end C-Plot click ‘Yes’ to continue using C-Plot click ‘No’. This function can also be accessed via the Alt+X shortcut key.

10.9 The ‘System - Shutdown’ Function

The **Shutdown** function will end the C-Plot application and shutdown the computer. To end the C-Plot application without shutting the computer down choose the **Exit** function (Section 10.8).

11.0 Object Data

11.1 The Object Information Box

The Object Information box enables any C-MAP or TMQ objects to be questioned these include the colour, name, comments and any other information available. The cursor requires to be placed over the object in question then the object information box can be invoked.

Access Sequences

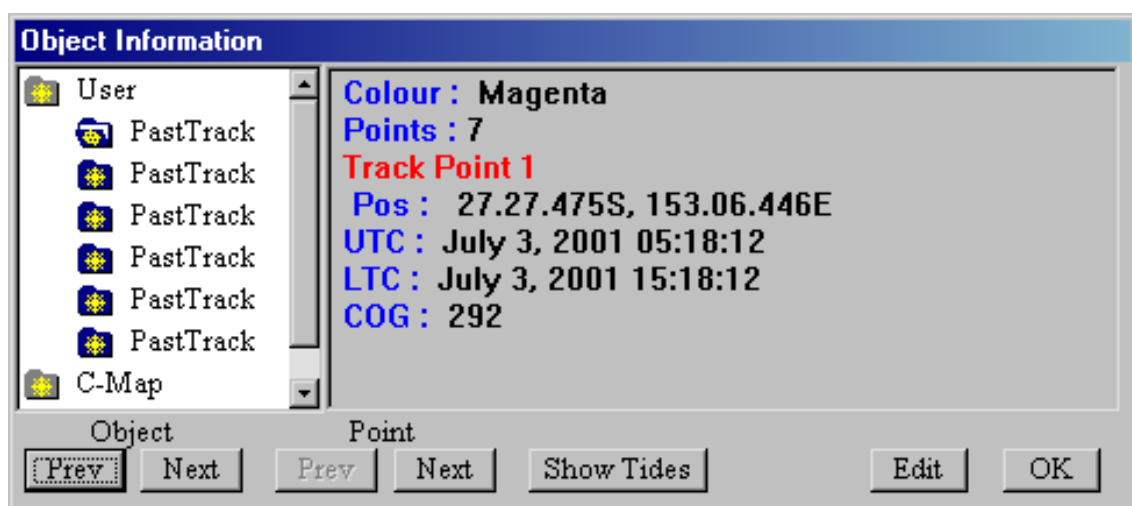


Press 'Info'



Press Ins

The Object Information box:



If there is more than one object in the list the required object can be selected by stepping through the list using ‘Prev’ and ‘Next’ buttons under the ‘Object’ heading.

If editing an object with more than one point, such as a past track the point can be selected by stepping through using the ‘Prev’ and ‘Next’ buttons under the ‘Point’ heading.

The ‘Edit’ function enables all the functions usually associated with the edit button for that particular object. For example; colour, delete, name and comments. See the ‘Edit’ Section for the required function.

11.2 Target Tracking

C-Plot enables particular targets to be tracked and their past tracks recorded similar to your own past track, comments can be added and track colour can be set. This enables monitoring, ‘spying’, on the movements of other vessels or buoys.

Target data sources include ARPA (Automatic Radar Positioning Aid), Ryokuseisha Tuna catch buoys and Taiyo buoys.

C-Com requires configuring to enable the type of buoy to be tracked, the sentences required are as follows:-

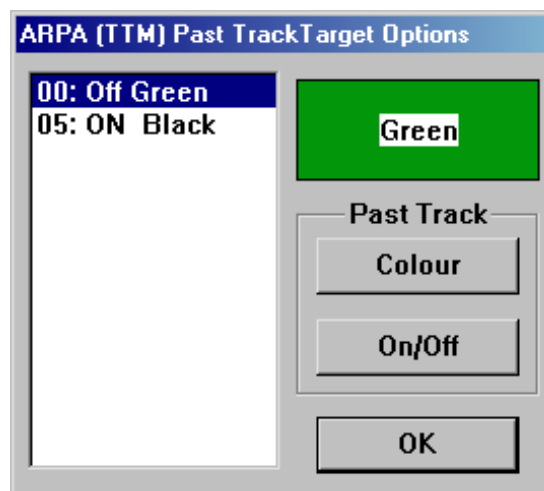
- ARPA Targets, require TTM and if available TTL
- Ryokuseisha/Line Master, Tuna catch buoy require RBY.
- Taiyo buoy require BLV.
- TMQ Radio Modem targets are used for TMQ C-Trak. (If C-Trak is installed refer to the TMQ C-Trak Operators Manual.)

See Appendix C for C-Com setup procedure, Target information Tab.

11.2.1 ARPA Targets

There is only one target displayed initially in the ARPA(TTM) Past Track Options Box, '00 Off Green'. The target availability list will increase as new targets are configured in C-Com then received and added to the system. (See Appendix C C-Com Communication Server)

Initially all targets are set to 'Off' so their past track isn't displayed. The target requires selecting and switching 'On' to enable the display of the past track. (See Section 11.4 ARPA Target editing)



11.3 Editing Target information

The cursor requires to be placed over the object's track in question then the object information box can be invoked.

Access Sequences

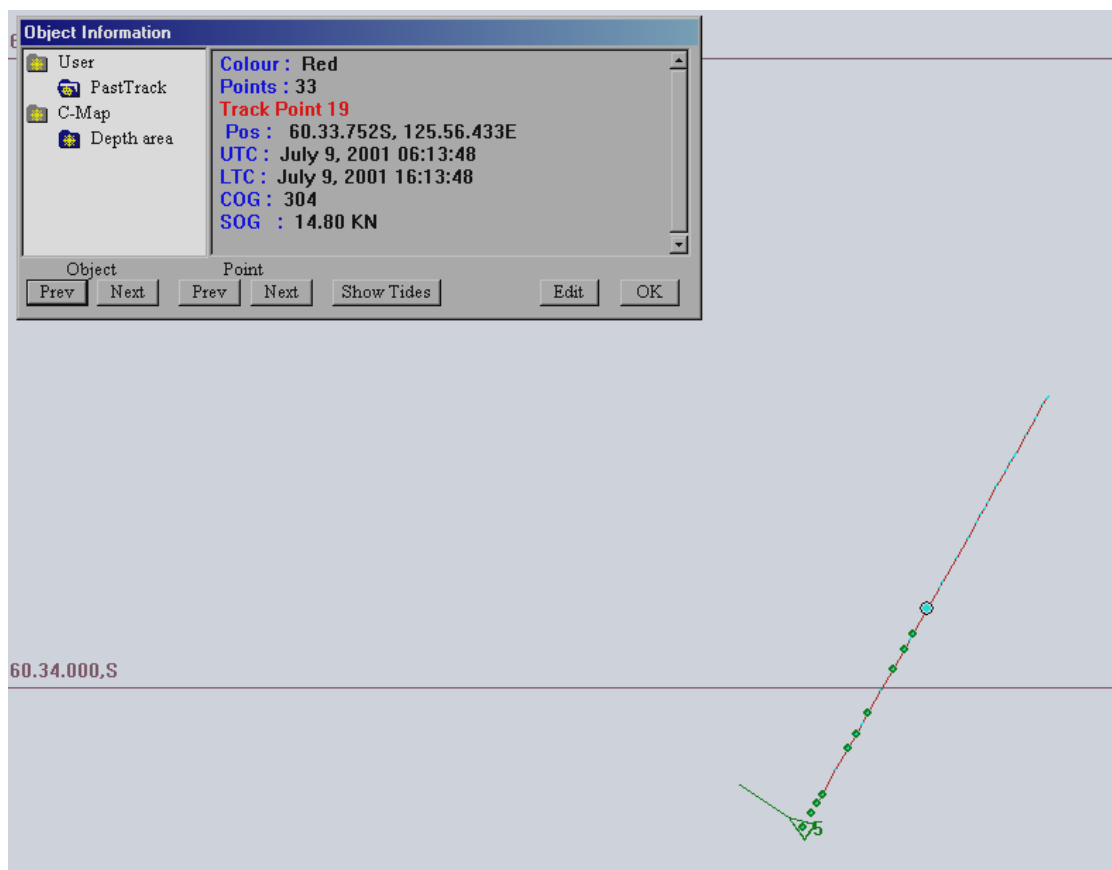


Press 'Info'



Press Ins

The Object Information box:



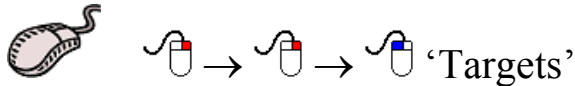
Selecting the 'Edit' button enables all the edit features for that object to be available.
For example the Edit Track dialogue box.



11.4.0 ARPA Target Editing

The 'ARPA (TTM) Past Track Target Options' dialogue box allows the selected track from list on the left side to be switched 'On' and 'Off' and the colour to be altered.

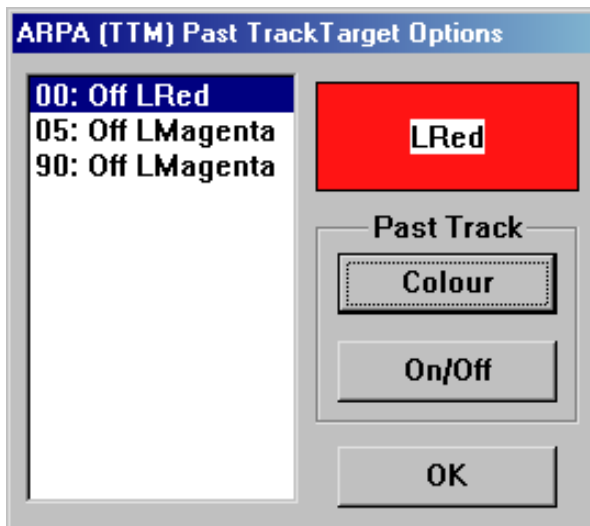
Access Sequences:



Press 'Menu' → 8



Press Alt+M → 8



Select the required target from the list on the left by highlighting it, to switch it on or off click the 'On/Off' button, which will toggle the tracks status. To change the colour click the colour button which will invoke a 'Colour Edit' dialogue box.

Target status can be examined using the C-Com Communication server.

11.4.1 Ryokuseisha/Line Master Tuna Catch Buoys

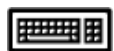
Ryokuseisha tuna catch buoys enable polling in addition to editing of track colour, name and comments similar to any other target. When the 'Object Information' box is invoked there is a 'Poll' button available, this sends a poll signal via the connected radio system to the Ryokuseisha buoy.

The cursor requires to be placed over the buoy in question then the object information box can be invoked.

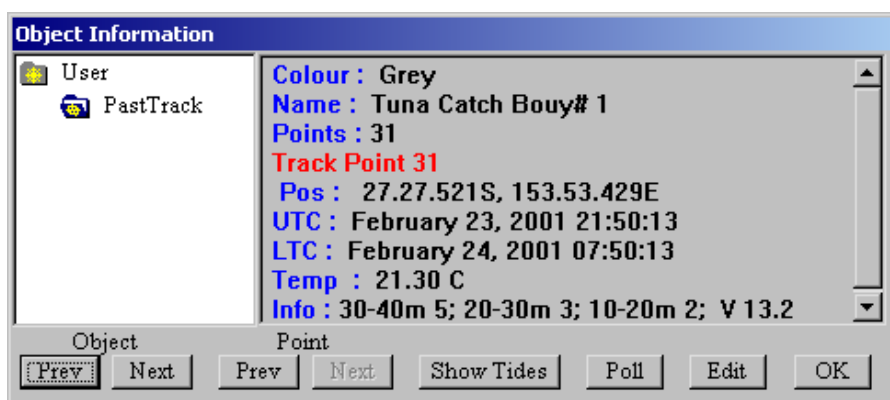
Access Sequences



Press 'Info'



Press Ins



11.4.2 Taiyo Buoys

Taiyo buoy information can be edited using the 'Object Information' dialogue box. Taiyo targets cannot be Polled.

See section '11.1 The Object Information Box' for information on using the 'Object Information' dialogue box.

Access Sequences



Press 'Info'



Press Ins

